A STUDY OF MARKETING PRACTICES OF OWNED, HOSPITAL AND CHAIN DIAGNOSTIC LABORATORIES IN PUNE CITY

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Submitted By

Pravin Subhash Gosavi

Under the Guidance of

Dr. Mukund Dongare

April 2016

DECLARATION

I hereby declare that the thesis entitled "A study of marketing practices of owned, hospital and chain diagnostic laboratories in Pune city" completed and written by me has not previously formed the basis for the award of any Degree of other similar title upon me of this or any other Vidyapeeth or examining body. I understand that if my Ph.D. Thesis (or part of it) is found duplicate at any point of time my research degree will be withdrawn.

(GOSAVI PRAVIN SUBHASH)

Research Student

Place: Pune

Date:

CERTIFICATE

This is to certify that the thesis entitled "A study of marketing practices of owned, hospital and chain diagnostic laboratories in pune city" which is being submitted herewith for the award of the Degree of Vidyavachaspati (Ph.D.) in Management of Tilak Maharashtra Vidyyapeeth, Pune is the result of original research work completed by Shri. Gosavi Pravin Subhash under my supervision and guidance. To the best of my knowledge and belief the work incorporated in this thesis has not formed the basis for the award of any Degree or similar title of this or any other University or examining body upon him.

(Dr. MUKUND DONGARE)

Research Guide

Place: Pune

Date:

ACKNOWLEDGEMENTS

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LIST OF ABBREVIATIONS USED

A.H.A. - American Hospital Association

A.I.D.S. - Acquired Immunodeficiency Syndrome

A.I.I.M.S. - All India Institute of Medical Sciences

A.I.U. - Association of Indian Universities

ANOVA - Analysis of Variance

C.A.G.R. - Compound Annual Growth Rate

C.A.P. - College of American Pathologists

C.A.P.D. - Continuous Ambulatory Peritoneal Dialysis

C.R.M. - Customer Relationship Management

C.S.R. - Corporate Social Responsibility

C.T. - Computerised Tomography

D.A.C. - Dubai Accreditation Department

D.N.B. - Diplomate of National Board

D.S.T. - Department of Science and Technology

E.C.G. – Electrocardiogram

F.D.A. – Food and Drug Administration

F.I.S.H. - Fluorescence in-situ Hybridisation

G.D.P. - Gross Domestic Product

H.D.I. - Human Development Index

I.L.A.C. - International Accreditation Laboratory Corporation

I.C.U. - Intensive Care Unit

I.M.F. - International Monetary Fund

I.P.U. - Integrated Practice Unit

I.V.D. – In Vitro Diagnostic

I.V.F. - In Vitro Fertilisation

L.I.S. - Laboratory Information System

L.P.L. –Lal Path Lab

L.S.D. - Least Significant Difference

M.R.I. - Magnetic Resonance Imaging

N.A.B.H. - National Accreditation Board for Hospitals and Health Care Providers

N.A.B.L. - National Accreditation Board for Testing and Calibration Laboratory

O.T.C. - over-the-counter

P.R. - Public Relation

R&D - Research and Development

R.O.I. - Return on Investment

S.P.S.S. - Statistical Package for Social Sciences

Sq. Ft. – Square Foot

T.A.T. –Turn Around Time

U.S. – United States

W.H.O. - World Health Organisation

CHAPTER - 1

INTRODUCTION

1.1. INTRODUCTION:

Healthcare has become a crucial aspect of our life since modern life is beset with health issues, which has increased manifold due to contemporary lifestyles. The healthcare industry has been forced to come up with new products, procedures along with effective diagnosis. The world healthcare industry generated revenues about USD 6 trillion in 2011[1] and the world in-vitro market generated revenues of about USD 52.04 billion in 2012[1]. This is estimated to reach about USD 87 billion by 2018[1]. The diagnostic segment is further classified as in-vitro diagnostics (IVD) and imaging diagnostics. There are many well-known players such as Apollo Hospitals, Sahyadri Hospitals, Metropolis Healthcare and Fortis Healthcare which are entering the market with new diagnostic centers, equipped with the latest technologies. Few players have also ventured into towns and rural areas as well, since there is huge untapped potential in these areas. The various diagnostic centers are currently upgrading the existing equipment from traditional to high-end automated systems.

The diagnostic industry in-vitro segment is estimated to touch about USD 1,254 million by 2018[1] in India. In the in-vitro segment principal areas for further growth included biochemistry, hematology, and molecular diagnostics. The number of hospitals and healthcare facilities has increased, along with the healthcare infrastructure development and the advancement of medical equipment which had lead to the growth of diagnostic industry. Today, the increase in the severity and complexity of infections has prompted the industry to provide better facilities for the diagnosis of the diseases and the various sample collection procedures.

In India the imaging-diagnosis segment revenue is projected to reach USD 1,000 million by 2018[2]. With increased awareness and investments in advanced technology pouring into the segment, the diagnostic sector had developed considerably over the past five years.

The increase in spending power of the customers is also a strong driver for diagnostic segment which has made sophisticated tests at more affordable price. Gynecologist, Physicians etc. need the services of diagnostic laboratory segment very often.

1.2. INTRODUCTION TO WORLD IN VITRO DIAGNOSTIC MARKET:

The global In Vitro Diagnostic market generated revenue of about USD 44 billion in the year 2011[3], growing at 7.8% CAGR from 2011 to 2016[3].The biggest market for the in vitro diagnostic equipment's is United States which accounts for a share of 47% of the total in vitro diagnostic market followed by European region of about 31% in the year 2011[3]. Germany accounts for the largest share of 23.24% followed by France 16.89% and Italy 16.41% of the total in Vitro diagnostic market of European region[3]. Asia is the fastest growing region of the global market and accounts to be about 22.88% of the global market and is estimated to reach the market of about USD 17.20 billion with a CAGR 11.3% from 2011 to 2016[3]. China is the fastest growing market within Asia and is growing at a CAGR of 18.8 percent[3]. The reasons for the growth are that Chinese health reform during the year, the initial phases of the three-year (2009-2011) made significant headway in increasing insurance coverage of some kind (now >93% of the total population) and improving grass roots and primary care health system

China and India in the Asian region has shown the highest CAGR by the year 2016[3]. The Chinese in vitro diagnostic market is taking frog leap amongst the emerging nations, followed by India, Russia, and Brazil. The improved healthcare facilities in

the emerging countries along with the Government funding are the major driving factors for the boom in the IVD market.

However, the condition is completely reverse in the developed countries such as North America and Eu-5 i.e. France, Germany, Italy, Spain, United Kingdom as these countries are facing major financial crisis and thus having deep cuts on the healthcare budgets with limited reimbursements provided on the clinical testing and the newly introduced tests in the market thus hampering the growth of IVD industry.

The increased customer's awareness, customers self-testing, increase in the population across the globe and also the advancement in the technology are the prime factors which are driving the growth of the in vitro diagnostic market.

The rise in number of complexity in the infections like respiratory infections, hospital acquired infections, etc. are also the other major drivers for the growth of the In-vitro diagnostic industry. Similarly rise in the chronic diseases such as diabetes, hypertension, cardiovascular diseases, and cancer are driving the overall IVD market.

For conducting the tests analyzers are the main instruments used like high through put analyzers, medium throughput analyzers, and low throughput analyzers.

Molecular diagnostics is the largest growing segment among the biochemistry, hematology, Microbiology etc.

Due to the financial crisis there are also budget constraints on the expenditure of healthcare sector which are also prime reasons for slow growth in the developed countries U.S., and Canada. While, the condition are reverse in the Latin American countries like Brazil and Mexico. Brazilian government and the public sector are providing huge funding along with the increased efforts for the prevention of infectious diseases in the country by conducting all the necessary preventive tests.

The major players in the IVD market are Roche Diagnostics and Siemens Diagnostics from Germany, Abbott Diagnostics, Beckman Coulter, BD Diagnostics from United States .

1.3. INDIA'S IN VITRO DIAGNOSTIC INDUSTRY:

India is the country with largest democracy in the globe along with varied cultures, cuisines, practices and religious beliefs. At the same time, it is a country that is making headways in the international scenario, largely due to its booming economy. India is attracting investments from across all sectors of the industry, mainly because of its intrinsic strength to grow from within rather than depend on exports.

The overall healthcare industry scenario can be said to be upbeat. It is directly influenced by the growing economy, new investment avenues, the high incidence of lifestyle disorders, and a large, talented and cost effective, young workforce, coupled with the large pool of experienced consultants. Importantly, the sectors that are benefitting the most are healthcare they are hospitals, pharmaceuticals, medical devices, In vitro diagnostic and Imaging diagnostic laboratories etc.

In India government is also taking initiative by introduction of the Health Bill for promoting the sector through positive regulations. It aims to bring together independent bodies like the Medical Council of India (MCI), Dental Council of India (DCI), Pharmacy Council of India (PCI) and the Nursing Council of India (NCI) under one umbrella.

The public expenditure in healthcare has been increased by the government. It is also boosting other allied activities such as medical tourism to increase the revenue in the sector, as well as promoting private-public partnerships in the area of R and D, thereby making the overall atmosphere conducive to investments by foreign companies in the sector.

The immense progress has been witnessed by the Indian diagnostic sector because of the major technological advancements and higher efficiency systems which had taken this sector to newer heights. To understand the prognosis of the infections advanced technologies are now used thereby strengthening the sophistication level of the participants in the sector.

Medical imaging is also one of the most rapidly growing fields in the Indian medical devices market. The diagnostic lab services are also growing at a fast pace, particularly in the unorganized sector. The segment's growth is expected to be fuelled by the growing demand for automated diagnostics.

The Indian diagnostics market has been mainly classified into services, equipment and reagents. The service sector is largely unorganized, with the majority of players being clustered in the suburban and metro areas. However a clear and structured format is being established in order to have better regulations and proper definition for the market. The Indian in vitro Diagnostics (IVD) market is estimated to be 531 million USD in 2011[4] and it is expected to expand to approximately 900 million USD by 2016[4] which is growing at an annual growth rate of 18 percent[4].

An important contributing factor towards this growth is the expansion of corporate hospitals. Moreover, non-communicable diseases such as diabetes are no longer diseases of the rich, and are spreading rapidly to rural areas. This is another contributory factor towards the growth. Therefore, in the Indian healthcare industry in vitro market has emerged as one of the most profitable markets with a CAGR of 18 percent[4]. Importantly, in the coming years there will be likely increase in the number of health insurance policies. Therefore, more and more health insurance companies will coordinate with the various diagnostic labs.

Although many diagnostic tests are available for most diseases, still, many more are needed. For example, there is an urgent need for good and reliable diagnostics for many communicable diseases like TB, malaria, dengue, hepatitis B and C. For tuberculosis, a new test is available – the GeneXpert, which is a very good test and can even detect resistance. But even this is currently plagued by the high cost, which is preventing its introduction in the public health program in India.

Therefore, diagnostic tests not only need to be "available", but they also need to be "affordable" and "accessible" in order to be able to make a real impact. It should be remembered that most of the people in urgent need of a diagnostic test are very poor, especially those in the developing countries. Therefore, innovative funding mechanisms need to be in place so that these tests can be made available to those who need them most.

Unorganised local players so far had dominated India's diagnostic segment but there are no doubts that few organised players like Roche Diagnostics, Abbott, Tulip Group, Span Diagnostics, Metropolis, SRL Ranbaxy etc. had also made their presence felt in this domain.

As per the industry experts the India diagnostic market is growing at 20 percent[5] which is faster than any country around the globe. The diagnostic sector in 2010-11 earned revenue of about USD 510 million[5] and with a rise in 2011-12 generated revenue about USD 600 million[5].

The growth in the diagnostic sector is witnessed due to the few factors like advancement in the diagnostic procedures, faster turnaround time, also increased availability of over-the-counter (OTC) tests by which clients can perform in the comfort and convenience at their homes. The Indian pathology business is around

10,000 crore in that Organized sector business is around 1,000 crore only from the few top laboratories[6, 11].

The diagnostic industry is now price-driven, there are certain kickbacks and demand of business referral payments in the absence of a regulatory body had made this industry very much competitive in nature.

Indian diagnostics market is estimated to grow at a CAGR of around 26 % during 2012–15[7, 11] since it is backed by immense potential characteristics including a large population of qualified clinicians, huge number of clients, cost-efficient treatments, and a well-trained medical community and the lab services market.

Recently the in vitro diagnostic market is shifting gradually towards semi-automated and fully-automated laboratory instrument. The number of tests conducted in the last decade had doubled to over five hundred million tests due to the increase in awareness coupled with increasing middle class income[11].

There is also a change in clinical practice because of the recent advances in the areas of molecular level and genetic testing. Advanced testing techniques are more sensitive and specific and allow medical practioner to detect, diagnose, and manage disease more effectively and efficiently than ever before.

Technologies that analyse the DNA, RNA, and protein composition diagnose disease at very initial level, permitting earlier detection and a more personalised approach to client care.

The treatment decisions around 70 percent[8] in the country are based on lab results to meet the demand the Indian diagnostics players are also smartly putting their foot forward. The diagnostic players are expanding their presence not only in India, but also in overseas territories like the Asia, Middle East and the United States.

The spectrum of their test menu is also expanded in the various areas of genetics, cancer, endocrinology, infectious diseases, and molecular diagnostics. They are coming up with different business models to penetrate not only in suburban, but also to town and rural areas.

The organised segment had explored the opportunities of expanding to suburban and rural areas and also for the expansions mergers and acquisitions would be opted .

1.4. GROWTH DRIVERS IN FUTURE:

The healthcare industry key issues driving the growth had been identified as follows:

Population Growth:

India is the second most populated country in the world at this juncture with population of over 125 crores[9]. However, by 2030, India is predicted to surpass China.

The countries population is projected to be 1.6 billion by 2050[10]. Needless to say, there is a positive correlation between population growth and the growth of health sector.

Expanding Middle Class:

Another factor that would spurt the growth of healthcare industry in India would be ever-expanding middle class. The middle class at this juncture constitute 64 percent of Indian population. Its expansion is reflected from the fact that in 1999 its constitution in the entire population was only 45 percent.

This class has realized the importance of staying healthy and is also willing to liberally spend for the same. The same leads to nothing but growth of healthcare sector.

Rise of Diseases:

Communicable and chronic degenerative diseases are two types of diseases which are largely prominent among people. Communicable diseases are such as polio, hepatitis, tuberculosis, pneumonia etc.

Among the urban population there is significant number of health problems then the rural population due to unhealthy diets, sedentary work and affluent lifestyle which is called as lifestyle diseases.

These lifestyle diseases had increased the complications in the various diseases and given a rise to hypertension, cancer, diabetes, obesity etc. Therefore, the demand for the healthcare centers is growing day by day .

1.5. MARKETING OF HEALTHCARE SERVICES:

"Business is all about marketing" this thinking of modern times explains the crucial role marketing was playing in sustaining and growing business. Marketing is just not communicating the value of a product or service to the customers but it is a connecting link between a society's material requirements and its economic patterns of response.

Today, marketing is considered indispensable functional area across various industries. One sector, wherein marketing was considered irrelevant till not so long back was healthcare sector. This was especially true in case of underdeveloped and developing countries where healthcare business was not lucrative for private sector owing to limited purchasing power and hence Government or charitable organisations were providing such services.

In fact, following myths (Weiss, 2002) relating to marketing of health services was also downgrading the scope of marketing function in healthcare industry:

Myth 1: Marketing is for Marketers:

The statement is merely a myth as healthcare industry is a complex industry. All the key stakeholders like doctors, support staff, pharmacists etc. their views are important ingredient to any marketing plan. All these are thus also a part of the marketing team and this fact do not undermine the role of marketing in healthcare services rather it makes it more challenging and key to success.

Myth 2: Advertising Derives Marketing:

Healthcare is considered a kind of service which needs to have a greater inclination towards society. Too much emphasis on profit generation is taken in a negative sense in this industry. Advertising can give customers a hint that healthcare industries are after money. The above assumption that only advertising derives marketing is not true.

Myth 3: Doctors Take a Back Seat to Customers:

The customers do not generally argue on the advice of the doctors rather they remain more vigilant about non-advisory services. Thus, neither the doctors take a back seat or the customer's agonies doctors on the pretext of being the king.

Myth 4: The Bigger the Budget, the Better the Marketing:

It is further assumed that bigger the budget, better will be the result of marketing practices. But in health care services, size of budget does not affect the marketing success. It only deals with the passion and clarity behind the efforts.

Myth 5: Public Relations (PR) does not Matter in Healthcare Services:

It is argued that public relations is not of much relevance in healthcare services and hence is usually not much used. This is again a big myth, PR can be used by healthcare service providers to shape public opinion, enhancing customer satisfaction, disseminating the information to the general public and so on.

As a matter of fact, marketing is of immense help to healthcare industry in following ways:

Recognising the Needs of Market:

As the society is progressing, newer diseases are also mushrooming. It is imperative for healthcare providers to keep an eye on the same. The same is possible only through focusing on marketing research.

The healthcare provider can became the champion of masses by identifying the medical needs and providing solution for the same.

Pricing of Medical Services:

Pricing of medical services is a ticklish issue. The setting of price involves identifying the cost associated with a particular treatment, keeping an eye on what competitors are charging for same, getting the consent of all stakeholders and so on.

Marketing function is desirable in the healthcare service providers to sort out the issue.

Distributing the Services:

Distributing medical services has also been a key decision area for healthcare service providers. Should the healthcare service providers provide medical services only in its premises? Should the healthcare service provider open its branches in other areas? Should the healthcare service providers use electronic channels to give advisory and other medical related services to its clients?

All these are key decision areas and need formal marketing wing in the premises to take a decision on these.

Information Resource:

Healthcare organisations have begun offering a large number of services, these needs to constantly inform the people about the services they are offering.

It can be done through by press releases or by any other marketing campaign.

Attracting Medical Staff and Employees:

Success of medical services hinges on competent staff. Skilled workers requirement also push the healthcare service providers to market themselves as the best recruiter.

Smoothening the Customer Purchase Process:

In the modern times, it has become imperative for medical service provider to efficiently deliver the service to the clients. Obviously, marketing people handle this task in the best possible manner.

Enhancing Visibility or Image:

The healthcare services are becoming more standardised day by day so it has become necessary for healthcare organisation to initiate that kind of marketing campaigns which would help them out to create a unique place in their customer's mind.

Improving Market Penetration:

As the competition is increasing day by day in healthcare organisation, it is difficult for them to increase customer volumes, revenues, and market share. So marketing is the only mean to retain all this.

Increasing Prestige:

Prestige has the great impression on the customer's mind. Therefore, healthcare service providers need to proactively market their best medical practioner, advanced equipment, and facilities, to their customers.

Encourage Referrals:

Marketing encourages new clients of healthcare service providers to seek information about it. By making the service experienced and heard frequently, the healthcare service providers also increases the chances of word-of-mouth referrals.

Implementing Government Policies and Indulging in Social Cause:

In developing countries, it is the Government that initiates and carries forward many healthcare programmes. The task of marketing the same is handed over to healthcare providers. Needless to say, professional marketing team can carry out the same more efficiently and effectively.

Offsetting Competitive Marketing:

With the advent of corporate type healthcare service providers, competitive marketing has become the order of the day. The actions and reactions of competitors are to be dealt with. The onus of the same obviously lies on the marketing department.

To sum up, it may be said that marketing is not only important but absolutely necessary for healthcare sector. This is true in case of both public as well as private healthcare service providers .

1.6. HISTORICAL DEVELOPMENT:

Marketing itself is not the oldest of the practiced subjects. Rather, it is quite a young field. Marketing in healthcare industry is even younger. It is so because when marketing was appreciated, adopted and gainfully practiced in other industries; it was still considered alien to the healthcare industry. Myths, discussed earlier were considered harsh reality of healthcare sector.

Although, public relation (PR) has become an important ingredient of marketing in the modern times, this was not the case in 1950s. In the said decade, hospitals were organising educational programmes and undertaking other public relation activities also but those were never considered to be under the purview of marketing. Even the enhanced role of PR in the decade of 1960s failed to translate the same into a marketing function. In this decade PR was considered a primary mean to keep in touch with key publics like physicians who referred patients to healthcare service

provider. Still, it was not seen as marketing. The scope of PR kept on enhancing in decade of 1970s as well.

Year 1977 can be considered as the year in which marketing was formally recognized as crucial and not alien for healthcare industry. In this year, first ever conference on healthcare marketing was organized by American Hospital Association (AHA). Subsequently began the era of sales in healthcare industry. Now, the hospitals started offering commission to third party payers for bringing patients to the hospital.

The decade of 1980s saw health professionals accepting marketing as an important factor to attain success. Marketing practices adopted by hospitals now were attuned to those being adopted by any other industry. However, soon it was realized that marketing of healthcare services was different to that of most of other industries. Unlike other industries advertising was considered to be playing second fiddle to other promotional tools in case of healthcare industry.

The decade of 1990s saw professionalism in marketing enhancing manifold in healthcare industry. The erstwhile patients had now become consumers. Hospitals were trying to win the "hearts and minds" battle for attracting and retaining consumers (Thomas, 2005). To capture popularity for newly established or reinforce positioning for established ones, healthcare industry had started using various print and electronic media tools.

The trend has continued and healthcare industry is becoming more and more consumer centric. Marketing has become an integral part of healthcare industries overall operation. Indian healthcare industry is not an exception to it .

1.7. CHALLENGES ASSOCIATED WITH HEALTHCARE MARKETING:

Healthcare marketing is tougher than not only marketing of goods but marketing of other services as well. It is so because of following reasons:

- **Unpredictable Demand:**

  The health care services are always in great demand but some types of demands occur almost unpredictably which are likely to arise unexpectedly for example heart attack, stroke, angina or the onset of cancer. To target the unexpected need of the customer the marketing of such services represents a particular challenge for marketers.

- **Promotional Emphasis:**

  In case of health care services, the end user of the service i.e. the client does not make any decision in order to purchase the service. Therefore, a medical practioner had to take decision about the what, where, when, and how much of the service to be provided. The decision maker may be a provider, or a family member.

  The marketer has to face the challenge of determining where to place the promotional emphasis.

- **Product Conceptualization is not an Easy Task:**

  Because it is a challenge for healthcare marketers to explain the nature of procedures as these are highly technology oriented and very complex and difficult to explain to a layperson .

1.7.1. THE INTEGRATED HEALTHCARE MARKETING: A WAY TO OVERCOME CHALLENGES:

Around the world, every healthcare system is struggling with rising costs and uneven quality. Healthcare marketers and policy makers have tried countless incremental fixes – making patients better consumers, attacking fraud, enhancing service quality, implementing electronic marketing – but none have had much impact.

The most feasible strategy under the prevailing circumstances is maximizing the value of patients. The strategic agenda for moving to a high-value healthcare delivery system has following five components (Porter and Lee, 2013):

- **Organize into Integrated Practice Units (IPUs):**

  Ideally the health service providers must be organized around the customers need. This required a shift from today's siloed organization by specialty department and discrete service to organising around the customer's medical condition. Such a patient or consumer driven structure is called integrated practice unit.

- **Measure Outcomes and Costs for Every Patient:**

  The outcomes and costs for every patient must be measured by the healthcare providers. The outcomes that matter to patients are survival, time to recovery and sustainability of health.

- **Move to Bundled Payments for Care Cycles:**

  The payment approach best aligned with value is a bundled payment that covers the full care cycle for acute medical conditions, the overall care for chronic conditions for a defined period, or primary and preventive care for a defined patient population.

- **Integrated Care Delivery System:**

  This had been done by defining the scope of services, concentrating volume in fewer locations, choosing the right location for each service line, and integrating care for patients across locations.

- **Expanded Excellent Services Across Geography:**

  Academic medical centers serve primarily their nearby geographic areas and also the healthcare delivery remains localized.

Specialist and superior medical service providers for particular medical conditions need to serve far more patients and extend their reach through the strategic expansion of excellent IPUs if the value needs to be substantially increased on a large scale.

The geographic expansion should also focus on improving value and not just the increase in the number. Further, a well conceptualized marketing mix had help marketers overcoming the challenges associated with marketing of healthcare services.

Product:

The products offered by the healthcare organization are intangible and customers can't feel the taste and touch of the product. Under such a situation, devising a suitable product mix becomes very important for the marketers. The health care organization product mix may include the following product or services:

- Correct diagnosis of the disease

- Methods or operation

- Medical professionals - support/advice

- Promptness in conducting tests in laboratories

- Counseling by medical experts

Therefore, the designing of the ideal product mix is important and marketing such product mix demands sincere efforts from the healthcare organisation.

Price:

In the marketing mix price is one of the most important elements. It includes all those charges which incurred by the organisation in order to provide facilities or services to their customers. It should be associated with the ability of the consumer to pay for the consumption of services. In healthcare services, there is no any common strategy for

the settlement of the prices for the services. It varies from one healthcare service providers to another and from one service to another. It depended upon the complexity of services, the availability of the services, the income level of customers, duration of treatment, kind of facilities, type of diagnosis tests and brand perception of the healthcare service providers.

Place:

Place is the element which is associated with the channel of distribution by which the services can be delivered. The healthcare service providers used a variety of distribution channels.

Primary care centres are located near the potential patient which is in heavily populated areas. In medical centres of excellence irrespective of the proximity factor, tertiary care centers are located. Also, there are joint clinics where many doctors are employed and providing services to the patients visiting the healthcare service providers.

Further, there is a concept of visiting doctors which are in tie-up with different healthcare service providers not in their own town only, but they are providing their services in many cities by visiting them on a regular basis.

Promotion:

An idea, image, brand or product/service can be promoted by the variety of techniques which comes under the term promotion. It communicates the message to the customer or potential customer by various means such as PR, advertising, sales promotion and personal selling.

PR: It includes all those activities which develop materials for dissemination of information to the general publics. It can be done through by press releases, press conferences, newsletters.

Sponsorships are also done for publicity by inviting celebrities for promoting campaigns like movie actors or cricketers for public health awareness campaigns i.e. DOT, POLIO. Also, the health fairs and educational programs are organised by the hospitals for community residents which come under the category of community outreach activity of public relation .

Advertising: It is defined as the paid form of non-personal activity for the promotion of goods or services by using mass media communication channel. Many healthcare service providers using this mode of promotion mix.

Sales promotion: It refers to those activities which add values or incentives to the product or service or offerings for salespersons or customers to achieve a specific sales and marketing objectives. The health fairs and trade shows and demonstrations, new laboratory advancement test etc. are the activities included in the sales promotion mix. Many healthcare organization organized health fairs which includes range of diagnostic tests and health education materials in order to promote their services.

As all the promotion mix elements use the media i.e. print or electronic as their means of communication therefore attention should be paid to the number of media options available around.

People:

People include all those persons who are involved directly and indirectly in service delivery process. In health care services, people element is essential in every stage of dealing. These dealings are performed by various people like for outdoor and indoor services i.e. frontline employees are the people, for pre-testing counseling i.e. counselors are the people. Therefore, people element is pervasive in nature in healthcare services. Thus, healthcare organization must organize the internal marketing of these services to meet the expectations of the customers.

Physical Evidence:

Physical evidence plays an important role in healthcare services.

It includes the appearance of physical facilities, equipment's, personnel and communication materials etc., which helps out in tangiblising the intangible services.

As the treatment is quite intangible in nature until a person actually recovers from the disease. Therefore, healthcare service providers used the ambience features in order to create a decent image in the mind of their customers.

Healthcare service providers includes various facilities such as state-of-art infrastructure, modern facilities, dress code for their personnel, maintaining right kind of temperature, cleanliness and hygienic conditions in rooms, pleasing behaviour of personnel, availability of facilities; water, electricity, canteen, lifts, parking facilities etc. in the creation of favourable healthcare service providers evidence.

Process:

Process is defined as the steps, procedures, mechanism and all those activities by which the service is delivered (Kapoor et al., 2011) to the customers. As healthcare services are inseparable in nature, it is the service delivery process through which customers get into contact with the service provider.

In healthcare service providers, the process generally includes the different tasks such as pre-testing registration, counseling programs, post admission billing procedures etc. The process must be made patient-centric.

1.8. STATEMENT OF PROBLEM:

Indian diagnostics players are too smartly putting their foot forward to meet the demand as around 70 percent[8] of the treatment decisions of medical practioner in the country are based on laboratory results.

In the overseas territories like the Asia, Middle East, United States etc they have expanded their presence. The spectrum of test menu is also expanded by the diagnostic industry had increased by expanding in the different areas like Oncology, Microbiology, Biochemistry and Molecular diagnostics.

India's diagnostic segment maximum market share is captured by the unorganised local players but now it is competed by few organised players like Metropolis, Dr Lal's Pathology, Piramal Diagnostics, Thyrocare, Roche Diagnostics, Abbott, Transasia Biomedical &Span Diagnostics, etc.

The Indian diagnostics market is growing by about 20 percent[5] which is faster than any country in the world as per the industry experts. The organised segment had now explored the opportunities of expansion and capitalizing the market share by penetrating in the suburban and rural areas and also mergers and acquisitions can be opted as a route of expansion. They had come up with various business models to penetrate not only in suburban, but also in the town and remote areas.

The growth in the diagnostic sector is witnessed due to the few factors like advancement in the diagnostic procedures, faster turnaround time, also increased availability of over-the-counter (OTC) tests by which clients can perform in the comfort and convenience at their homes.

Recently the in vitro diagnostic market is shifting gradually towards semi-automated and fully-automated laboratory instrument. The Indian pathology business is around 10,000 crore[6] in that Organized sector business is around 1,000 crore[6] only from the few top laboratories.

The diagnostic industry is now price-driven, there are certain kickbacks and demand of business referral payments in the absence of a regulatory body had made this industry very much competitive in nature .

The problems raised in the mind of researcher to select this topic to study are as follows:

RESEARCH QUESTIONS:

1. Marketing principles summarized as 7P's (Product, Price, Place, Promotion, People, Process & Physical Evidence) do have relationship with marketing practices in diagnostic laboratories?

2. Does marketing strategies have impact on marketing practices in diagnostic laboratories?

3. Will the 7 P's (Product, Price, Place, Promotion, People, Process & Physical Evidence stated as marketing principles) have correlation between themselves in diagnostic laboratories?

4. Whether the form of organization has an impact on marketing practices of diagnostic laboratories?

1.9. OBJECTIVES OF THE STUDY:

1. To study the relationship of marketing principles summarized as 7P's (Product, Price, Place, Promotion, People, Process & Physical Evidence) with marketing practices in diagnostic laboratories.

2. To study the marketing strategies impact on marketing practices in diagnostic laboratories.

3. To find the 7 P's (Product, Price, Place, Promotion, People, Process & Physical Evidence) stated as marketing principles correlation between themselves in diagnostic laboratories.

4. To find whether the form of organization (Chain, Owned, and Hospital) has significant   impact on marketing practices in diagnostic laboratories.

1.10. HYPOTHESES OF THE STUDY:

1. In diagnostic laboratories marketing principles summarized as 7P's (Product, Price, Place, Promotion, People, Process & Physical Evidence) have no significant relationship with marketing practices.

2. In diagnostic laboratories marketing strategies have no significant impact on marketing practices.

3. In diagnostic laboratories the 7 P's (Product, Price, Place, Promotion, People, Process & Physical Evidence stated as marketing principles) have no significant correlation between themselves.

4. In diagnostic laboratories the form of organization (Chain, Owned, and Hospital) has significant impact on marketing practices.

1.11. SCOPE OF STUDY:

THE CONTRIBUTION OF STUDY:

*   Proper guidance and awareness of various laboratory services and marketing practices to the customers.

THE BENEFICIARY OF STUDY:

*   Researchers who wanted to study the report for the reference.

*   People will come to know about various diagnostic services and marketing practices through this study.

The factors contributed towards the growth of IVD market are:

*   Increased health awareness and demand for the quality healthcare.

*   Changing demographics and prevalence of diseases.

*   Increased corporate presences.

*   Expansion of diagnostic market to towns and rural areas.

*   Growing number of insured lives.

- Changes in medical liability legislation.

- Developing clinical research market.

1.12. NEED FOR THE STUDY:

There are low entry barriers in the Indian IVD industry which had led to an increase in the number of laboratories, and the complete lack of standardisation. The inadequate insurance coverage is another significant concern for the companies. Responding to the demand for quality healthcare, most of the corporate laboratories had introduced cost-effective and convenient patient care packages.

The cost of testing equipment's in the laboratories contributed to almost 40 percent of the cost in a tertiary setup[11]. The diagnostic equipment's are cutting edge at the time of purchase; there is the threat of inevitable obsolescence within five to seven years of the setup.

Most of such equipment's are either imported or there exists a very few local reputed manufacturers. This leads to apportioning to higher treatment costs and lesser competitive edges and low utilisation rates resulting in undesired operating margins .

1.13. REASONS FOR THE CHOICE OF THE TOPIC:

The global IVD market is been segmented based on techniques, product type, usability, applications, end user and geography. In the techniques market is further segmented into eight categories such as immunoassay or immunochemistry, clinical chemistry, haematology, coagulation, microbiology, molecular diagnostics and point of care testing techniques.

Point of care technique was the highest revenue generating technique in 2013 and would continue to lead the global market through 2020 according to the research. Clinical chemistry is the second highest revenue generating technique in the current

market. Immunoassay is another attractive technique in this market. It would remain the third largest revenue generating segment by 2020.

However, molecular diagnostics is the fastest growing segment which is growing at a CAGR of 9.7% during 2013-2018[12]. Currently, molecular diagnostics involved large number of technically advancements due to which it is the most attractive technique of diagnosis amongst the medical practioner, clinician, and pathologist. Haematology and Microbiology are also popular techniques of diagnosis. Still molecular diagnostics had attracted the global IVD techniques market. Primary reason for this market to grow is technological advancements in each technique.

Usage automated instruments in the diagnosis had reduced the turnaround time of the test results. This had provided help to the global techniques market to grow at a faster rate than other segments in the IVD market .

1.14. LIMITATIONS OF THE STUDY:

The resource constraints and not so conducive research environment usually hampers research in a developing country like India. The present study may not be an exception to it. However more than it, various other limiting factors acted as blocking stone in the present research.

At the outset, the term marketing is still considered an alien word to healthcare industry in India. It is widely believed that health care service providers confine themselves to social marketing while chain health care service providers are too young to engage in serious marketing.

The researcher had to convince many regarding appropriateness of research. However, once convinced the research was appreciated especially for novelty.

It was extremely difficult for the researcher to trace managers/officials who were comfortable in giving information relating to marketing practices being adopted by the diagnostic laboratories.

Even those who were found awarded on this front were reluctant on sharing information either on account of being busy or confidentiality. The researcher remained on his toes getting desired information.

Moreover, technicalities involved in the questionnaire consisting of principles and their aspects like 7 P's, and relationship marketing etc. might have jeopardise the prompt and accurate reply of respondents.

The study may not be representing the entire country as diagnostic laboratories have been picked from Pune city. Still, the researcher is of the opinion that healthcare is the kind of industry wherein fundamentals are not changing with place.

Since most of the studies pertaining to problem in hand have been carried out in foreign countries, literature reviewed has mentioned most of such studies. Such a literature automatically creeps in the work of the researcher also.

The researcher, however, has tried his best that the peculiarities of India are nowhere ignored in the study.

The generalization of the finding of the study could be dump for similar situation in other parts of the market. The findings will be limited to area under study with respect to Owned, Hospital and Chain Diagnostic Laboratories. A survey method is subject to response error. Problems like incompleteness of information may be confronted during the data and information collection exercise.

Inspite of the said limitations, the researcher is quite satisfied with the outcome of the research and hope it can go a long way in filling the gap in this regard .

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CHAPTER - 2

PROFILE OF OWNED, HOSPITAL AND CHAIN DIAGNOSTIC LABORATORIES

2.1. INTRODUCTION:

This chapter helps in understanding the owned, hospital and chain diagnostic laboratories along with their examples. The diagnostic laboratories are classified and explained in detail.

The role of diagnostic laboratories in the treatment decision along with their ethics and code of conduct is discussed here.

2.2. DIAGNOSTIC LABORATORIES:

Laboratory is a place that is equipped with various biomedical instruments, equipment's, materials and reagents etc. for experimental works, research activities and investigative procedures by using the biological specimens like whole blood, serum, plasma, urine, stool, etc.

CLASSIFICATION OF LABORATORIES:

The world Health Organization (WHO) based on the biosafety had listed four different levels of laboratories. They are as follows:

BASIC LABORATORY LEVEL I:

Basic laboratory level I is the simplest form of the laboratory. This type of laboratory is adequate for working with the organisms which has low risk to the person performing the test procedure as well as to the members of the community.

For example food spoilage bacteria, common molds and yeasts etc. are the organisms that are categorized under Risk Group I by the WHO. These organisms are very much unlikely to cause any human diseases.

BASIC LABORATORY LEVEL II:

Basic laboratory level II is the type of laboratory in which there is moderate risk to the person performing the test procedure and a very limited risk to the members of the community. In this type of laboratory organisms like staphylococci, streptococci, entero bacteria except Salmonella typhi and others etc. are categorized under Risk Group II by the WHO. These organisms can cause serious human diseases but will not cause serious hazards since there is availability of effective preventive measures and treatment.

This type of laboratory need to be kept clean, should have enough space, should have adequate sanitary facilities and also equipped with autoclave for the sterilization of the equipments.

CONTAINMENT LABORATORY (LEVEL III):

Containment laboratory is the more advanced form of laboratory. In this type of laboratory there is higher risk to the person performing the test procedure and a lower risk to the members of the community. For Example, Tubercle bacilli, Salmonella typhi, HIV, Yersina and others etc. are the organisms which are categorized under Risk Group III by WHO.

The categorization of the laboratory is done basically to remove those organisms and activities which are particularly hazardous. The organisms categorized in this type of laboratory are easily transmitted through various ways like airborne, ingestion of contaminated food or water and also parental route. This type of laboratory should have a controlled access by the authorized staff in a separate room along with the microbial safety cabinet.

MAXIMUM CONTAINMENT LABORATORY (LEVEL IV):

Maximum containment laboratory is the type of laboratory in which working is with the different types of viruses.

In this type of laboratory there is higher risk to the person performing the test procedure as well as to the members of the community.

For Example, Small pox, Ebola, Lassa fever and others are the organisms which are categorized under Risk Group IV by WHO. Most of these organisms cause serious disease and are also readily transmitted from one person to another. This type of laboratory should have a controlled access by the authorized staff in a separate building.

2.3. LABORATORY ORGANIZATION:

Organization is defined as a system, an orderly structure, keeping things together into a working order, and making the arrangements for undertakings which had involved the co-operations. The focus is on arrangements which enable the peoples working together and accomplishing their common objectives in an efficient, planned and economic manner which is also called as goal congruence.

In a single medical laboratory at least there are two interlocking components of organizations. They are head and other staff of the laboratory having their own duties and responsibilities.

2.3.1. STRUCTURE OF MEDICAL LABORATORY SERVICES:

The laboratory can be classified as owned, chain or hospital diagnostic laboratory.

OWNED DIAGNOSTIC LABORATORIES:

Owned diagnostic laboratories are the laboratories which are smaller in size and business. These are the laboratories which are been owned by the Pathologist or the DMLT degree holder. In this type of laboratories mainly the routine tests are performed and the few specialized tests are outsourced to the nearby referral laboratory. This type of laboratory is near by the medical practioner where in patients are referred by the nearby practioner.

This type of laboratories supports primary health care in investigating, controlling and preventing major diseases in the country. They also promote health care by integrated health education.

The main activities of this type of laboratories are as follows:

- The main activity is to investigate by the referral or testing on site infection and health problems affecting the local community. Their investigations will include identification of bacterial diseases, parasitic diseases and other causes of illness. The tests are performed by simple methods.

- They assist the medical practioner in deciding the severity of a patient's conditions or diagnosis of the patient.

- Incase if the test are not performed in their laboratory they will collect and refer the specimens for testing to nearby referral laboratory.

- They also keep the records, which can be used by health authorities in health planning and for epidemiological purposes .

EXAMPLES OF OWNED DIAGNOSTIC LABORATORIES:

1. SIDDHI PATHOLOGY LABORATORY:

This is a unique 1000 sq.ft private laboratory founded in 2006 for fulfilling the growing needs of patients and improves its quality management. In 2006 this laboratory was established as a small lab for performing all the basic investigations but now it had blossomed into a fully automated computerized lab with state of art technology.

The laboratory performs both routine and special investigations for their walk in clients and they also cater the diagnostic needs of major hospitals and institutions which are in and around Pune. The laboratory is specialized in providing prompt and

accurate service in the field of Pathology with the International Standards ISO 9001:2008 due to which it is able to deliver quality reports and services.

They regularly take extra efforts in the internal and external quality control checks to assure its valuable customers and referring medical practioner the world class quality.

They have started reporting results by SMS as well as by e-mail since customer's convenience and satisfaction had always been an upfront consideration. Thus customers can know their results while on the move or from the comfort of their homes.

The technologies and infrastructure at par with the current standards are possessed by the laboratory along with the aim of enhancing customer's satisfaction.

The features of the Siddhi Pathology Laboratory are as follows:

- Earliest reporting of the report via E-mail.

- Specialized and regular testing of the samples.

- The team of renowned Pathologists and Microbiologist along with the phlebotomist.

- Pimpri Chinchwad's best and ISO certified private pathology laboratory.

- Serology tests like ANA, DS DNA, and ANA BLOT etc.

- In case of Microbiology section the investigation is done through Bactec, AFB and Routine Culture & Sensitivity.

- Fully automated Siemens Hormone Assay and Tumors Marker computer operated system in the laboratory for investigation of samples.

- Bone Marrow with Bone Marrow Biopsy facility setup along with haematologist opinion provided to the patients.

- Histopathology reporting by the renowned histopathologist.

2. DHANDE LABORATORY:

It was established in 1988 as a small Laboratory but over the period of time it has blossomed into a fully automated computerized lab. For the Walk in customers as well major hospitals in and around the periphery the laboratory performs the investigation. Dhande laboratory have qualified phlebotomist which collect the sample properly and also process and report the results properly which helps the practioner in further treatment decisions of the patients.

They now have their collection centers in and around the periphery to facilitate collection of samples and delivery of reports. Sample processing is done in the central lab under the supervision of renowned pathologist. Dhande lab also collects the samples from health camps organized by various organizations for which they have well trained technicians.

Internal and external quality control checks at Dhande lab have assured the clients and referring medical practioner the world class quality. Therefore the laboratory had always taken pride in quality reports and services.

They have also started reporting results by electronic media like SMS, e mail etc along with the print media thus which had resulted in the customers convenience and satisfaction. Thus customers can know their results while on the move or from the comfort of their homes.

3. NUCLEUS PATHOLOGY LABORATORY:

Dr. S. K. Gokhale in the year 1989 started the laboratory in Pune. The area of laboratory is of 1000 sq. ft. The laboratory offers consultation with the doctors and has a very spacious waiting room for the customers along with the special areas for collection of samples and their processing. The laboratory has well equipped advanced analyzers and instruments with a power back up which can perform

different tests related to haematology, biochemistry, Serology, Microbiology etc. uninterrupted even during power failures.

The laboratory handles heavy workload daily with the support of all modern facilities and adequate manpower. They also collect the samples from the home as an additional service rendered for their customers.

HOSPITAL DIAGNOSTIC LABORATORIES:

Hospital laboratories are the laboratories which are generally attached to the hospitals for catering the as and when required needs of the medical practioner and patient.

In case of bigger hospitals the laboratory is functioning as a separate unit in the hospital while in case of smaller hospital the samples are referred to the nearby laboratory.

The hospital laboratories received samples of the patients visiting hospital from their practitioners for analysis and report the result immediately in case of emergency situations. This laboratory offers 24 hr service to the practioner as well as to the patients. These laboratories can be called as the reference laboratory since routine as well as specialized tests are done.

For the extremely specialised tests, samples are processed in the research laboratory. Hospital laboratory recently have started receiving the samples from the nearby areas also apart from their hospital samples which has resulted in the increase of sample size. Therefore the hospitals can now perform the test at very low cost and also can provide it at low cost to the customers or patients.

The test can be performed at a very low cost if a particular laboratory specializes in a rare test and receives the specimen along with the money from various other laboratories and send the result through electronic or print media. There are three

types of medical laboratories according to the types of investigations carried out in many of the countries. They are as follows:

1. Clinical Pathology

2. Clinical Microbiology

3. Clinical Biochemistry

1. Clinical Pathology: Clinical pathology is the stream of diagnostics in which haematology, histopathology, cytology, routine pathology etc. are performed.

2. Clinical Microbiology: Clinical microbiology is the stream of diagnostics in which bacteriology, mycobacteriology, virology, mycology, parasitology, immunology, serology etc. are performed

3. Clinical Biochemistry: Clinical biochemistry is a part of diagnostic in which Biochemical analysis, Hormonal assays etc. are performed.

Blood bank is a separate entity. Blood bank also requires the laboratory facilities. In this laboratory to find out infectious diseases in the blood collected through microbiological analysis is done.

Pathology is required for the blood grouping, haematology & cross matching reactions. Molecular diagnostic is the advanced addition to the above mentioned laboratories.

Laboratory is generally divided into two sections, each of which being subdivided into multiple units. These two sections are

Anatomic pathology: In case of anatomic pathology the units studied are histopathology, cytopathology, and electron microscopy. Academically, each unit is studied alone in one course.

Other courses pertaining to this section include anatomy, physiology, histology, pathology, and pathophysiology.

Clinical pathology: This includes clinical microbiology which encompasses five different units. They are as follows bacteriology, virology, parasitology, immunology, and mycology.

Clinical Chemistry: The units under this section include instrumental analysis of the components of blood, enzymology, toxicology and endocrinology.

Hematology: This is the section which consists of analysis of blood cells with the help of automated machine or manual method. This section includes coagulation and blood bank.

Reproductive biology: In this section analysis of sperm is done along with sperm bank and assisted reproductive technology.

The distribution of laboratories in the healthcare institutions varies greatly from one place to another. For example for microbiology, some health facilities have a single laboratory for microbiology, while others have a separate laboratory for each unit, with nothing called a "microbiology" lab.

The following are the detailed breakdown of the responsibilities of each unit of laboratory:

The microbiology is the department which receives almost any of the clinical specimens like swabs, feces, urine, blood, sputum, cerebrospinal fluid, synovial fluid, also if possible infected tissue. In this department the cultures are done for the samples for looking suspected pathogens and if they are found, they are further identified based on biochemical tests.

If the pathogens are found in the culture then the sensitivity testing is done to find the resistance or sensitivity of pathogens to different types of medicines. The results are reported for the identified pathogens their type and the sensitivity or resistance to the type and amount of medicine.

Parasitology is a part of microbiology unit that investigates parasites. This unit does the identification for various samples like faeces, blood, urine, sputum etc.

Virology is the unit which is concerned with the identification of viruses in the specimens like blood, urine, and cerebrospinal fluid etc.

Hematology is the unit which works with whole blood for doing various tests like well RBC count, WBC count Platelets, blood group etc. For the coagulation it requires citrated blood samples to analyze blood clotting times and coagulation factors.

The clinical biochemistry receives the samples like serum or plasma. Serum is used for testing the chemicals present in blood like lipids, blood sugar, enzymes, and hormones etc.

Toxicology is the unit which tests for pharmaceutical and recreational drugs for the samples like urine, blood samples etc.

Immunology or Serology is the unit which uses for the identification purpose the concept of antigen-antibody interaction. The compatibility of transplanted organs is also determined in this unit.

Immunohaematology or Blood bank determines the blood groups, and also performs the compatibility testing on the blood of donor as well as recipients. This unit determines a patient's blood type and Rh status, checks for antibodies to common antigens found on red blood cells, and cross matches units that are negative for the antigen.

Urinalysis tests the urine for many analytes. Few of the health care providers like urologist, nephrologists have a urinalysis laboratory. The components in the urine are analyzed. If the chemicals in the urine are to investigate then the specimen is

processed in the clinical biochemistry lab and if the cell studies are to be studied then it is processed in the cytopathology laboratory.

Histopathology is the unit in which the biopsies are processed and evaluated at the microscopic level.

Cytopathology is the unit examines the smears of cells from all over the body like cervix for the evidence of inflammation, cancer etc.

Cytogenetics is the unit which involves usage of blood and other cells in the karyotype which is helpful in prenatal diagnosis like Down's syndrome.

Surgical pathology is the unit which examines organs, limbs, tumors, fetuses, and other tissues biopsied in surgery like breast mastectomys .

Hospital laboratory main activities:

- They investigate different types of infections through the various types of samples.

- Specimens are processed and results are reported 24 by 7.

- Specimens those are not processed are referred to the reference laboratory.

- They keep the record and also follow the safety procedures.

- They also participate in the external quality assurance programme organized by the laboratory.

For Example:

1. RUBY HALL CLINIC:

 The laboratory attached to the hospital functions 24 hours for providing the laboratory facilities to the patients and assisting the medical practioner of the hospital in proper treatment of the patient. The laboratory of the hospital is accredited by various authorities like NABL accreditation.

The laboratory setup of the hospital is fully automated for carrying over the specimen testing. The laboratory performs routine as well as specialized test which are more than 500 tests. The laboratory performs tests from various areas like hematology & coagulation, biochemistry, immunoassay, microbiology & serology, clinical pathology, molecular Pathology, histopathology & cytology. The routine biopsies are done by the well renowned doctors.

2. SAHYADRI HOSPITAL:

In the year 2000 the laboratory was established, by the name of "Sahyadri Laboratory and Haematology centre" (SLHC). The laboratory was first center of its kind in Pune providing all the tests related to haematology centre as well as clinical consultation under one roof.

The laboratory services quickly expanded with the investigations in the routine and special tests as there was a growth in the "Sahyadri Group". Thus the chain of Sahyadri Speciality Labs (SSL) was formed which provided laboratory diagnostic services to Sahyadri group of hospitals in Maharashtra & Gujarat. The laboratory had a distinct and prominent name in the city of Pune and across the state & country for its speciality and quality services. They use state of the art equipment and follow all international guidelines in generating a quality report.

The laboratory with the help of qualified technicians and a team of highly qualified, reputed & dedicated consultants dose the investigation 24 by 7. One of the laboratory located in Pune at Karve road is accrediated by the NABL. The continuous effort is taken in ensuring that the various staff of the laboratory understands the quality policy & all the quality documentation, along with the quality manual and implements the quality system procedures all the time. Therefore Sahyadri Specialty Labs provides the highest quality of investigation and Medical Laboratory services.

The laboratory had implemented the QMS with the objective of minimizing the investigation errors, minimizing customer complaints & achieving maximum growth of the lab which resulted in achieving the highest standard of service and the most reliable results at competitive rates.

The laboratory also had committed to the ethical professional practices by offering the highest priority to the client's confidentiality along with the reporting of test values without any biasness.

The lab had participated in the BIORAD External Quality Assurance Scheme for maintaining the high quality of investigations. The lab offers home collection facility in Pune for those who cannot come to their lab or collection center, they have the facility of home visits where in clients blood is collected by qualified phlebotomist in a scientific way.

The laboratory has a very have effective network with the help of it specimens are collected and also reports are delivered in and around the periphery. Therefore most of the investigation reports are delivered to the clients within few hours. The laboratory in case of urgency or on the request of the clients provides the results through SMS & emails.

All the processing units and collections centers are also supported by LIS, which allows the connectivity between all its centers. The laboratories most of the major instruments have bi-directional interface to LIS, which minimized data entry errors.

Thus the reports are immediately accessible through the network at all the centers resulting in reducing turnaround time. As SSL is accredited by NABL most of the clinical trials are also run.

They offered a wide menu of diagnostic services which includes routine and special tests in the following categories:

- Haematology

- Clinical Pathology

- Biochemistry

- Immunochemistry

- Serology

- Microbiology

- Molecular Biology

- Flow Cytometry

- Cypathology

- Histopathology

3. KEM HOSPITAL:

K. E. M. Hospital laboratory is operational since twenty five years. It is the only laboratory in and around pune with a Platelet Aggregometer instrument to investigate the platelet function defects which are very rare like Glanzmann's Thromboasthaenia, Bernard Soulier Syndrome etc. The laboratory along with the routine and specialized investigations focuses on pediatric heamatology.

It also performs investigations of all the cases of anaemia like the deficiency anaemia, the haemolytical disorders, the haemoglobinopathies and aphasias etc. The laboratory has the instruments and analyzers which investigate Leukemias including cytochemistry, i.e. LAP Score, PAS, Peroxidase etc. along with the facilities for conducting bone marrow aspirations and biopsies. The laboratory performs the tests for hemophilia, thrombocytopenia, thrombotic Disorders etc. through coagulometers and coagulation factor assays. The primary screening tests for thrombophilia is also available in the laboratory. By the participation in the external quality control programs the unit is able to maintain the highest standards of Quality Control.

The laboratory has various advanced instruments like autoanalyser, immunoanalyser, PCR Unit, Hitachi Randox Random Access Analyzer and Mini Vidas Bio Merieux. The laboratory of KEM hospital is the only laboratory in around the periphery of Pune which does the investigations for the metabolic errors in the bone. Therapeutic drug monitoring, blood gas analysis, hormone concentrations in plasma are the investigations which are done in the endocrine Disorders and other autoimmune disorders are some of the other facilities available in this laboratory.

The Microbiology Unit of the K.E.M. Hospital is the leading automated clinical microbiology laboratory in and around the periphery of Pune which dose the investigations of the samples of hospitals as well as of the other hospitals and clinics. The laboratory does the isolation of pathogenic bacteria, Fungi and Mycobacterium etc. by the help of automated blood culture system for rapid identification. This unit also does the serological detection of HIV, HBsAG, HCV, Typhoid, Rickettsial fevers, and rheumatoid factor etc.

The KEM Hospital Research Center conducts various research projects under the microbiology unit of the hospital like Effects of maternal nutrition and low birth weight amongst newborn babies for USAID-ICMR, Bacterial pneumonias and Meningitis in neonates, Meningitis Vaccine Project for WHO-Serum Institute of India, J.E. Vaccine Project for ICMR and Avert HIV for Tata Trust.

The newer tests and techniques, which are used in the research projects, are later successfully incorporated as routine diagnostic tests by the help of implementation of successful technology transfer.

The histopathology unit is equipped with sophisticated instruments and the latest technology. It has recently established an Immunohistochemistry section that has the facility for all RHC- Biomarkers.

The Cytology unit of the laboratory has the facility for the fine needle aspiration of body fluid for the cytology and PAP smear. The Cytopathology section is equipped with a cytocentrifuge. The liaison of laboratory with the radiology department for imaging guidance under the Computed Tomography renders all body sites accessible to the fine needle aspiration for the FNAC and biopsy, thus it allows the consistent tissue diagnosis of the patients without any delay.

4. SAI SNEH HOSPITAL & DIAGNOSTIC CENTER:

SAI SNEH is a multi- specialty hospital with a diagnostic center. The hospital has diagnostic center with various services of imaging and invitro diagnostics. The hospital is ISO 9001-2008 certified which helps in attracting a significant number of clients from Pune and its nearby periphery. The hospital dose the routine as wells specialized tests.

The laboratory also dose research activities in various fields in basic and applied collaboration with teaching & training for the purpose of advancement of medical education, health and prevention, relief of sickness, the development of medical and health services of allopathic, ayurvedic, homeopathy, unani or any Yoga and naturopathy in the interest of good patient care.

The laboratory has a very have effective network with the help of it specimens are collected and also reports are delivered in and around the periphery. Therefore most of the investigation reports are delivered to the clients within few hours.

The laboratory in case of urgency or on the request of the clients provides the results through SMS & emails.

5. NOBLE HOSPITAL:

The Laboratory is in the hospital premises functioning as a separate unit which is committed to offer a top-quality patient care.

The laboratory is functioning 24 by 7 for providing the support to the medical practioner in the treatment decisions.

The laboratory doses the testing of specimens precisely and accurately which helps in accurate reporting of the results and further proper diagnosis of the infections. To offer a quality in the investigations the laboratory has started internal quality control and external quality assurance measures.

The laboratory is equipped with the latest technology, instruments and analyzers which help it in performing the routine as well as specialized tests in different areas like

- Hematology

- Biochemistry

- Serology

- Immunology

- Clinical Pathology

- Microbiology

- Histopathology and Cytology

- Immunohistochemistry

- Infertility Diagnosis

The laboratory has a highly skill set phlebotomists along with the renowned doctors in above mentioned areas. The laboratory also offers the service of home collection of the specimens with prior appointments. They also provide special health packages for the clients at very concessional rates.

The laboratory in case of urgency or on the request of the clients provides the results through SMS & emails.

6. ADITYA BIRLA MEMORIAL HOSPITAL:

The Aditya Birla Memorial Hospital laboratory is accredited by NABL. The diagnostic laboratory offers a full range of services under a strict norms and international guideline for laboratory procedures which helps in the quality investigations.

In the laboratory the samples are collected and transported from sample collection unit to the processing unit through the use of pneumatic chute services which are first time in India thus avoiding contamination of the specimens and saving the time.

The laboratory has well trained phlebotomists and doctors for performing the routine as well as specialized tests with the help of advanced analyzers and instruments. To minimize the errors and biasness and offer quality results the laboratory has used the laboratory information system (LIS).

Through the LIS the test reports are easily accessible in any of the wards, OPD, ICU etc of the hospitals thus effectively saving valuable time.

The laboratory works 24x7 for patient services. Urgent (STAT) samples are processed on priority and reported immediately .

7. INAMDAR MULTISPECIALITY HOSPITAL:

Inamdar multispecialty hospital's laboratory offers 24x7 services and is equipped with the best fully automated instrument and machine for the testing of specimens.

The laboratory performs specialized tests through well-calibrated & supervised equipments & instruments like

- Haematology 5-part cell counter from Sysmex

- Haematology Analyzer

- Autoanalyzer & Semiauto Instruments for biochemistry tests

- Hormonal assays and specialized tests through Mini-vidas

- ABG analyzer for blood gas analysis

- Electrolyte Analyzer from Easylyte

- NYCOCARD Reader for the rapid diagnostics

8. SHREE HOSPITAL:

The founders of Shree Hospital are Dr. Shrihari Dhore Patil and Dr. Mrs.Bharati Dhore Patil. The main motto is to "Provide quality medical care at affordable cost.

Shree hospital and its laboratory are functioning since 1988 and have been there in providing high quality health care services to pune as well as its nearby periphery area. The hospital lab is highly regarded for its exceptional patients & family centered care.

Shree Hospital through the unit of Pathology provides a full range of diagnostic and assessment services. The unit provided microscopic examinations of tissue samples, blood tests, drug monitoring, viral studies, body fluid analyses, and other tests, with a wide range of subspecialty areas. The specialties include hematopatholgy, breast pathology, dermatopathology, cytopathology and aspiration biopsy, renal pathology, special hematology and coagulation tests, and perinatal and pediatric pathology.

9. KOTBAGI HOSPITAL PVT LTD:

A progressive, full service well equipped 100 bed Hospital offered advanced medical and surgical care as well as specialty support and outpatient services. Kotbagi Hospital Pvt Ltd. was established in 1967 and subsequently migrated into a new place in 1991.

It is strategically located at Pune Municipal Corporation and Pimpri Chinchwad Municipal Corporation in Aundh area in city of Pune which is 100 miles away from Mumbai.

They aspired to become the comprehensive, accessible, integrated health care delivery system recognized for advanced clinical care, quality excellent service, cost

effectiveness and commitment to improving the health status of the communities they serve.

10. DEENANATH MANGESHKAR HOSPITAL & RESEARCH CENTER:

This is a largest multi-specialty hospital started functioning from 2001 in the heart of Pune city. Deenanath Mangeshkar Hospital is having a capacity of about 800 beds, 12 operation theaters, a sophisticated ICU, blood bank, a digital radiology unit, a kidney transplant unit, and many other facilities.

The hospital laboratory has advanced instruments and analyzers for the investigations along with the finest medical and administrative personnel.

The laboratory is equipped with latest technology for performing tests of various areas like haematology, Microbiology, biochemistry, molecular diagnosis etc. The laboratory offers wide range of services ranging from imaging diagnostic to in vitro diagnostics.

There are highly qualified and renowned doctors like clinical haematologist who are specialised in haematology, haemato-oncology and bone marrow transplantation, leading the clinical services to the adult & Paediatric patients and also haemato-pathologist, supporting in the haematopathology services.

The laboratory had dedicated haematology unit with adequate and well trained technicians and doctors to handle chemotherapy drugs thus allowing them to provide chemotherapy on the patients.

The diseases treated under clinical Haematology are:

- Acute Leukemia & Chronic Leukemia

- Plasma Cell disorders

- Hodgkin / Non Hodgkin Lymphoma

- Haemoglobin and platelet disorders

- Myeloproliferative Neoplasms

- Thalassemia and other haemoglobinopathies

- All types of coagulation and thrombotic disorders

The Molecular Diagnostic Lab is operational since 2008 and has started many tests through various techniques as follows:

- Conventional PCR: for detection of mycobacterium tuberculosis, many human genetic, oncology and hematological disorders, HLA typing, prenatal detection of thalassemia.

- Real-time PCR: for quantitative estimation of viral loads (CMV, HBV) and BCR-ABL minimal residual disease detection.

- NASBA: for HIV viral load detection.

- Fluorescence microscope: for fluorescence in-situ hybridisation (FISH) test in leukemias and solid tumors.

- Line-probe assays: for detecting drug resistance in TB, EGFR and KRAS gene mutations.

- DNA banking: for rare genetic disorders or cancers for future testing from any part of the world

11. DHANWANTARI HOSPITAL:

The Pathological Laboratory attached to Dhanwantari Hospital is governed by Dhanwantari Medical Foundation. It was managed & run by Mr.Pradeep Vanza & Mrs.Hemlata Vanza with Dr.Vikas Mandlecha M.D. (Path) as associate pathologist.

The laboratory is fully air conditioned with full generator & inverter backup thus allowing the uninterrupted analysis of the specimens. The spacious lab had glass partitioned working area separated from the seating arrangement for patients. The working of the lab is from 8.00am till 10.00pm & all night emergencies are also

attended. Samples from O.P.D, I.P.D of Dhanwantari Hospital as well as from other private practitioners nearby are also processed.

All types of routine haematology, biochemistry, microbiology, parasitology investigations are done in the lab & specialized tests are outsourced to renowned recognized labs .

The Lab had different instruments like:

- Fully automated haematology Cell counter

- Fully automatic electrolyte analyzes

- Semiautomatic biochemistry blood analyzer

- Calorimeter

- Glucometer

- Incubator & Oven

CHAIN DIAGNOSTIC LABORATORIES:

These are laboratories which are functioning in a very organized way. The laboratory structure consists of referral laboratory or satellite laboratory attached to the franchise centers.

The reference laboratory is located at one of the center place where all the necessary staff, equipments is functioning and the franchise centers are around the reference laboratory or any peripheral areas which send the specimens to the reference laboratory.

The franchise centers are further classified as direct customer or collection centers. In case of direct customer the facilities are provided directly by the reference laboratory like in case of collection centers. The chain diagnostic appoints the direct customer majorly the bigger hospitals or the doctors providing huge sales. The deposit as a

purpose of security is taken from the direct customers and it varies from company and person to person.

The reference lab provided facilities to the collection center. The size, shape and colour of the premises are decided by the reference lab and it varies as per the organization. The deposit as a purpose of security is taken and it varies from company and person to person.

Following are the facilities provided by the reference laboratory to the collection centers as well as to the direct customers:

- To collect the specimens various containers are provided like vacutainer tubes with colour coding for collection of blood and other samples.

- Sample requisition forms.

- Biohazard bags for holding the specimen and requisition form

- Samples pick up and report delivery.

- Promotional materials like leave behind, posters for different types of tests and health packages.

- Sales representative for the promotion of tests

- Discounted rates for the tests which are done regularly

- Opinion of experts if required for deciding particular type of test or for the interpretation of results.

- Cold chain for the specimens if required.

The reference laboratory receives the samples from direct customer or collection center in a small plastic bag, along with the form and specimen. The laboratory provides the identification number or accession number to the specimen for the proper reporting of the results.

The accession number is generally in the form of barcode that is scanned by automated analyzers and the tests are processed accordingly through the Laboratory information system. In the LIS while accessioning the client information, test requested are filled and any other details related to the test are filled. This helps in knowing through the system the number of tests processed and to be processed.

The results are displayed digitally through LIS and are accessible to the concerned person. To maintain the security of the result the reports are also provided with the passwords. The reports are stored in the system and if required can be accessed as and when required.

The reference lab as such receive the sample from direct customer and collection center in bulk which may result in running of the test in bulk thus minimizing the cost of test.

The specimens are processed in the sophisticated automated analysers which require fraction of the sample. There are few laboratories which use robotic sample handlers thus optimizing the workflow and reducing contamination risk of sample.

The specimens are drawn throughout the day and are delivered in the lab. The specimens collected throughout the day are processed in the evening and overnight to ensure results are available the following day.

The credibility of laboratories is paramount to the health and safety of the patients relying on the testing services provided by the laboratories. The international standard in use today for the accreditation of medical laboratories is ISO 15189 - Medical laboratories - particular requirements for quality and competence. The accreditation is done by the joint commission, College of American Pathologists, AAB (American Association of Bio analysts), and other state and federal agencies. CLIA or the Clinical Laboratory Improvement Amendments also dictate testing and personnel.

The accrediting body in Australia is NATA, all laboratories must be NATA accredited to receive payment from Medicare.

In France, where accrediting body is COFRAC (COFRAC), in 2010, modification of legislation established ISO 15189 accreditation as an obligation for all clinical laboratories.

In the United Arab Emirates, the Dubai Accreditation Department (DAC) is the accreditation body that is internationally recognized by the International Accreditation Laboratory Corporation (ILAC) for many scopes including Medical Laboratories, Testing and Calibration Laboratories and Inspection Bodies .

The chain diagnostic carries following activities:

- There is a professional code of conduct.

- They perform a range of special as well as routine tests which are not done by the other laboratories like forensic and genetic investigations etc.

- They are engaged in the research so that newer tests for the different diseases identification can be done.

- To collaborate with international organizations in promoting the laboratory standards.

- To organize seminar, prepare training manuals for the different laboratory training programmes.

- To participate in the prompt laboratory investigation of epidemics and outbreaks of serious illness among communities like swine flue.

FOR EXAMPLE:

1. Dr. LAL PATH LABS DIAGNOSTICS CENTRE:

Dr Lal Path lab was founded in 1949 by Dr. S. K. Lal as a blood-testing centre, now it is one of the largest and huge diagnostic lab in India. Dr. Lal Path Labs (LPL) a

pioneer in diagnostic services had advanced technology and equipments to carry out over more than 1,650 different tests.

Dr Lal Path lab included more than 1,000 collection centers and more than 2,500 pick-up points throughout the country. The lab is growing at 40 % compounded annual growth rate. The annual revenue of the company in 2010-11 was INR 250 crore (US $60 million) approximately. Dr Lal was an ardent technology-enthusiast.

For the first time in the healthcare industry in 1998, they used FoxPro based reports when its competitors were using typewriters to type out reports. Since then, the organization has seen repeated upgrades in IT infrastructure. The tech-savvy management is always in the process of enhancing its technology infrastructure to extract as many benefits as possible. In the last two decades, LPL management had significantly invested in multiple standalone automation applications. Line-of-business (LOB) applications on multiple platforms included IBM's AIX based solution, Tally for financial accounting, ERP from Ramco for purchase and inventory management, and an in-house designed application for payroll.

LIMS is the backbone for LPL's laboratory and information management system. It supports laboratory operations from managing raw test data, final test results as well as to set and record quality parameters with respect to equipment, tests and turnaround time (TAT).

2. MEDINOVA DIAGNOSTIC SERVICES:

Medinova a diagnostic services was established in the year 1985.The laboratory offers both imaging diagnosis under one roof. Medinova is able to create a brand name in the market because of its quality services over the period of time along with strategic marketing efforts. Medinova has built trust among the doctors which has resulted in the spread of business throughout the country. The latest automated machinery

laboratory offers quality investigations as well as enables to meet international standards.

MEDINOVA laboratory is managed by an eminent Board comprising Directors. Every Medinova Centre has on its roles professionals of high caliber belonging to different health care disciplines.

The laboratory has trained and renowned medical professionals like radiologists, biochemists, pathologists, microbiologists, etc., apart from skilled phlebotomists to carry out the investigations. Medinova provides the expert opinion regarding the diagnosis, treatment and results to their clients.

Medinova had successfully completed consultancy assignments for projects at Nigeria and Zambia funded by African development Bank thereby marking its presence in the International arena. Thus Medinova has expertise to undertake overseas turnkey projects.

Medinova had started training & research institution in pune which imparted training in the various procedures of diagnostic tests due to the availability of experts and trained phlebotomists.

The quality service of laboratory has enabled laboratory to earn enormous goodwill. The laboratory has started various promotional schemes like health packages or test packages which are offered at discounted prices.

The laboratory also conducts free health camps as a part of CSR activity. Till today more than 2 million people have benefited from such camps and packages.

Medinova keeps the pace with the ever changing medical technology by upgrading its instruments and analyzers. Medinova is expanding itself by setting up more collection centers and attaching direct customers. Medinova also had plans to expand its reach overseas through mergers and acquisitions.

3. PATHCARE LABS:

PathCare Labs Limited is an emerging diagnostic service provider having the reference laboratory at Hyderabad, A.P. The laboratory is accredited by various bodies like NABL, CAP, etc.

The laboratory has highly sophisticated instruments and analyzers which ensures quality investigations. The laboratory also offers dedicated customer service. The laboratory has started functioning since 2008 but within a span of just 8 years it has made its presence in the country. Pathcare has regional labs located at various places like Delhi, Nagpur, Chennai, Bangalore, Mumbai, Salem, Trivandrum, Lucknow, Kolkata, Vijayawada, Vishakapatnam, Bhopal, Indore, Trimulgherry, Mehdipatnam and Pune.

The laboratory has plans to expand through various ways like appointing the collection centers at various places, joint venture etc.

The laboratory offers services 24 hrs. The turnaround time is very less for the specialized as well as routine tests. The laboratory has well qualified doctors and trained technicians which enables it in providing the efficient, reliable and accurate diagnostic testing services.

The laboratory offers test at an affordable price to the clients as well as it also offers package of tests. PathCare offers almost the entire range of Clinical Diagnostic Tests.

4. SUBURBAN DIAGNOSTICS:

The laboratory is established in 1994 with headquarter in Mumbai. The laboratory has many diagnostic centers at prime locations of the cities. The laboratory is thus able to capitalize the advantage of location. Suburban Diagnostics has well qualified pathologists, radiologists, physicians, cardiologists, technologists and support staff thus ensuring accuracy and reliability in the results of the clients.

The company had continuously invested in large lab spaces, advanced diagnostic systems sourced from world leaders in their respective fields. Suburban Diagnostics also offers free health checkups as a part of CSR activity.

Suburban Diagnostics conducts a broad range of tests which are essential to the basic management of patient care allowing physicians to detect diseases earlier, make diagnosis, prescribe therapies and monitor patient results. To conduct these tests, they had set up the best infrastructure and procured state of the art equipment from the leading companies across the globe.

Suburban Diagnostics can help with services ranging from a specific health checkup to a complete health checkup. They understand that people are not ready to admit when something is going wrong in their body. People want to ignore their health and fight it on their own until something is seriously wrong. By that time, it could be too late and patients regret missing a chance to get a preventive health checkup.

Home service is a provision which they provide to all those who are either medically challenged or too busy with the hassles of life.

5. METROPOLIS HEALTHCARE LIMITED:

They are the Pathology specialists delivering over 30 million tests a year, catering to more than 10,000 Laboratories, Hospitals, Nursing homes and 2,00,000 Consultants. With 34 years of experience in delivering accurate reports, Metropolis has earned the reputation of being India's most respected and only multinational chain of diagnostic centers with presence in UAE, Sri Lanka, South Africa, Kenya, Mauritius and Ghana. Driven to make a difference, their wide network includes 130 state-of-art Laboratories across India with over 1000 collection centers, processing over 4500 varieties of tests and supported by an efficient team of more than 3500 people. Equipped with cutting edge technology, innovative work equipment, expansive logistics network and

rigorous processes, Metropolis ensures and delivers precision and accuracy in every single test; each time, every time.

In the last 10 years, Metropolis has expanded into new service lines like Clinical Trials, Hospital Lab Management, Home Health Services, Preventive Health Check-ups and Corporate & Wellness Solutions. Metropolis is at the forefront in adopting cutting edge technologies and services that contribute new revenue streams and has positioned the company on the pedestal it is today.

Today, they are one of the few laboratories that have received the College of American Pathologists, accreditation, the global gold standard in Laboratory Accreditation. Twelve of their laboratories in India has received the accreditation of National Accreditation Board for testing and Calibration Laboratories.

In addition, the central laboratory in Mumbai also adheres to Clinical Laboratory Improvement Amendments program and also follows the guidelines laid by GCP and GLP. Their unit in South Africa is accredited by South African National Accreditation System is the only accreditation body approved by South African Government.

Their in-house logistics team comprising of more than 300 logistic associates travel more than 15,000 km per day to over 200 dedicated routes across regions ensuring minimum transit time. Their robust alliance with renowned logistics players like Blue Dart, TNT, DHL, World Courier help us deliver shipments efficiently across the country and globally. Adhering to core quality standards and best practices, they utilize IATA approved packaging which ensures sample integrity till it reaches the destination for processing.

An interactive website offers exhaustive features like online ordering, sample tracking, appointment scheduling, reporting, e-prescription, billing, payment, exhaustive medical library and information etc .

6. SRL RANBAXY DIAGNOSTICS:

SRL RANBAXY Diagnostics is a leading and reputed Pathology Lab network. They are the only Pathology Lab Network in India to have 11 Reference Labs, 4 Centers of Excellence and 273 Network Laboratories with a footprint spanning over 6700 Collection Points. They offer more than 3500 tests, using the most advanced state-of-the-art technology supported by our highly skilled personnel.

Today, SRL is conducting more than 107,000 tests in a day, ranging from simple to high-end tests. Through its network of laboratories, SRL offers an all-inclusive collection of diagnostic facilities including an extensive range of specialties in Pathology services.

In addition, SRL also offers a host of other services like Radiology modalities including Computed Tomography (CT), Diagnostic Radiology (X-Ray), Magnetic Resonance Imaging (MRI), Ultrasound and (PET) Positron Emission Tomography.

SRL is known to be one of the most renowned Pathology Lab centers that has a dedicated R&D division, which is ISO certified and also recognized by the Government of India's Department of Scientific and Industrial Research. SRL is a trusted name in the field of Pathology services providing quality diagnostic, prognostic and monitoring services to other path labs, hospitals and patients.

It also provides Clinical Research services by conducting Phase I-IV clinical trials for Multinational and Indian pharmaceutical and biotechnological companies, thereby supporting their international regulatory submissions.

SRL being the largest corporate chain of diagnostic service provider in country achieved the unique distinction of being the first NABL & CAP accredited laboratory of India.

2.4. MEDICAL LABORATORY SERVICES ROLE:

The various services rendered by the laboratories have played an important role in the diagnosis of the diseases and the treatment decisions of the medical fraternity.

The service gives a scientific foundation by providing accurate information to those with the responsibility for:

- The treatment of patients along with monitoration towards the prescribed medicine or treatment.

- Monitoring the development and spread of infectious pathogens.

- In deciding effective control measures against the major prevalent diseases.

- In deciding health priorities and allocating the resources.

If the laboratory services are not offered then the various problems will be raised. The medical practioner will not be able to find the source of a disease correctly thus it will lead into wrong diagnosis and treatment of the patients.

There will be resistance to different drugs like antibiotics which will lead to unnecessary usage of higher version of drugs. The epidemic diseases or contagious diseases may not be identified on time and with confidence resulting increase in the spread of disease.

2.5. MEDICAL LABORATORY PHLEBOTOMIST ROLE:

The major roles of Phlebotomist are as follows:

- To do the routine as well as specialized tests using standard laboratory methods.

- In case of any errors or unknown problems they have to apply proper problem-solving strategies.

- To properly collect the specimens, perform correct investigations and proper reporting of the results.

- To keep the record as required by various authorities

- Provide opinion regarding renovation, upgrading and reorganization of medical laboratories of intermediate levels.

2.6. MEDICAL LABORATORY RULES, ETHICS AND PROFESSIONAL CODE OF CONDUCT:

2.6.1. RULES OF MEDICAL LABORATORY:

A. MEDICAL LABORATORY REQUEST FORM

The request for different types of tests and services are received daily in any type of laboratory. The format of the laboratory requisitions may vary from one laboratory to other laboratory but the basic information remains the same.

In various laboratories the test requisition form will be either kept by the receptionist or it will move the specimen till the results are released

The Laboratory request form ideally should provide the following information to the laboratory:

- Personal identification information which should contain the name, age, sex, address and contact number.

- The identification number or accession number with specific code to avoid biasness and disclosure of identification of the patient.

- The test to be done along with the specimen provided.

- The name of medical practioner requesting the test.

- Any other information which is relevant or required for conducting the test requested.

B. LABORATORY RECORDS:

The laboratory should always keep the records of all the tests performed which might be required by the various authorities.

The record which is to be preserved should contain following details

- Personal identification information which should contain the name, age, sex, address and contact number.

- The test done along with the specimen provided.

- The date on which the specimen was processed and the result was generated.

The record in the laboratory can be maintained in the form of carbon copies, work sheets, or recording test results in registers which will result in immediate finding of any patient record as and when required.

It is required incase the patient has lost the result or required by patient for other purposes. The record can also be used in preparing duty reports and estimating the workload of the laboratory.

C. LABORATORY RESULTS DELIVERY:

The Laboratory should provide relevant information so that there is a clear understanding of the results by the medical practioner or those requesting the test. The standardization in the presentation of reports along with the units is important because it helps in the proper interpretation of results.

This is very important when the patient is referred from one medical practioner to the other for the second opinion. The reports should be clearly and neatly written, particularly the figures .

Therefore, to ensure the validity and accuracy of the test results, the following points should be taken into consideration:

- The qualified person or the signing authority of the test report has to clearly check all the laboratory results before dispatching them to respective departments or units or patients.

- If the results are above or below the expectations should be investigated or repeated if required.

- The standard or normal values for the test result should be included in the report.

2.6.2. PROFESSIONAL CODE OF CONDUCT AND ETHICS:

The code includes those attitudes and practices which characterize a responsible laboratory technician and which is necessary in ensuring that a person works up to the level of a recognized standard. The people who are receiving the service also expect the professional code of conduct and ethics.

This helps in reminding us that the profession is primarily dedicated to the service of the client and the promotion of his or her good health care.

MAJOR CODES OF PROFESSIONAL CONDUCT ARE ENUMERATED BELOW:

1. The well being and the service to the ill person should be kept above our own interest.
2. We should be loyal to our profession by maintaining the higher standard of work along with improvement in our skill set and knowledge.
3. To work in a scientific way, ethically and honestly
4. To avoid misuse of professional skills and knowledge in case of the personal gains.
5. To avoid taking things from the work place which do not belong to our.
6. The result of our investigation should not be disclosed to the patient or any unauthorized person.
7. Strict confidentiality should be maintained for the result as well as the patient's identification.
8. The authorities subordinated and colleagues are to be respected and also maintain harmony or proper environment in the work place.

9. To have sympathetic approach towards the ill person and their relatives.

10. To promote prevention and control of diseases.

11. While working safety precautions to be followed along with the knowledge of first aid.

12. Alcohol or any other abusive substances during the working hours to be avoided

13. The equipment and other instruments to be used properly and utmost care to be taken.

14. Reagents and other supplies should not be wasted unnecessarily.

2.7. LABORATORY POLICIES:

Policies are the decisions which are taken in consultation with the other staff to enable proper and effective working of the organization or unit in harmony with other departments.

The points to be covered by polices are as follows:

2.7.1. LABORATORY HOUR AND EMERGENCY WORK:

The working hours of the laboratory should be generally fixed which will result in smooth working. In case of the peripheral or remote areas it is not possible to maintain the working hour because of more patients and emergency nature of work. The laboratories apart from their normal schedule of testing should have a system of conducting the investigations faster in the emergency situation specimens.

The investigations which are really essential for the immediate care and assessment of a patient should be requested urgently by the doctors.

2.7.2. RANGE OF TESTS TO BE PERFORMED AND THOSE TO BE REFERRED TO HIGHER LEVEL:

The range of tests to be processed depends on the equipments along with the phlebotomist and doctors. It also depends on the availability of reagents, stains and chemicals. This also depends upon the type of organization and the flow or quantity of the specimens as lesser quantity may increase the cost of test. This also depends upon the referral specimens when necessary for calibration or comparisons.

2.7.3. COLLECTION OF LABORATORY SPECIMEN:

The collection of the specimen is one of the important part of processing of samples. If the specimens are not collected properly then it may lead in the errors in the investigations. The collection unit responsibility is from collection, handling and shipment of medical specimens.

The laboratory receives daily different types of samples so it is necessary to observe certain details to ensure that appropriate specimens are collected in the laboratory.

Following are the things which can e done for proper collection of laboratory specimens:

- The container in which the specimen is to be collected or processed to be labeled with the name of client, identification number or accession number along with the date and time of collection.

- The laboratory requisition form filled with the necessary details to be accompanied with each specimen.

The reliability of tests mainly depends on the quality of specimens. For example for the WBC count the clotted blood sample has a little value, hence such sample must be rejected from being used. The specimens received in a laboratory should fulfill the below mentioned requirements as follows:

1. The container in which specimen is to be collected should be clean and leak proof and also sterile.

2. The special collecting trays or boxes are to be used in keeping the collected samples and this should also with stand repeated autoclaving or disinfection

3. The laboratory requisition form should be accompanied with the specimen but care has to be taken to avoid contamination and pilferage over the form.

4. The specimens collected should be adequate enough so that the requisite tests are performed.

5. The specimens that are suspected of containing dangerous pathogens, are to be labeled as "Dangerous or highly infectious" and handled with special precautions like specimens of e bolla, Bacillus anthrax etc.

6. When the specimen needs to be sent through airways to referral laboratories, it has to be packed as per the air authority regulations.

7. The specimens which required a cold temperature should be kept or transported in the cold chain.

2.7.4. WORKLOAD CAPACITY OF A LABORATORY:

The workload capacity for the laboratory is to be decided according to the staff available, the size as well as facilities in the laboratory and the equipments or instruments in the laboratory. The increase in workload may result in the errors in the investigations .

NOTE: This chapter solely depends on the information provided (electronically) on the websites of various companies as mentioned below:

1. http://www.siddhilaboratory.com/about.html

2. http://www.dhandelab.com/aboutus.htm

3. http://www.gokhalenucleuslab.in/aboutus.html

4. http://www.rubyhall.com/

5. http://sahyadrihospital.com/sahyadri-speciality-laboratory/services/

6. http://www.kemhospital.org/

7. www.saisneh.com/

8. http://www.noblehospitalspune.com/

9. www.kotbagihospital.org/

10. www.dhanwantarihospital.in/

11. http://www.adityabirlahospital.com/about-aditya-birla-hospital-pune.aspx

12. http://www.inamdarhospital.com/about-us.html

13. http://www.shreehospital.com/our-history

14. http://www.dmhospital.org/about-us

15. http://www.metropolisindia.com/

16. https://www.suburbandiagnostics.com/mumbai-diagnostic-centers/

17. http://www.medinovaindia.com/

18. http://www.pathcarelabs.com/about-us.html

19. http://www.srlworld.com/content/1/about-us.html

20. https://www.lalpathlabs.com/about-us.aspx

All this websites are accessed during 1 Nov 2015 to 31 Dec 2015.

CHAPTER - 3

REVIEW OF LITERATURE

3.1. INTODUCTION:

This chapter covers all the material used in the form of various books, international and national journals and research reports. The chapter has very purpose to state the reference material used in the study, further it aims to review the relevant research articles and, to find out the research gaps in the existing literature. The reference material is arranged chronologically.

Literature review provides various insights associated with marketing practices. The researcher from assessing the literature review tries to find out the gaps in the existing research.

3.2. REVIEW OF RELATED LITERATURE:

Stanley F. Teele et al (1944) had studied the marketing practices of Food manufacturers and observed that the use of brand names is not directly related, however, to high distribution costs because it is the intensity with which brands are promoted that determines costs rather than their use alone. The costs of marketing differ very decidedly from organization to organization within the same product division of the food industry. It is of great importance to see how wide a range of marketing practices may be adopted successfully by companies in competition with each other.

The wide variety of marketing practices had exemplified by the extent to which firms differed in the selection of types of customers. Personal selling costs vary significantly from one industry to another, but within each industry there is more of a tendency toward a common or typical figure. Firms of larger size tend to had higher distribution costs in relation to smaller firms in the same industry.

Barksdale et al [1972] had conducted in the United States cross-sectional study on consumers attitudes towards the policies and practices of business of a national sample of consumers. Consumers showed a high level of apprehension about certain policies of business and discontent over specific marketing practices. Most consumers valued the free enterprise system highly.

In the marketing system presence of imperfections was believed to be caused by the ineptness, carelessness, and apathy of consumers. Consumers also believed that their problems needed more attention and expressed the need for greater government regulation.

Drucker Peter F. [1973] had written that in modern society there is no other leadership group but managers. Despite the emphasis on marketing and its approach, marketing is still rhetoric rather than reality in many types of businesses. After many years of marketing the rhetoric consumerism has become a powerful popular movement that has prove that not much marketing has been practiced.

Williamson [1975] in a study concerning the pattern of adoption of new drugs, surveyed 140 general practitioners and the results showed that doctors prescribing attitudes are strongly influenced by the characteristics of the drug. He pointed out that a single marketing practice for the entire product line would be ineffective and recommended a different combination of marketing variables to influence sales revenue in each product market taking into account the complex factors characterizing each product market and the effects of the product characteristics on doctor's prescribing attitudes. He also draws literature on risk assessment to examine the medical practitioners prescribing the new drugs .

He concluded that the level of risk which a doctor perceives determines the external validation he or she requires in order to prescribe the drugs. The preferred information

sources vary with the perceived riskiness of medicines by the doctors. He also stated that the most important source for low-risk drugs are medical representatives, but are less important for higher risk drugs.

Arndt et al [1977] had conducted in Norway cross-sectional study for exploring the opinions of present and potential business executives concerned for marketing practices and corporate responsibility.

The survey has not revealed any pronounced pro-business stance in the area of consumerism. The executives were more pro-business on statements of ideological nature; they were at the same time critical of marketing practices when their own experiences as consumers were unplcasar. The researcher concluded that on the consumerism executives were not too far out of step with the executives from other developed.

Slatter [1977] stated that a pharmaceutical product market share is dependent on the medical practioner acceptance. The product is also a function of all the level of promotional expenditure at the time of product introduction and the inherent therapeutic quality of drug.

He found that a company obtaining a higher market share in a particular therapeutic segment, leading to higher profits, will be able to spend more on the promotional activities to defend its market position as well as to support a large research and development resulting in new product development.

Lilien [1979] had done the research in the business marketing practices in a major project called ADVISOR and reported the following findings:

1. The marketing budget is decided to be 7% of its sales by most of the average companies. It spent only 10% of their marketing budget on promotional activity like

advertising while the remaining on sales force, trade shows, sales promotion and direct mail.

2. The companies will spent a higher than average amount on promotion like advertising when their products have higher quality, uniqueness or purchase frequency or where more customer preferences.

3. The companies set a higher than average marketing budget when their customers were more dispersed or when the growth rate of customer is higher.

French et al [1982] had examined consumerism and related regulation through a cross-sectional study during a highly uncertain economic period in Britain. The period is characterized by high unemployment, presence of EEC trade regulations and a government reluctant to support industry.

The author found that there is dissatisfaction in the mood of consumers towards the current marketing practices concerning product quality, truth in advertising and fairness in prices. The author further concluded that a mood is strong enough for consumers to advocate not only price controls, but also promotion and product quality controls as well. The Study further stated that the businesses which ignored public criticism for their practices have experienced a tremendous trouble in the future growth.

Mackowiak et al [1985] found the relationship between promotion and demand for medicines by using econometric modeling. They looked at benzodiazepines and diuretics which were the medicines from 1977 to 1981 and investigated the overall organizations promotional expenditure affecting the demand for a group of medicines that is overall market size and how individual company promotional expenditure affected demand for a particular drug that is market share.

They used research organization IMS-Health data for investigating the extent of medical representative activity and the extent of advertising, and converted these into estimates of expenditure. IMS also provided data on the number of new prescriptions for the products studied. They used Auto Regression Integrated Moving Average modeling but were not able to find any relationships between promotional expenditure and demand. They suggested that this may be due to limitations of the methodology, or it may be due to companies spending much on advertising that they are getting little marginal return for extra dollars spent. The authors were unable to draw any conclusive findings from the study.

Krupka L et al [1985] compared advertising in the New England Journal of Medicine and the Journal of the American Medical Association with the number of prescriptions filled for the 15 most advertised drugs.

They found that about a five of the 15 most advertised drugs were also one of the leading 15 drugs in terms of the number of prescriptions filled for the five years analysed. Ten of the 15 most advertised drugs in 1972 had advanced their ranking in terms of prescription numbers between 1972 and 1973, and two were in the same position .

Garyl L Fraizer [1987] had pointed of focus of marketing practice towards the concepts of product positioning & differentiation as ways to impact on market behavior in current market situations. Strategic marketing practices had focused on product and market portfolios.

 In today's scenario the globalization of market has introduced strategic marketing practice which has produced standardized products and services as a way of creating better values for the customers. The marketing research has also become more important in the area of marketing practice because of the failures of new products

introduced in the late fifties. The marketing practices are highly focused on specific products or industries. The task of marketing practice is to create and retain positive market position for the product as well as services of the industries.

They further concluded that creation and retention of positive market predisposition and positive market behaviour is achieved by the help of seven or four P's of marketing principles which are practiced.

Peay et al [1990] investigated the role of different information sources in the decisions of medical practioner in adopting new drugs. Every medical practioner were asked about his or her general drug adoption practices. The results had suggested that commercial sources of information are not important to the medical practioner.

Williams et al [1990] had studied the pattern of prescription of the doctors in Ontario. It was found that the increase in the prescription of any of the medicine is due to the more contact of that particular company with the doctor. The contact with the doctors can be in the form of one to one interactions or the benefits in the form of gift, meal or sponsoring of seminar or conference. Further it was found that industry-sponsored seminars are important sources of drug information.

Sundar G Bharadwaj et al [1991] had focused on the attitudes of customers towards marketing practices in a developing country like India. The results of the study indicated support for the consumerism movement while dissatisfaction with the marketing practices of the industries.

Smarta [1994] observed the changes in marketing practices stressed that in addition to devising strategies to generate prescriptions, in the new environment, the firm must devise method to strengthen retailing. He said if retailing is not focused, generated prescriptions are likely to get substituted by similar brands of other companies.

Cheryl B. Carson [1997] had studied marketing efforts of the companies from pharmaceutical sector towards individual medical practioner, who had complete discretion as to what drugs to prescribe. It was found that due to unethical marketing and its practices or the fee for the service provided by the doctors the benefit was passed on to the doctors as well as to the companies which has lead to the increase in the cost of healthcare.

Today the focus of marketing practices has shifted from the individual doctors to pharmacist, hospital authorities, insurance companies etc. The institutional tie ups provide the companies access to millions of customers, but this also enables them to offer a sizable discount.

As part of its ongoing investigation into prescription drug marketing practices it was found that companies offer money, gifts etc. to the doctors. The offers used for promotional purposes are studies, speaking engagements, program attendance, and gifts.

Z. John Lu et al [1998] studied the factors affecting the prices of new pharmaceuticals, both at the introduction and after four, six and eight years. They examined the pricing strategies adopted by newly patented pharmaceutical company.

They found that drugs which were having higher therapeutic value were priced twice or thrice more than those of existing drugs used for same purposes, and over time these drugs prices declined compared to the drugs with limited therapeutic value. The existence of branded substitutes also plays an important depressing effect on the drug prices.

Mikkelsen L. [1999] stated that producers which had wish to penetrate new markets or improve their position in the current market, the use of an intermediary may

significantly reduce marketing costs, provide important consumer feedback, and open up access to a larger client base.

The time-consuming tasks for the marketing service providers include identification of new clients or markets, retain the existing ones, sourcing good raw materials, or figuring out how to ship various kinds of goods to different destinations by various means of transportation.

The intermediaries provide information on prices, consumer preferences, competition to the company thus adds transparency to the market, and provides the company to take further decisions in the future production or introduction of new and existing products .

Kotler Philip [2000] had written in his book that marketing practice might pass through different stages as follows:

1. Entrepreneurial marketing: Individual starts the companies with the vision of offering service or product to the society by marketing at every door step.

2. Formulated marketing: As small companies achieve success, they inevitably move toward more formulated marketing.

3. Intrepreneurial marketing: Many large companies get stuck in formulated marketing, poring over the latest ratings, scanning research reports, trying to fine-tune dealer relations and advertising messages.

Very few companies practice the marketing concept. The societal marketing concept calls upon marketers to build social and ethical considerations into their marketing practices.

In addition to updating their marketing plans, companies often need to restructure business and marketing practices in response to major environmental changes such as

globalization, deregulation, computer and telecommunications advances, and market fragmentation.

Gonul et al. [2001] explored the impact of medical representatives on the prescribing pattern of doctors. The study used data from a leading pharmaceutical consulting firm which was of doctor's responses.

The data included information on the prescription pattern, the detailing of the product by medical representative, samples provided etc. The data shows that for one condition seven drugs were used for treatment. However it is unclear whether the drug used are different or of different brand names this is the major limitation in the study. Using a multinomial Logit model, they had concluded that exposure of medical representative and samples increased the probability of that medicine being prescribed.

However, the study also showed that excessive detailing or samples did not increase sales higher and higher.

David Chris [2001] highlight the changing focus of marketing pharmaceuticals products by building services around the products. This Services Around Pharma model makes the product stand out in the crowd and also helps build customer loyalty. The author had given example of pharma services model existing in the country such as 'Humacare' by Eli lilly launched in 2002 around their insulin product Humalin. It offered 24 hour customer care service through mail, a complete user kit with disposable syringes and a kit with a cooling gel to carry insulin.

It also brings magazine, Astha which provides information on lifestyle changes, diet and disease management. Neoral by Novartis-for the immune-suppressant drug neural for the kidney transplant patients. It included a helpline which keeps tracks of the medicine dosage and reminds the patients when the dose is due.

Kapil et al [2003] conducted a study to determine those critical success factors that are specific to small scale pharmaceutical companies. The data for the study was collected by questionnaire method and the respondents were from the small scale pharmaceutical companies. The analysis of data was done using Factor analysis of 33 variables identified 11 main factors, among which marketing was identified as most important factor by CEO's of small scale companies followed by entrepreneur's attributes and abilities, governmental policies, technological competence, clusters, networking, R&D infrastructure, company's climate and raw material supplies.

The researchers suggested that small firm's should form alliances with larger pharmaceutical companies, but as they mature and grow their product portfolio, their own sales channels should be re-evaluated.

Rainisto S. K. [2003] in there thesis had evaluated critical success factors in place marketing, and also studied how these factors could be utilised in place development.

The analysis of place marketing practices from the perspectives of the process, assessment criteria and success factors was done. The study contributed to the literature by translating the key concepts of corporate marketing theory for places, through a conceptual framework and also makes propositions for place marketing practices along with its specific success factors. The study had made a managerial contribution by giving recommendations for place marketing practices, and by offering a new and holistic approach.

Neelamegham S. [2004] in their book presented a study to analyze the factors which motivate salesman employed in the pharmaceutical industry in India. The study was based on a sample of salesman taken from thirty pharmaceutical companies. The study revealed that despite the importance attached to personal selling, only a few

firms in the industry devoted the required attention towards training, development and motivation of their sales force.

The findings revealed that the need deficiency between the salesman's aspiration level and their actual need satisfaction was highest in respect of three factors viz. prospects for promotions, feeling of self-esteem and opportunities for personal growth and self-development.

The researchers suggested that sales administration should be given more attention to these factors while designing the motivational programmes to improve the performance of their salesman.

Wadhwa et al [2004] stated that competitiveness of the Indian Pharmaceutical Industry will depend on marketer's ability to market new products more efficiently. The core strategies that have been successfully adopted by companies according to them are:

1) Co-Marketing which helped companies with weaker marketing infrastructure have quicker and cheaper access to the market.

2) Franchisee model-Ranbaxy Laboratories, Dr Reddy's, Nicholas Piramal, Alembic, Zydus Cadilla etc had launched franchisee's to handle their products so that the companies can retain their focus on core products.

3) Consultative Selling: Consultative detailing of medical representatives to improve the sales call productivity, improve brand recall and increase the image of the company which had recently been adopted by MNC's

The researchers had emphasized on the support strategies that would play an important role to support the core marketing activities. These included focus on smart research collaborations, setting up subsidiaries abroad, and upgrading manufacturing facilities and becoming globally compliant.

Peter R. Darke [2004] had focused on number of reasons to believe that consumers had become increasingly concerned about the practices of marketers. For instance, books criticizing common marketing practices, such as Eric Schlosser's Fast Food Nation and Naomi Klein's No Logo, had became best sellers .

The implication for marketers is that false advertising can seriously hamper the effectiveness of further advertising communications. To the extent to which consumer suspicions are shown to generalize, marketers should be concerned about the deceptive practices of other advertisers, not only with respect to their immediate competitors, but also with respect to deception that occurs in other product categories, and even in other markets.

The results showed that suspicion can generalize across these factors. The findings also implied marketers cannot simply assume they were immune to the effects of false advertising so long as they avoid such practices themselves, or because they had built a positive reputation with consumers in the past.

David Bowie et al [2004] stated in their book that in marketing we are all involved, willingly or unwillingly. Every day we came into contact with marketing practice as customers making buying decisions and at work, even if we do not have a job in marketing. The key concept that underpins marketing theory and practice is the management of demand.

The impact of postmodern thinking in various field had created considerable interest in marketing practice. In practice, many of the customers who enjoyed a promotional price do not book at the 'normal' price once the promotion has finished. Distribution channel is relatively very simple, but in practice can be extremely complicated, especially for large organizations.

Buckley J. [2004] had identified negative impacts included misleading advertising, disease mongering and escalating costs. Thus there is a need to move from industry self-regulation to an independently monitored code of practice for pharmaceutical marketing was concluded by the author.

Paul D. Ellis [2004] had studied the implementation of the marketing concept in boosting the organisational performance in developing countries.

Data collected from central China manufacturing-exporters revealed that although there is a link between marketing practice and performance, as such link dosen't exists for Narver and Slater's (1990) concept of market orientation. To assess the marketing practice respondents were asked to rate their firm's performance on six diverse marketing activities in comparison with major competitors. Following Woodside, Sullivan and Trappey (1999) performance on each activity was judged by asking respondents to rate themselves relative to competitors.

The performance was seen to be influenced primarily by the firm's management of the marketing mix, the usefulness of its market research, the appropriateness of its positioning strategies, and the nature of its marketing goals from the marketing practice perspectives. Marketing Practice had generally more impact on business performance than Marketing Orientation.

Chaffey Dave et al [2006] in their book had focused on internet marketing practice which included the use of a company web site jointly with online promotional techniques such as interactive advertising, e-mail marketing and partnership arrangements with other web sites. The purpose for use of these techniques is to provide services to existing customers that help to develop the customer relationship and to support objectives of acquiring new customers.

There is still a necessity for integration of these techniques with traditional media such as print, TV and direct mail for the success of internet marketing. To understand the nature of customers is fundamental to marketing practice and it is equally important online.

Kjellberg et al [2007] had defined market practice as "all activities that contribute to constitute markets" and the interrelated practices that create markets were identified that are normalizing, representational and exchange practices.

Normalizing practice is the process of establishing rules, norms and guidelines of how markets should work according to certain actors involved in the process. This includes among others formally or informally agreed upon contracts on what can be offered in the market, who can participate in the market, how exchange takes place, as well as the responsibilities a firm has towards its customers.

Representational practice is the practice of depicting markets and its workings. Various sales statistics, figures of market share, research reports of consumer help in reflecting the form and state of a market. Market segments represent the whole set of customers in a more manageable and understandable form.

Exchange practice is related to actual activities that fulfill the individual economic exchanges such as setting a price, presenting a product, and also terms of payment and delivery. These all activities stabilized the conditions necessary for economic exchange to take place. They found that health care market is based on mainly normalizing and exchange practices .

Alleah Crawford et al [2007] from the East Carolina University, United States of America had examined and identified the effective and useful marketing channels for business to business establishments. To gather the marketing channels related information electronic survey of business to business owners was used in the study.

The most frequently used and highly effective marketing practice among business to business owners was word-of-mouth marketing which was still considered important.

Burnett John [2008] in the book "Core Concepts of Marketing" has provided insights on different aspects like determining the needs of customers and their satisfaction through products that has value and accessibility. The features are clearly communicated in the general purpose of any business. The author also has introduced the tools of marketing practices used in the marketing of their products.

Elena Simakova et al [2008] the article was written as a contribution to marketing theory from a science and technology studies perspective. Few of the marketing theory like critical marketing suggested that marketing in practice is in fact different from its widely adopted normative textbook portrayals.

These incongruities between marketing theory and marketing practice are often acknowledged through stating the lack of empirical research in what it actually means to do marketing. Ethnographic access to virtual world was successfully negotiated on the assumption that more research on marketing in practice needs to be done.

The existence of a gap between marketing theory and marketing practice is suggested in the works of various researchers like Brownlie et al. (1999), Dibb and Stern (1999) etc.

Roderick Brodie et al [2008] purpose of study was to develop an understanding of how firms relate to their markets in a manner that integrates both traditional and more modern views of marketing, and incorporates an understanding of both the antecedents and consequences of various marketing practices.

The researcher adopted theoretical approach. It had reviewed the history of contemporary marketing practices research and its outcomes. The study concluded with a discussion of the research contribution to marketing knowledge and some

issues and challenges for future research. The study had made a unique contribution to marketing knowledge by bridging the gap between theory and practice.

Adam Lindgreen et al [2009] investigated the relationship between marketing practice and leadership style and also suggested that these are dynamic and linked. It was found that transformational style of leadership is positively associated with interaction and network marketing. Transactional leadership is positively associated with database and network marketing. Passive or avoidant leadership has no effect on any of the marketing practices.

The study has contributed in a number of important areas like it had built on the recent well established contemporary marketing practice framework by adding an important theoretical and managerial dimension, which extended understanding of the way marketing is practiced and theorized. There is an opportunity to build a more comprehensive understanding and explanation of managerial and marketing practice by indicating linkages between these areas. The different marketing practices are more than a technique; they encompassed an underlying attitudinal approach towards the staff, the internal market, and the external market of customers and the wider stakeholder network.

Chai Lee Goi [2009] in their research paper "A Review of Marketing Mix : 4Ps or More ?" Published by International Journal of Marketing Studies has provided an idea to the marketers that can be used as tools to assist them in pursuing their marketing objectives.

Borden (1965) has claimed to be the first to coin the term marketing mix and this was suggested to him by Culliton's (1948). McCarthy (1964) coined marketing mix which included 4Ps, as a means of translating marketing planning into practice (Bennett,

1997). Marketing mix is but originating from the single P (price) of microeconomic theory (Chong, 2003).

The new Ps were introduced into the marketing scene in order to face up into a highly competitively charged environment by Low and Tan, 1995. Even, Möller (2006) presents an up-to-date picture of the current standing in the debate around the mix as marketing paradigm and predominant marketing management tool by reviewing academic views from five marketing management sub-disciplines like consumer marketing, relationship marketing, services marketing, retail marketing and industrial marketing and an also emerging marketing i.e. E-Commerce.

Johan Hagberg et al [2009] had analyzed two longitudinal case studies of Swedish retail trade marketing practices.

To select a number of empirical vignettes of marketing practice from the case studies they employed the threefold conceptualization of market practices as interlinked exchange, normalizing and representational practices proposed by Kjellberg and Helgesson (2006; 2007).

They addressed whether or not the admittedly broad conception of marketing implied by the model of markets as constituted by marketing practice was able to capture relevant marketing activities. They had done this by relating the empirical vignettes to a few marketing practice concepts which are well known like pricing, targeting, market analysis, internal marketing, distribution, promotion activities and sales activities.

The researcher founded that the definition of marketing implied in conceptualizing markets as constituted by interlinked normalizing, representational and exchange practices indeed captures central and familiar marketing themes.

The analysis also revealed that various important marketing activities were carried out by a multitude of actors, which also included professionals and amateurs, individuals and collectives, specialists and generalists, humans and non-humans .

John J. Withey [2009] described a set of marketing practices which were used in the smaller organizations that had pursued customers in the regional markets. Every marketing practice was evaluated against a range of popular theories of ethical behavior.

The paper also addressed issues of ethical behavior and marketing creativity by the help of alternative models which can be used to evaluate marketing practices among the small business to business marketers.

Helen Reijonen [2009] had focused on examining interrelated constructs that are marketing concept, market orientation and success.

The dissertation has considered various perceptions of marketing, the way marketing is adopted and implemented and also the relationship of business success and marketing in the context of Small and Medium Scale Enterprise (S.M.E.).

The results indicated that S.M.E. marketers perceive marketing through concrete practices that are often related to promotion, selling and customer relationships. The single business philosophy was not use but rather features of several philosophies which they estimated to best fit their business operations was used. The role of marketing practices in the smaller size SMEs was not considered focal and it was often carried out unsystematically and sporadically.

Marketing Practices in SMEs has described as haphazard, informal, loose, spontaneous, but also as innovative and close to customers (Gilmore et al. 2001, O'Dwyer et al. 2009, Mc Cartan-Quinn & Carson 2003

A book viz. "Marketing: A Critical Textbook" authored by Nick Ellis, James Fitchett, Matthew Higgins, Gavin Jack, Ming Lim, Michael Saren, Mark Tadajewski [2010] provided different aspects of Marketing theory and practice. The text has introduced the development of marketing as an academic discipline and business practice. The marketing was studied for a variety of reasons, one of the most important is that business enterprises were increasingly aware that as their business expanded, and also their production facilities became capable of producing ever more quantities of goods that they needed to find some way of selling or marketing these goods more efficiently. They had done this by expanding the markets which they served and created demand where previously there was none. This is why marketing is often associated with demand stimulation.

In equal measure marketing scholars and practitioners legitimised their activities on the basis of satisfying customer needs i.e. the marketing concept. Part of the legitimation strategy used by marketers was their attempt to demonstrate how their marketing activities added value. They had done this by demonstrating that distribution costs was reasonable and the middleman i.e. distributors, agents and retailers etc. among others, deserved to be compensated for their activities (Shaw and Jones, 2005).

Paul Sherlock [2010] had studied marketing practices of pharmaceutical companies through a literature review, case studies and interviews. The case studies focused on the way companies promoted and influenced customers to buy their products through electronic & print media in order to maintain their market share and also to attract new customers to buy the products.

Interview method was used for data collection to find out the opinions of respondents on current marketing practices of the companies, the influence of gifts from medical

representatives on prescribing or selling particular drugs and opinions on Direct-to-Consumer (DTC), internet advertising, and how it effects and controls their decisions on prescribing or selling particular brands of drugs to the clients.

Interviews were also carried for the respondent's i.e. medical representatives to find out their opinions on their own positions within the pharmaceutical industry, their backgrounds, and their individual approaches in marketing their particular products i.e. medicines. The pharmaceutical company can go direct to the customer if it builds a strong brand. Pharmaceutical marketing through medical representatives is not the only source of information for doctors and pharmacists, it plays an important role in providing information about the medicines, such as usage, dose, adverse reactions, contradictions etc. and helps play a role in providing the best treatment for the clients.

Arsalan M. Ghouri et al [2011] stated that marketing practices differed from continent to continent, countries to countries, cities to cities and sector to sector in relation with social, cultural and economic backgrounds.

The distinction for any firm or business in particular environment may be the differentiation among space, time and effectiveness of marketing practices. Different approaches of marketing planning and practices are used in different phases of the organizations life. The author analyzed the vague marketing practices and its effect on restaurant and catering business and their performance in Karachi.

It was concluded that for the small and medium sized Catering and Restaurants businesses various marketing practices except advertising are the waste of money and time.

Ernst & Young [2011] had reported that adoption of ethical practices and transparency in the operations was due to implementation of good marketing practices by pharmaceutical companies. The relationship between physician and

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pharmaceutical industries goes a long way back, since they are dependent on each other.

Initially it started as information sharing practice & had evolved over a period of time into aggressive marketing practices targeted at physicians to ensure greater coverage and translate into enhanced sales for pharmaceutical companies. Consequently, practices such as giving gifts and other incentives to physicians had crept into the system.

Nariswari Angeline [2011] in there conceptual paper has explored the model by focusing on market practices as the unit of analysis. A model was developed for understanding markets by integrating the disparate but compatible views that are institutional theory, the practice based approach to markets, and service dominant logic.

The practice based approach identified the key practices that constitute markets while service dominant logic situates these market practices within the context of resource integration and value co-creation. Additionally, institutional theory also explains the institutionalization of market practices, thereby setting up the rules for value co-creation amongst market actors. Markets, though often seemingly chaotic or complex in form, can be broken down into fractal pieces that consist of a simple set of practices.

It is expected that one can study multiple level of markets and the interactivity between them by using practices as the underlying unit of analysis by identifying key practices and translation as the link between practices.

OWUSU, A. F. [2011] in there thesis studied the complex concept of customer satisfaction in the light of the customer relationship marketing practices of the company.

To focus on customer satisfaction, retention and brand loyalty etc. customer relationship marketing is one of the marketing practice which is been employed by companies. The author also concluded that, the main dimensions of perceived service quality are tangibility, responsiveness and empathy and thus needs to be improved to meet the customer's satisfaction.

Onaolapo A. A. et al [2011] examined the impact of marketing segmentation practices on the performance of selected commercial banks of Nigeria in the post consolidation era. The study was based mainly on secondary data and the research design used was exploratory in nature. Haffindal Hirschman index, Return on equity (ROE), Net operating margin and Net interest margin were employed as parameters for determining effects of market segmentation practices on operational performance. The author concluded that banks with higher level of market share demonstrated higher customer retention ability and lower overall unit operating expenses. Apart from segmenting the market for product offering, continuous customer loyalty and retention process also require creation of customer centered operating premise through quick service delivery, acceptable corporate image; customer-employee relation, relaxed account opening formalities and effective use of referrals among others.

Singh Harpreet [2012] the researcher has made an attempt to study the marketing practices adopted by the selected tourism corporations of northern India viz Haryana Tourism Corporation, Punjab Tourism Development Corporation and Himachal Pradesh Tourism Development Corporation. The study was done to find out the effectiveness of marketing practices of the corporations by analyzing the seven P's of marketing mix and find out the loopholes in it, if any .

Dr. P. B.Singh et al [2012] had pointed on the activities of the marketing practices that didn't mislead customers or companies, and do not breach regulations and laws dealing with the environmental marketing.

K. Sudhakar et al [2013] had investigated that most innovative practices of marketing are well known to create penetration and depth in customer reach which has remained practically impossible for many successive ages. There is tremendous development in the theory and practice of marketing. This is underlined by the economic and social processes which have occurred in the world like globalization, advances in technology, deregulation, market fragmentation, the levers of power customers etc. In countries with developed economies marketing has emerged and started to be deepened both as a science and as a practice.

The retail markets were also characterized by an abundance of products and services that were designed to put consumers in a position to choose the product best suited to their own needs.

A Rita Horvath [2013] had made pioneering studies in Laboratory medicines practices. Laboratory tests offer value to the clients if they provide benefits at an acceptable cost. A multifaceted and individualised implementation strategy which included individually detailing, reminders in the form of electronic or print media, clinical decision support systems, feedback on performance and participation of medical practioner and laboratory professionals in quality improvement activities, addressing test selection and interpretation and also in clinical audits had greater potential for success.

The excellent practice could be achieved through commitment to evidence-based good practice in strategic plans and job descriptions; allocation of sufficient time and tools for staff training and training assessment to achieve the competence required for

the change; re-engineering care processes such as acceptable caseload, appropriate skill-mix of colleagues, availability of necessary resources including staff, time, equipment, health care facilities; information systems aligned with implementation of evidence-based practice; investing in patient information and patient education; devising and using quality measures and systems for monitoring key performance indicators and rewarding positive outcomes i.e. health outcomes, patient and customer satisfaction, cost savings, etc.; continuous feedback of information to demonstrate the impacts achieved by the change; and linking budget to outcomes and performance.

Luciana Terra Targino et al [2013] had found that companies are not technologically prepared to act more aggressively in the market, given the moderate level of technology in the transactional or relational interactive segment. Brazilian companies seem to be waking up to the advantages of relationship marketing, providing value to goods and services.

Anica Iancu et al [2013] had found the ways through which consumers interact and use the online medium while making the purchase decisions. There is an increase in social and political pressure on firms toward environmental responsibility.

Price is an influential factor in the accommodation selection process due to constantly changing economic conditions.

Chirica C. [2013] highlighted proper marketing practices in relationship marketing due to adjusted companies strategies in a turbulent, unstable, and dynamic economic environment.

For the excellent practices in relationship marketing it required a comprehensive approach of clients and also of the employees, in order to build long-term profitable relations.

Sahoo A. [2013] stated that Referral labs used a high class logistics system to obtain their marketing and face value in the market and they are successful doing these with the accurate test results.

The growth of Indian diagnostics industry has created special interest in the study of improved value chain in health care sector. This is done by enabling accurate detection of health risks and diseases at earlier stages and also improving treatment and disease management, while diminishing subsequent health problems and their associated costs. Due to these factors the industry has gain a high positive response in the market. Relationship between clients and diagnostics laboratories or referral laboratories had an influential role for analysis as it had a keen interest in the re-discovery of the true meaning of logistics on the basis of marketing.

The financial position and goodwill of the various laboratories from small to big players of the whole industry are affected also by customer's satisfaction.

John H. Roberts et al [2014] investigated the impact of print media i.e. marketing science articles and tools on the marketing practices.

The impact of print media i.e. marketing science articles may be direct for example an academic article may be adapted to solve a practical problem or indirect for example its contents may be incorporated into medical practitioners tools, which then influenced marketing decision making. The author used the term "marketing science value chain" to describe these diffusion steps, and survey marketing managers, marketing science intermediaries i.e. practicing marketing analysts, and marketing academics to calibrate the value chain.

The author concluded that the impact of marketing science is perceived to be greater on decisions such as the management of brands, pricing, new products, product portfolios, and customer or market selection, and tools such as segmentation, survey-

based choice models, marketing mix models, and pre-test market models had the greater impact on marketing decisions .

Zaibunnisa Siddiqi et al [2014] the research was conducted to understand the importance of marketing practices which had impact on customer brand awareness that leads to enhance the brand equity of a brand in BTL.

 The study surveyed two dimensions namely brand awareness, and BTL marketing practices. Only two factors of BTL which are "word of mouth" and "availability" created highest brand awareness of tetra pack milk. Although, the other factors of BTL marketing practices also appeared to have low influence on brand awareness of tetra pack milk.

Findings of this research are beneficial in exploring the recent market trends on brand awareness and to understand the impact of BTL activities over consumer brand perception through various promotional activities which helps to enhance sales or brand equity.

Companies should focus on effective market practices to create brand awareness among its consumers. Samples should be distributed on highly populated areas. Attractive gift offers given to consumers. Free trials activities of tetra pack milk should be done in every area. The attractive discounts given to consumers to enhance their point of sales areas. Billboards place on very attractive destinations. By improving such activities Companies can enhance the brand awareness of tetra pack milk on consumers.

Kiran.R et al [2014] stated that effective distribution is widely accepted marketing strategy for newer products. The study concluded that reputed producers generally use self-sustained distribution management system rather than independent or outsourced

distribution network, when it is fully equipped, confident and capable both financially and with human resources.

Rizwan Raheem Ahmed et al [2014] studied that the development of effective communication mix in pharmaceutical marketing is a complex task, which goes through identifying the target audience, determining the communication objectives, designing a message, choosing method of delivery, collecting feedback. Pharmaceutical marketing professionals are fast becoming aware of the latest development in the discipline of marketing, and they have also started to adopt latest theories in communications.

It is not like few years back, when all tools were used in isolation from each other, which messages and format changing as per the requirement of the tool, now we find a synergy in all marketing activities due to integrated marketing communication.

Marketers are making all efforts so that each next step in the communication process adds some value to the previous one. Product slogans, logos and positioning statements are taking up fast. Product positioning is also now being based on emotional appeals, which is a takeoff from simple no-nonsense kind of approach pharmaceutical marketing symbolized for long.

The author concluded that considering the peculiar characteristics of pharmaceutical products, and the dynamics of the industry the line between pharmaceutical marketing and general marketing is thinning, but still it is intact.

Sangeeta [2015] had presented the review of medical tourism in relation with the marketing practices of Indian tourism. Marketing practices like promotion of health care service, physical evidence, price effectiveness etc. have contributed in medical tourism development most.

The paper covered wide collection of academic literature on medical tourism which specifies different approaches and emphases of research in diverse disciplines.

Nilesh R. Berad et al [2015] analyzed the current marketing practices and outlined in detail future developments that will increase the return on investment (ROI) within sales, marketing and customer fulfillment activities. Pharmaceutical companies had started investing in new technologies; research and development but still achieve poor return on investment because of poor assessment of user needs and customer requirements.

This limited the scope of rural marketing activity and assimilation within the company and fails to recognize that rural marketing is as much about changing employee skills and business processes as it is about technology.

Investing intelligently in rural marketing, companies can bring genuine improvement across business functions and reap the rewards of higher ROI. The research paper also studied the different current trends used in rural marketing within pharmaceutical companies & determined established best practice and provided detailed analysis on key activities, which allowed pharmaceutical companies to manage their business more effectively .

Izvercianu Monica et al [2015] analyzed the marketing practices embraced by small and medium scale enterprises (SME) managers to fulfill their organisation objectives in terms of profit. The study was based on literature review, structured interviews and quantitative research; a sample consisting Maltese SMEs was used to acquire a broad image of the marketing practices used within SME type organisations.

The researchers studied particularly the SME size (in terms of turnover and employee number), influence on the process of marketing activities within the organisation. They found that SMEs managers, more or less, set short term marketing objectives

based on "entrepreneurial instinct" or conjuncture, to overcome threats or to transform opportunities in short term profit.

SMEs with a smaller turnover do not take into consideration marketing practices and act upon instinct or conjuncture.

The insufficient human and financial resources and a lower turnover, determines SMEs not to pursue marketing practices. A solution for better marketing practices, which will lead to strategic marketing planning and adequate marketing strategies for SMEs and their business domain depending on its available resources, is for managers to seek external collaborators form business or university environment.

Abdul Rahim et al [2015] had explored the role of marketing practices in SMEs and evaluated the impact on SME performance through changes in marketing practices from traditional to entrepreneurial marketing practices. Marketing in SMEs is centered on traditional methods such as using print media and selling.

 The author found that the level of commitment towards marketing practices varies by business context, by level of marketing expertise and by the maturity of the company. The study revealed that within certain small business environments, traditional marketing activities such as advertising and sales promotion of services were perceived to be damaging to credibility with owners preferring to craft their activities to suit their individual business dynamics.

 Marketing was also regarded as a separate activity within the business and one that could be accessed as necessary or as an opportunist basis rather than as an intrinsic part of the whole business function.

The author concluded that marketing within an SME context can be unskilled activity that requires little time or training and which anyone in the company can undertake .

3.3. RESEARCH GAPS IDENTIFIED:

- After many years of marketing the rhetoric consumerism has become a powerful popular movement that has proven that not much marketing has been practiced.

- A single marketing practice for the entire product line would be ineffective and recommended a different combination of marketing variables to influence sales revenue in each product market taking into account the complex factors characterizing each product market and the effects of the product characteristics on doctor's prescribing attitudes.

- A higher market share in a particular therapeutic segment, leading to higher profits, will be able to spend more on the promotional activities to defend its market position as well as to support a large research and development resulting in new product development.

- The commercial sources of information are not important to the medical practioner.

- Excessive detailing or samples did not increase sales higher and higher.

- Despite the importance attached to personal selling, only a few firms in the industry devoted the required attention towards training, development and motivation of their sales force.

- The sales administration should be given more attention to the factors like prospects for promotions, feeling of self-esteem and opportunities for personal growth and self-development while designing the motivational programmes to improve the performance of salesman.

- It is said that there is a link between marketing practice and performance, as such link doesn't exists for concept of market orientation.

- Marketing Practice had generally more impact on business performance than Marketing Orientation.

- The role of marketing practices in the smaller size SMEs was not considered focal and it was often carried out unsystematically and sporadically.

- The level of commitment towards marketing practices varies by business context, by level of marketing expertise and by the maturity of the company.

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CHAPTER - 4

RESEARCH METHODOLOGY

4.1. INTRODUCTION:

In the light of the present study, this chapter had covered all the research methods used in the study, also the data collection tools used are mentioned. The population selected for the study, sample size, and sampling procedure is also explained in this chapter. The statistical tools used in the present study and their significance are discussed in detail in the various sections of the topic. To observe and analyse the opinion of the owned, Hospital and Chain Diagnostic Laboratories the present chapter had also covered the variables used in the study. Data is presented in the tabular form and also presented in the chart form like pie, column, etc. along with the significance and interpretation.

The objectives and hypotheses of the study are prepared with the help of review of literature by researcher. The data collection tool which is used for the study that is questionnaire for the marketing practices of Owned, Hospital and Chain Diagnostic Laboratories is also prepared thorough review of existing literature. The different parameters are formulated to present the data related to views.

The variables which had the most impact on the marketing practices were a real part of the study. For the analysis of the data different tools and packages are available but researcher has used Microsoft Excel 2013 and SPSS version 20 for the analysis of data and also for the presentation of data in the graphical from like pie chart, column chart etc.

The methodology for this study adopted is as follows -

- A set of variables are selected for the analysis, which also represent the existing literature review on marketing practices and its related elements.

- The data which is collected its master sheet is prepared.

- The Master sheet of the data prepared is then used for analyzing the data and its interpretation is done to find out meaningful relations between the variables.

- The most significant relations are determined in the data and as required additional explorations are performed to further explain the relations in detail.

- The meaningful conclusions from the analysed data are drawn .

4.2. RESEARCH DESIGN:

DESCRIPTIVE RESEARCH DESIGN:

The research aims to study the marketing practices taken into account by Owned, Hospital and Chain Diagnostic Laboratories for their customers or increase in the market share. It was descriptive in nature because it measured the different marketing practices carried over by Owned, Hospital and Chain Diagnostic Laboratories for their customers or increase in the market share.

4.3. RESEARCH METHODS AND DATA COLLECTION:

The observational analysis was made by the researcher as a first phase regarding quantitative growth of the Owned, Hospital and Chain Diagnostic Laboratories in Pune city. Then in the second phase, the research design was carried out to analyze the problem.

4.3.1. PRIMARY DATA: The researcher had collected the primary data for the study from the sample of chain, hospital and owned diagnostic laboratories.

4.3.2. SECONDARY DATA: The researcher had collected the secondary data for the study from the various sources like research articles, books on marketing management, magazines, dissertations and other publications from conference proceedings. The details are also mentioned in bibliography.

4.3.3. QUESTIONNAIRE METHOD:

To study the marketing practices of Owned, Hospital and Chain Diagnostic Laboratories and different problems associated with them the formal instrument in the form of questionnaire was developed by the researcher.

4.3.4. RESEARCH INSTRUMENT DESIGNING:

The research tool used y the researcher for the study that is questionnaire had mainly four purposes. First the main purpose is to collect the relevant data, second to make the data comparable, third to minimize the bias and lastly to motivate the respondents for the proper responses of the study. The research instrument designed had help researcher in classifying the data based on the details of the respondents. The respondents opinion about the marketing practices of Owned, Hospital and Chain Diagnostic Laboratories and present business scenario was understood from the research instrument i.e. questionnaire by the researcher.

4.3.5. OBSERVATION METHOD:

Researcher had also used the observation method in order to compare various aspects related to marketing practices of Owned, Hospital and Chain Diagnostic Laboratories. Researcher had made remarks on his own on these parameters related with every type of Diagnostic laboratory.

4.4. POPULATION, SAMPLING PROCEDURE, SAMPLE SIZE AND SAMPLE SIZE ESTIMATION:

4.4.1. POPULATION:

Researcher had used target population in the form of owned, chain & hospital diagnostic laboratories.

A research population is also known as a well-defined collection of individuals or objects known to have similar characteristics. A research population is generally a

large collection of individuals or objects that are the focus of a scientific query. To understand the opinion of population researches are done. However, due to the large sizes of populations, it is difficult to test every individual in the population because it is too expensive and time-consuming. All individuals or objects within a certain population usually have a common binding characteristic.

4.4.2. SAMPLING PROCEDURE:

The researcher had used non-probability sampling method for the study. From the various types of non-probability sampling purposive sampling was chosen.

NON-PROBABILITY SAMPLING:

This is a type of sampling method which do not follow the theory of probability in choosing the elements from the sampling population. This method is adopted in the study when the numbers of elements in a population are either unknown or cannot be individually identified.

There are different methods or types of non probability sampling which are used in both qualitative as well as quantitative research.

Following are the types of non probability sampling methods:

- Quota sampling

- Accidental sampling

- Judgemental sampling or Purposive sampling

- Expert sampling

- Snowball sampling

4.4.3. PURPOSIVE SAMPLING:

To achieve the objectives of our study that can provide us the best of the information is taken place according to our judgement which is the primary consideration in the purposive type of sampling.

In this type of sampling the researcher is only going to visit or meet those respondents or peoples which in his opinion are likely to have the required information related to his or her study and is willing to share with the researcher.

Purposive sampling is very useful for the researcher when he or she wanted to construct a historical reality or describe any of the phenomenon or develop something of which very little information is known to the world.

The researchers more often use this type of sampling incase of qualitative research but it can be used in quantitative research also the only thing is that the researcher has to select a predetermined number of people who, in his or her judgement, are best positioned to provide the needed information for their study.

4.4.4. SAMPLE SIZE:

The sample size is 177 consisting of 90 Owned, 80 Hospital and 7 Chain Diagnostic Laboratories. Total 200 questionnaires were distributed among the respondents, out of which 27 questionnaires were incomplete because the respondents had shown negligence and reluctance to complete the questionnaire. Therefore 177 valid questionnaires are taken for the further study by the researcher.

4.4.5. SAMPLE SIZE ESTIMATION:

The sample size calculations which are developed by Roscoe was taken for the research and are published in the book titled "Research methodology" by the author Uma Shekran. In this book, the author had clearly stated that, sample size greater than 30 and less than 500 are appropriate for carrying over most of the research. He had further stated that when the sample needs to be broken in to sub sample based on gender or profession and income groups, a minimum sample size of the 30 for each

category is necessary. He had further stated that in multivariate analysis the sample size should be ten times greater than the variables taken for the size.

4.5. MEASUREMENT AND SCALE USED FOR THE STUDY:

The self-administered questionnaire is a research component of the study. The questionnaire designed for the study by the researcher had used different types of questioning techniques. The researcher had used in the questionnaire five point Likert scaled questions, multiple choice questions, dichotomous questions, close-ended questions and single answer questions respectively. Categorical scale and dichotomous questions provided easiness of understanding and flexibility to the respondents.

The Questionnaire is designed to contain the 7 P's of marketing which is spread over fourteen questions for demographic purposes, eleven questions for the Product, nineteen questions for Price, six questions for Place, twenty one questions for Promotion, eight questions for People, five questions for Physical Evidence, seven questions for Process, twelve questions for segmentation, twelve questions for Positioning, six questions for relationship marketing and fourteen questions for marketing effectiveness. Except for demographic questions, five point Likert Scale has been used. The questions were mainly based on thesis titled "Marketing of health care services a comparative study of selected multi-specialty hospitals of north India."[1]

The questions are further strengthen by using "Marketing practices of corporate hospitals in Andhra Pradesh"[2], An appraisal of marketing practices in selected Chilli marketing centres of Dharwad district"[3], "Marketing Practices in Service Industry"[4], "Marketing practices of women self-help group members an analytical study with special reference to selected blocks in Coimbatore district"[5], "A study on Marketing

Practices and Strategies of the Software Export Companies"[6] , "Marketing practices of leather industry A study with reference to the select footwear retail units in Tamilnadu"[7],"Marketing practices and problems of pharmaceutical companies registered in Goa"[8],"Marketing of hospital services"[9] & "A Comparative Study on Product Mix in Corporate Hospitals".[10]

The Validity of constructs used by all the above references has been thoroughly understood and then taken as it is by the researcher for this study. In the context of the health care industry per se, appropriate changes have been made so as to make it industry specific.

The same is true about the construct validity as well further to that the researcher has approached two renowned marketing Professor's, who are ardent researchers. On the condition of anonymity, they have thoroughly gone through and extensively discussed, each and every questions of the questionnaire designed by the researcher. The suggestions made by them are been incorporated before the conduct of Pilot Study.

However, it is essential to note here that the suggestions given by these two Professor's do not alter the content of the questions related to the 7 P's of marketing. Again, these two Professors have insured that the Construct & Content validity is not hampered or compromised throughout the questionnaire.

The questionnaire was pre-tested by the researcher amongst 30 respondents and was also shown to two faculties of marketing.

- Five point Likert scale was used to know and understand marketing practices.

- Nominal scale is also used by the researcher in the questionnaire.

- The sales of the respondents taken for the study fall under the categorical scale.

Pre testing of the questionnaire - The questions, which were not understood, are deleted from the questionnaire. Few questions, which were confusing, are dropped. The group of 30 respondents was asked about the statements.

4.5.1. SELECTION OF TYPE OF DISTRIBUTION:

As the research consists of large sample size, the data falls in the category of the normal distributions. In this case many frequencies falls on the normal curve and many parameters are consistent. For the Likert's scale '1' score is given for the strongly disagree criteria and '5' score is given for the strongly agree criteria .The scores are equally distributed from score 2 and 4 which has been labeled as 'disagree' and 'agree'. '3' score is given for neutral criteria.

4.6. DATA CODING AND DEMOGRAPHIC VARIABLES USED FOR THE STUDY:

The data grouping is the most important step in data coding. The classification based on the demographic variables is the first stage of the data coding. The demographic variables include the factors like Qualification, Type of diagnostic laboratory and sales (routine & specialized tests), and Marketing Department. The respondents are numbered from 1 to 177 serially. For the above-mentioned demographic variables, the coding considered for data processing is as follows:

4.6.1. CODING USED FOR TYPE OF THE RESPONDENTS:

For the variable 'Type', 1 is considered for Owned, 2 for Hospital & 3 for chain Diagnostic Laboratories.

4.6.2. CODING USED FOR QUALIFICATION OF THE RESPONDENTS:

For the Qualification, one is considered for the respondents who had medical background, 2 for the respondents who had Non-medical background.

4.6.3. CODING USED FOR SALES (ROUTINE & SPECIALIZED TESTS) OF THE RESPONDENTS:

The sales distribution is made using continuous distribution which started from the less than Rs.1000 and the difference is taken of Rs.2000 i.e.Rs.1000 to 3000, Rs.3000 to 6000, Rs.6000 to 9000 and last is Rs.9000 and above.

4.6.4. CODING USED FOR THE RESPONDENTS MARKETING PRACTICES RELATED TO PRODUCT, PRICE, PLACE, PROMOTION, PHYSICAL EVIDENCE, PEOPLE, PROCESS, SEGMENTATION, POSITIONING, RELATIONSHIP MARKETING & MARKETING EFFECTIVENESS:

Scale consists of the numbers from 1 to 5. 1 stands for strongly disagree, 2 stands for disagree, 3 stands for neutral response, 4 stands for agree and 5 stands for strongly agree.

4.6.5. VARIABLES FOR IDENTIFICATION OF THE DATA:

Identification of the data consists of name, Department, year of establishment & Type.

4.6.6. VARIABLES FOR CLASSIFICATION OF THE DATA:

Classification of the data in the research instrument consist of Qualification, Sales, Marketing Department and its type, additional services, Marketing practices and other relevant data.

4.6.7. VARIABLES FOR SUBJECT DATA:

Subject data gives the emphasis upon the different objectives for which the survey is conducted. In this research, various parameters are set for testing the opinion of the respondents in terms of marketing practices related to Product, Price, Place, Promotion, Physical Evidence, People, Process, Segmentation, Positioning, Relationship Marketing & Marketing Effectiveness.

These parameters are mentioned in respective sessions.

4.7. PRESENTATION OF DATA AND ANALYSIS:

4.7.1. TABLES AND GRAPHS:

Tables and graphs are visual representations. They are used in the study to organize information to show patterns and relationships between different variables related with marketing practices of various diagnostic laboratories.

Pie charts are used to show percentages. Column charts are used to show comparisons between different groups and variables.

4.8. STATISTICAL PACKAGE USED - THE SPSS ENVIRONMENTAL:

The statistical package which is used by the researcher is SPSS. This package provided a different ways or techniques of statistical analysis along with the data management system in a graphical form as an output using the descriptive menus and simple dialogue boxes to do the various work of the researcher.

The researcher can accomplish his most of the tasks simply by pointing and clicking the mouse.

4.9. RELIABILITY ANALYSIS OF THE DATA:

The reliability measure indicates which is to the extent without bias and also ensured the consistent measurement across the time and also across the different items in the instrument for the study of the researcher. Thus, reliability of a measure is an indication of the stability and consistency with which the instrument measured the concept and helps to assess the goodness of measure.

SPSS software package also provided the reliability analysis. The reliability analysis is done on the data compiled by the researcher.In carrying over the reliability analysis in SPSS the analyze menu is considered in that scale menu is further considered and analysis is done.

In the Reliability analysis the Cronbach's alpha value is considered for considering the instrument reliable for the study of the researcher. Cronbach's alpha should be in between 0.5 and 1. In case of the researcher study, the Cronbach's alpha is 0.818. Therefore, the data is considered to be reliable by the researcher for his research. Following are the tables of reliability analysis output from the SPSS (version 20) package.

TABLE: 4.9.1. RELIABILITY TEST

Scale: ALL VARIABLES

Case Processing Summary			
		N	**%**
Cases	**Valid**	177	100.0
	Excluded[a]	0	0.0
	Total	177	100.0
a. Listwise deletion based on all variables in the procedure.			

RELIABILITY STATISTICS		
Cronbach's Alpha	**Cronbach's Alpha Based on Standardized Items**	**N of Items**
0.818	0.830	10

4.10. HYPOTHESIS TESTING STEPS USED:

The primary consideration in the testing of hypothesis is to prove or disprove the research questions of the researcher taken for the study. The researcher can allow an error of 5% or 1% for the statistical analysis and can conclude the result by making correct decisions based on statistical principles.

The steps followed for testing the hypothesis of the study of the researcher are as follows:

Research question to be stated:

The first step used in the present study is to state the research question that identifies the population(s) of interest, the parameter(s) of the variable under investigation, and the hypothesized value of the parameter(s). This step helps in defining what is to be tested and what variable will be used in sample data collection. The type of variable whether it is categorical, discrete or continuous further defines the statistical test which can be performed on the collected data set.

Hypotheses:

The second step followed in the study is to select the significance level of hypothesis.

Test statistics calculate:

The third step used in the study is calculation of a statistic analogous to the parameter specified by the null hypothesis.

Compute probability of test statistic or rejection region:

The fourth step is calculation of the probability value (often called the p-value) which is the probability of the test statistic for both tails.

Conclusions to be stated:

The fifth and final step is description of the results and state correct statistical conclusions in an understandable way.

The conclusions consisted of statements describing the results of the hypothesis.

4.11. STATISTICAL TESTS USED FOR HYPOTHESIS TESTING:

4.11.1. MANOVA (MULTIVARIATE ANALYSIS OF VARIANCES):

In multivariate analysis of variance (MANOVA) multivariate sample means are compared. When there are two or more dependent variables, and is followed by significance tests involving individual dependent variables separately this statistical test is used.

It is a generalized form of univariate analysis of variance (ANOVA), although, unlike univariate ANOVA, it uses the variance-covariance between variables in significance testing of the mean differences. Sums of squares appear in univariate analysis of variance and in multivariate analysis of variance certain positive-definite matrices appear.

The diagonal entries are the same kinds of sums of squares that appear in univariate ANOVA while the off-diagonal entries are corresponding sums of products. Under normality assumptions about error distributions, the counterpart of the sum of squares due to error has a Wishart distribution.

 (See -userwww.sfsu.edu/efc/classes/biol710/manova/MANOVAnewest.pdf)

4.11.2. ANOVA (ANALYSIS OF VARIANCES):

Analysis of variance (abbreviated as ANOVA) is an extremely useful technique concerning researches in the fields of economics, biology, education, psychology, sociology, business /industry and in researches of several other disciplines. This technique is used when multiple sample cases are involved.

As stated earlier, the significance of the difference between the means of two samples can be judged through either z-test or the t-test, but the difficulty arises when we happen to examine the significance of the difference amongst more than two sample

means at the same time. The ANOVA technique enables us to perform this simultaneous test and as such is considered to be an important tool of analysis in the hands of a researcher. Using this technique, one can draw inferences about whether the samples have been drawn from populations having the same mean.

The ANOVA technique is important in the context of all those situations where we want to compare more than two populations.

The basic principle of ANOVA is to test for differences among the means of the populations by examining the amount of variation within each of these samples, relative to the amount of variation between the samples.

(See - onlinestatbook.com/2/analysis_of_variance/intro.html)

4.11.3. CORRELATION:

The population consisting of measurement of only one variable called as univariate population. But if we have the data on two variables, we are said to have a bivariate population and if the data happen to be on more than two variables, the population is known as multivariate population.

If for every measurement of a variable, X, we have corresponding value of a second variable, Y, the resulting pairs of values are called a bivariate population. In addition, we may also have a corresponding value of the third variable, Z, or the forth variable, W, and so on, the resulting pairs of values are called a multivariate population. In case of bivariate or multivariate populations, we often wish to know the relation of the two and/or more variables in the data to one another.

PARTIAL CORRELATION:

A partial correlation provides an index of whether two variables are linearly related if the effects of a third (or more) control variable are removed from their relationship. A partial correlation is a type of Pearson correlation coefficient that can range in value

from -1 to +1. A significant positive partial correlation implies that as the values on one variable increase, the values on a second variable also tend to increase, while holding constant the values of the control variable(s).

Partial correlations are conducted in order to understand why two variables are correlated. In order to interpret a partial correlation between two variables, we first need to know the size of the zero-order that is bivariate correlation between the two variables. Partial correlations help in understanding the regression.

The simplest partial correlation involves only three variables, a predictor variable, a predicted variable, and a control variable.

(See - www.socialresearchmethods.net/kb/statcorr.php)

4.11.4. NON PARAMETRIC TESTS -KENDALL'S W TEST:

Kendall's coefficient of concordance is a non-parametric statistic. It is a normalization of the statistic of the Friedman test, and can be used for assessing agreement among raters. Kendall's W value ranges from 0 that is no agreement to 1 that is complete agreement. Suppose, for instance, that a number of people have been asked to rank a list of political concerns, from most important to least important. Kendall's W can be calculated from these data. If the test statistic W is 1, then all the survey respondents have been unanimous, and each respondent has assigned the same order to the list of concerns. If W is 0, then there is no overall trend of agreement among the respondents, and their responses may be regarded as essentially random. Intermediate values of W indicate a greater or lesser degree of unanimity among the various responses.

While tests using the standard Pearson correlation coefficient assume normally distributed values and compare two sequences of outcomes at a time, Kendall's W makes no assumptions regarding the nature of the probability distribution and can

handle any number of distinct outcomes. W is linearly related to the mean value of the Spearman's rank correlation coefficients between all pairs of the rankings over which it is calculated .

(See://sphweb.bumc.bu.edu/otlt/MPHModules/BS/BS704_Nonparametric/BS704 _Nonparametric_print.html)

4.12. CONFIDENCE INTERVAL (CI):

Confidence interval is a kind of estimate of interval of parameter as population and is also used to indicate the reliability of an estimate. If the study or experiment is repeated it is an observed interval and differs from sample to sample which frequently includes the parameter of interest, the observed interval contains the parameter how frequently is determined by the confidence level or confidence coefficient. Confidence intervals act as good estimates of the unknown population parameter since consist of a range of values.

The confidence interval level of confidence would indicate the probability confidence range captures this true population parameter given a distribution of samples . The Researcher for the study had selected the confidence level of 95% and significance level of 0.05.

4.13. RESEARCH PROCESS:

The research process is similar to undertaking a journey. For a research journey there are two important decisions to make -

1) What we want to find out about or what research questions (problems) we want to find answers to.

2) How to go about finding their answers.

There are practical steps through which we must pass in our research journey in order to find answers to our research questions.

The path to finding answers to our research questions constitutes research methodology.

At each operational step in the research process we are required to choose from a multiplicity of methods, procedures and models of research methodology which will help us to best achieve our objectives. This is where our knowledge base of research methodology plays a crucial role.

The steps in Research Process are as follows:

- Formulating the Research Problem

- Extensive Literature Review

- Developing the objectives

- Preparing the Research Design including Sample Design

- Collecting the Data

- Analysis of Data & Interpretation

- Conclusions, Suggestions & Recommendations and Areas for further research

Formulating the research problem:

It is the first and most crucial step in the research process

- Main function is to decide what we want to find out about.

- The way we formulate a problem determines almost every step that follows.

Sources of research problems:

Research in social sciences revolves around four Ps:

People - a group of individuals.

Problems - examine the existence of certain issues or problems relating to their lives; to ascertain attitude of a group of people towards an issue.

Programs - To evaluate the effectiveness of an intervention.

Phenomena - To establish the existence of the regularity.

In practice most research studies are based upon at least a combination of two Ps.

Every research study has two aspects:

Study population-

People: individuals, organizations, groups, communities (they provide you with the information or you collect information about them)

Subject area-

Problems: issues, situations, associations, needs, profiles

Program: content, structure, outcomes, attributes, satisfactions, consumers, Service providers, etc.

Phenomenon: cause-and-effect relationships, the study of a phenomenon itself (Information that you need to collect to find answers to your research questions)

We can examine the professional field of our choice in the context of the four Ps in order to identify anything that looks interesting.

Steps in formulation of a research problem:

Working through these steps presupposes a reasonable level of knowledge in the broad subject area within which the study is to be undertaken. Without such knowledge it is difficult to clearly and adequately 'dissect' a subject area.

Step 1 Identify a broad field or subject area of interest to us.

Step 2 Dissect the broad area into sub areas.

Step 3 Select what is of most interest to us.

Step 4 Raise research questions.

Step 5 Formulate objectives.

Step 6 Assess our objectives.

Step 7 Double check.

As we narrow the research problem, similarly we need to decide very specifically who constitutes our study population, in order to select the appropriate respondents.

Reviewing the literature:

-Essential preliminary task in order to acquaint our self with the available body of knowledge in our area of interest.

-Literature review is integral part of entire research process and makes valuable contribution to every operational step.

-Reviewing literature can be time-consuming, daunting and frustrating, but is also rewarding.

Its functions are:

a. Bring clarity and focus to our research problem;

b. Improve our methodology;

c. Broaden our knowledge;

d. Contextualise our findings.

Procedure for reviewing the literature:

i) search for existing literature in our area of study;

ii) review the literature selected;

iii) develop a theoretical framework;

iv) develop a conceptual framework.

The formulation of objectives:

-Objectives are the goals we set out to attain in our study.

-They inform a reader what we want to attain through the study.

-It is extremely important to word them clearly and specifically.

-They should be numerically listed.

-Wording should clearly, completely and specifically communicate to our readers our intention.

-Each objective should contain only one aspect of the study.

-Use action oriented words or verbs when writing objectives.

Preparing the research design:

Research design is the conceptual structure within which research would be conducted.

The function of research design is to provide for the collection of relevant information with minimal expenditure of effort, time and money.

The preparation of research design, appropriate for a particular research problem, involves the consideration of the following :

1. Objectives of the research study.

2. Method of Data Collection to be adopted

3. Source of information—Sample Design

4. Tool for Data collection

5. Data Analysis-- qualitative and quantitative

Collecting Data:

Having formulated the research problem, developed a study design, constructed a research instrument and selected a sample, we then collect the data from which we will draw inferences and conclusions for our study. Depending upon our plans, we might commence interviews, mail out a questionnaire, conduct experiments and/or make observations.

Analysis of data & interpretation:

Processing and analysing data involves a number of closely related operations which are performed with the purpose of summarizing the collected data and organizing these in a manner that they answer the research questions (objectives).

If we had conducted a large quantitative survey, this section may contain tables, graphs, pie charts and associated statistics. If we have conducted a qualitative piece of research this section may be descriptive prose.

Conclusions, Suggestions & Recommendations and Areas for further research:

In this section we sum up our findings and draw conclusions from them, perhaps in relation to other research or literature.

Suggestions and areas for further research is useful in both academic reports and work-related reports which shows how the research can be continued. Perhaps some results are inconclusive, or perhaps the research has thrown up many more research questions which need to be addressed. It is useful to include this section because it shows that we are aware of the wider picture and that we are not trying to cover up something which we feel may be lacking in our own work .

4.14. CHAPTER SCHEME:

The present study had been discussed in the following 6 different chapters as follows:

I. **INTRODUCTION:**

This chapter included the scenario of world in vitro diagnostic market along with the Indian in vitro diagnostic market. Subsequently, various aspects pertaining to marketing practices of diagnostic laboratories has been discussed.

II. **PROFILE OF OWNED, HOSPITAL AND CHAIN DIAGNOSTIC LABORATORIES:**

This chapter consists of profile of diagnostic laboratories along with the examples.

III.   REVIEW OF LITERATURE:

This chapter has reviewed the existing literature pertaining to problem in hand.

IV.   RESEARCH METHODOLOGY

This chapter consists of various research methods used in the study. The research methods consist of source of primary data, secondary data and research tool. Sample procedure consists of sample size and type of a sample used in the study and finally research plan.

The variables and the data coding procedure are the integral part of research methodology.

V.   DATA ANALYSIS AND FINDINGS

This chapter included analysis of data which was divided into three parts:

- Demographic Analysis and findings

- Descriptive statistics and findings

- Inferential statistics and findings

VI. CONCLUSIONS,   AREAS   FOR   FURHER   RESEARCH   AND SUGGESTIONS:

This chapter included conclusions of all the results based on the findings of the study and also the areas of further research and suggestions are provided.

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3. http://shodhganga.inflibnet.ac.in/bitstream/10603/95303/18/18_questionnaires.pdf

4. http://shodhganga.inflibnet.ac.in/bitstream/10603/89381/14/14_appendix-questionnaire.pdf

5. http://shodhganga.inflibnet.ac.in/bitstream/10603/102448/17/17_appendix.pdf

6. http://shodhganga.inflibnet.ac.in/bitstream/10603/54228/17/17_appendix.pdf

7. http://shodhganga.inflibnet.ac.in/bitstream/10603/62454/15/15_annexure%20i.pdf

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CHAPTER - 5

DATA ANALYSIS AND FINDINGS

5.1. INTRODUCTION:

Marketing is considered to be the potent weapon in the armoury of organisations to serve their customers better, gain over competitors, and enhance market share and profitability and so on. Marketing in healthcare sector was a late starter. In fact, the same was completely written off in healthcare industry when other industries were mad about marketing relevance to their industry. In fact, it was only realised in late 1970s that marketing can be game changer in healthcare industry also. In the modern times, marketing is also increasingly becoming involved in customer's communications and processes to improve the customer experience and bring a non-clinical perspective to customer care and services. Advent of Chain diagnostic laboratories initiated professional marketing in Indian diagnostic laboratories health care industry.

The present study has made an endeavour to assess marketing practices of Owned, Chain and Hospital diagnostic Laboratories. The same have been analysed with the help of a structured questionnaire addressed to the managers/officials/other respondents of the diagnostic laboratories.

In all, 177 respondents (90 respondents from Owned diagnostic laboratories, 80 respondents from Hospital diagnostic laboratories and 07 respondents from Chain diagnostic laboratories) have constituted the sample for research. This chapter is divided in three parts:

5.2. PART A - DEMOGRAPHIC DATA

5.3. PART B - DESCRIPTIVE STATISTICS

5.4. PART C - INFERENTIAL STATISTICS

5.2. PART A –DEMOGRAPHIC DATA:

TABLE NO. 5.2.1.

TYPE OF ORGANIZATIONS

Sr. No.	Type of Organizations	Responses in figure	% of responses
1	Owned Diagnostic Laboratory	90	50.8
2	Hospital Diagnostic Laboratory	80	45.2
3	Chain Diagnostic Laboratory	7	4.0
	Total	**177**	**100**

CHART NO. 5.2.1.

PIE CHART SHOWING TYPE OF ORGANIZATIONS - % OF RESPONSES
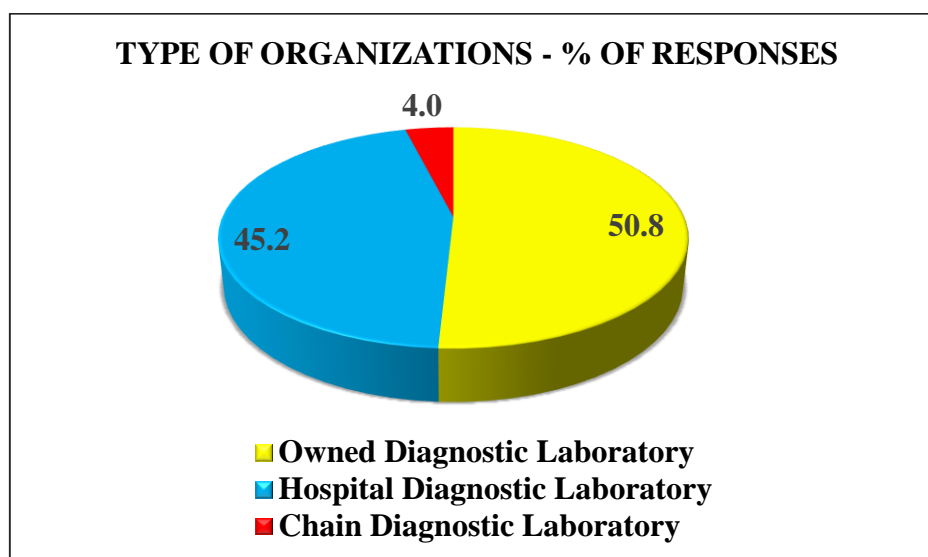
From the table no.5.2.1. It can be analyzed that 50.8% of the respondents were owned diagnostic laboratories, 45.2% of the respondents were Hospital diagnostic laboratories and 4.0% of the respondents were Chain diagnostic laboratories. Thus it is clear that responses received of chain diagnostic laboratories are less as there are less number of chain diagnostic laboratories in Pune city.

PROMOTER'S QUALIFICATION

Sr. No.	Promoter's Qualification	Responses in figure	% of responses
1	Medical	90	50.8
2	Non-Medical	87	49.2
	Total	**177**	**100**

CHART NO. 5.2.2.

PIE CHART SHOWING QUALIFICATION WISE DISTRIBUTIONS OF

RESPONDENTS

PROMTER'S QUALIFICATION - % OF RESPONSES
■ Medical ■ Non Medical
49% 51%
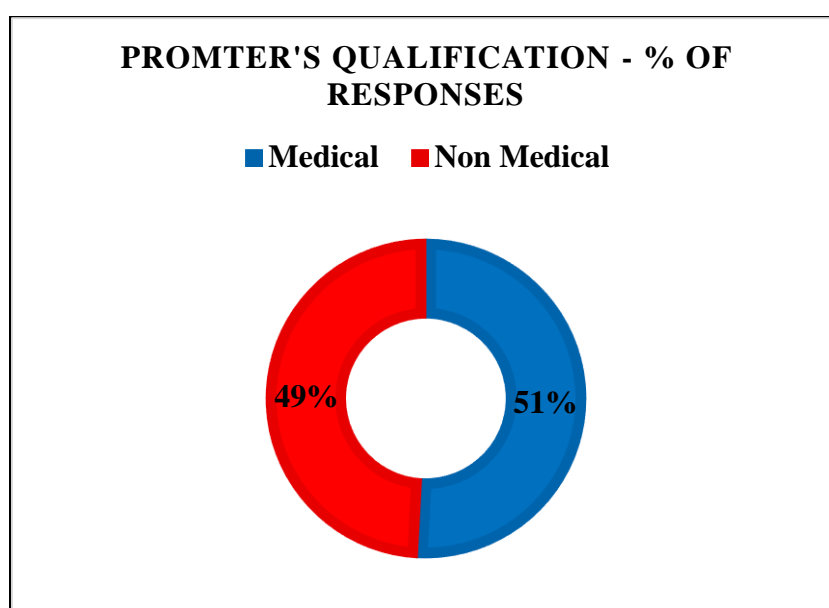
From the table no. 5.2.2., it can be analyzed that 51 % of the respondent's promoting the diagnostic laboratories are from medical profession and 49% of the respondent's promoting the diagnostic laboratories are from non- medical profession. Thus it is clear that diagnostic laboratories are also promoted by non-medical professionals.

TABLE NO. 5.2.3.

PROMOTER'S YEARS OF EXPERIENCE

Sr. No.	Promoters - Years of Experience	Responses in figure	% of responses
1	Less than10 Year	32	18.1
2	10 - 20 Year	37	20.9
3	20 - 30 Year	42	23.7
4	30 - 40 Year	36	20.3
5	40 & above Year	30	16.9
	Total	**177**	**100**

CHART NO. 5.2.3.

PIE CHART SHOWING YEARS OF EXPERIENCE DISTRIBUTIONS OF RESPONDENTS

PROMOTER'S YEARS OF EXPERIENCE - % OF RESPONSES

- Less than10 Year
- 10 - 20 Year
- 20 - 30 Year
- 30 - 40 Year
- 40 & above Year
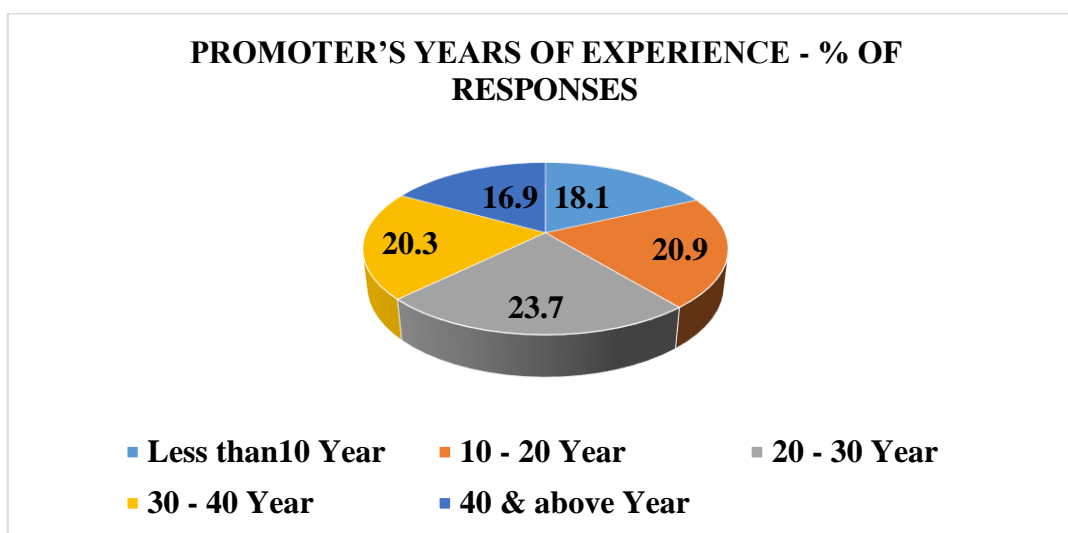
From the table no. 5.2.3., it can be interpreted that 23.7% of the respondents promoting the diagnostic laboratories are having 20-30 year of experience. While 20.9% of the respondents fall in the category of 10-20 year of experience.20.3% of the respondents fall in the category of 30-40 year of experience. 18.1% of the respondents fall in the category of less than 10 year of experience. Only 16.9% of the respondents fall in the category of 40 and above year of experience. Thus majority of diagnostic laboratories promoters are experienced.

TABLE NO. 5.2.4.

AVERAGE DAILY SALES OF ROUTINE TESTS

Sr. No.	Average Daily Sales of Routine Tests	Responses in figure	% of responses
1	Rs 1000 – 3000	41	23.2
2	Rs 3000 – 6000	43	24.3
3	Rs 6000 – 9000	47	26.6
4	Above Rs 9000	46	26.0
	Total	**177**	**100**

CHART NO. 5.2.4.

PIE CHART SHOWING AVERAGE DAILY SALES OF ROUTINE TESTS OF RESPONDENTS
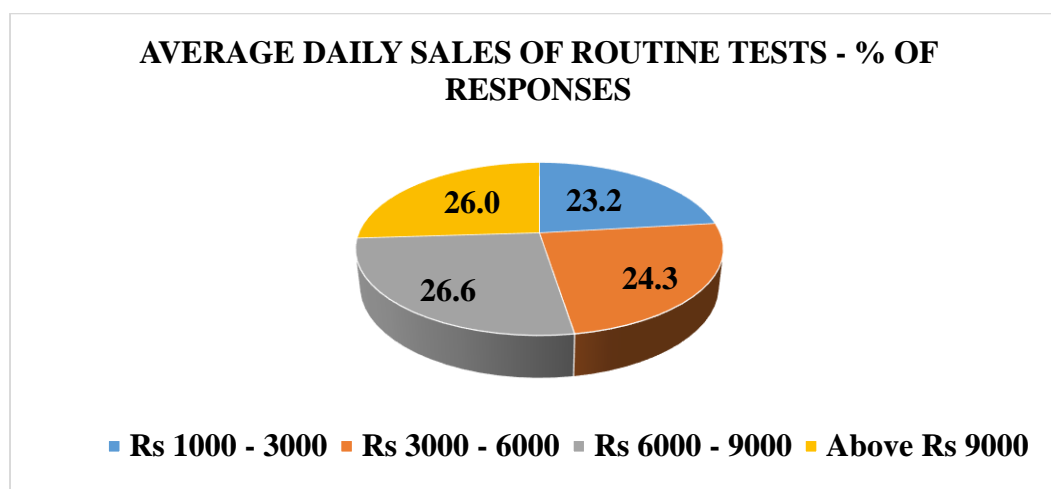
From the table no.5.2.4.it can be interpreted that 26.6% of the respondents of the diagnostic laboratories are having average daily sales of routines tests between Rs 6000 - Rs 9000. 26.0% of the respondent's fall in the category of sales above Rs 9000. while 24.3% the respondents fall in the category of sales between Rs 3000 - Rs 6000.Only 23.2 % of the respondent's fall in the category of sales between Rs 1000 - Rs 3000.Thus majority of the diagnostic laboratories are having sales of routine tests.

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AVERAGE DAILY SALES OF SPECIALISED TESTS

Sr. No.	Average Daily Sales of Specialised Tests	Responses in figure	% of responses
1	Rs 1000 – 3000	42	23.7
2	Rs 3000 – 6000	50	28.2
3	Rs 6000 – 9000	39	22.0
4	Above Rs 9000	46	26.0
	Total	**177**	**100**

CHART NO. 5.2.5.

PIE CHART SHOWING AVERAGE DAILY SALES OF SPECIALISED

TESTS OF RESPONDENTS

AVERAGE DAILY SALES OF SPECIALISED TESTS - % OF RESPONSES

■ Rs 1000 - 3000 ■ Rs 3000 - 6000 ■ Rs 6000 - 9000 ■ Above Rs 9000
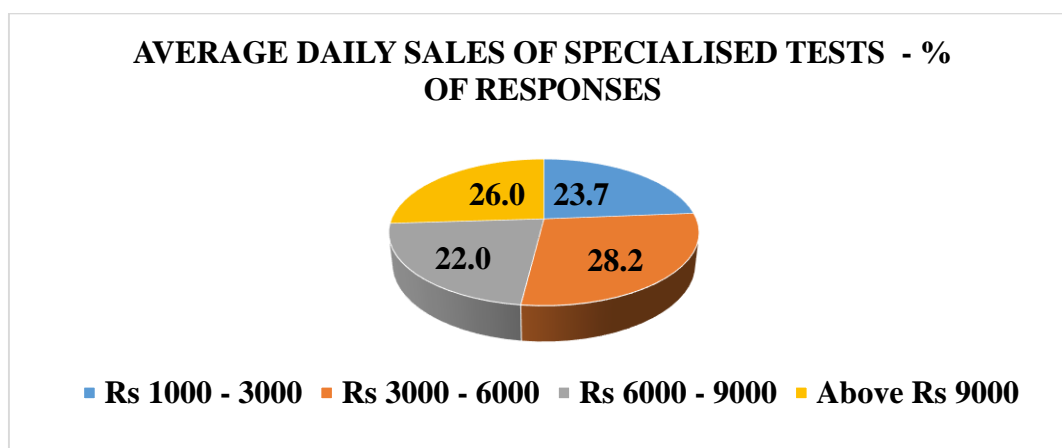
From the table no.5.2.5., it can be interpreted that 28.2% of the respondents of the diagnostic laboratories are having average daily sales of specialised tests between Rs 3000-Rs 6000.26.0% of the respondent's fall in the category of sales above Rs 9000.while 23.7% the respondent's fall in the category of sales between Rs 1000-Rs 3000.Only 22.0 % of the respondent's fall in the category of sales between Rs 6000-Rs 9000.

Thus majority of the diagnostic laboratories are having sales of specialised tests.

TABLE NO. 5.2.6.

MARKETING DEPARTMENT

Sr. No.	Marketing Department	Responses in figure	% of responses
1	Yes	36	20.3
2	No	141	79.7
	Total	**177**	**100**

CHART NO. 5.2.6.

PIE CHART SHOWING PRESENCE OF MARKETING DEPARTMENT OF RESPONDENTS
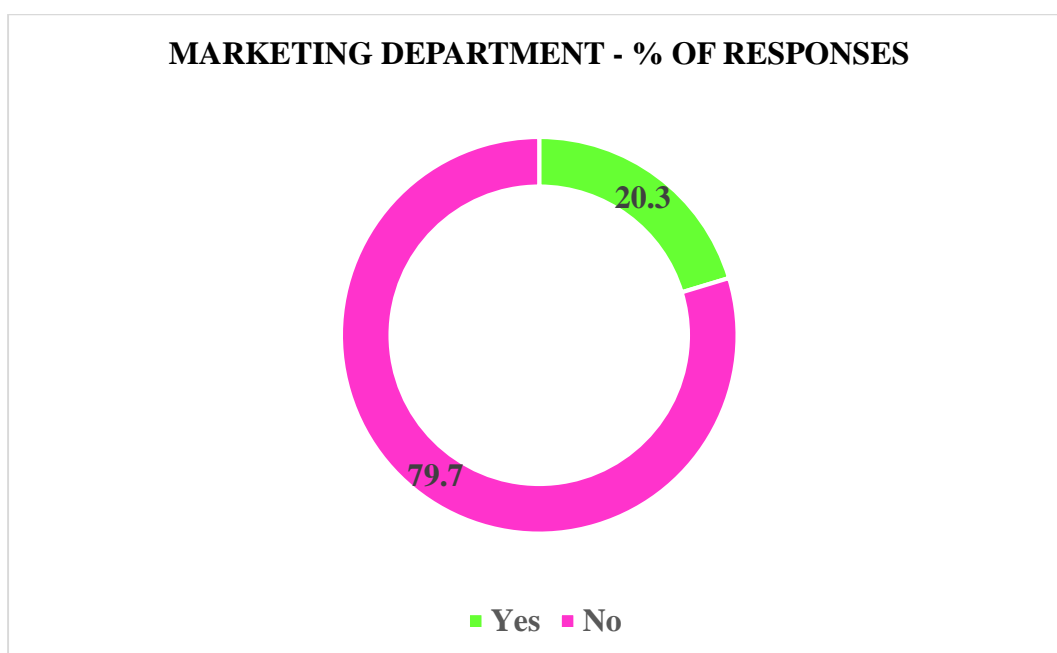
From the table no. 5.2.6., it can be interpreted that 79.7% of the respondents of the diagnostic laboratories are not having marketing department. While 20.3% of the respondents of the diagnostic laboratories are having marketing department.

Thus a presence of separate marketing department has minimum role in the sales of diagnostic laboratories.

PRODUCT

Health care product poses unique challenges for marketers. It is so because the demand for such products can never be estimated beforehand and it keeps on fluctuating. The emergence of newer diseases keep healthcare providers under tremendous pressure to regularly indulge in research and development (R & D) activities and at the time remain in touch with medical developments taking place at globe. Even existing treatments need to be modified to make these better for customers. It is thus imperative for healthcare marketers to devise the product portfolio as per the expectations of the customers and keep in it the scope to modify the same as per market requirements. By doing so, the healthcare marketers can hope to enhance the image for their product portfolio in customers mind. The product portfolio of the diagnostic laboratories has been scanned with the help of table no. 5.2.7.

TABLE NO. 5.2.7.

MARKETING PRACTICES – PRODUCT

Sr.No.	Product	Agree		Disagree		Neutral		Total	
		Responses	%	Responses	%	Responses	%	Responses	%
1	The product/service portfolio up to the customer's expectations	86	48.6	48	27.1	43	24.3	177	100
2	The Diagnostic Laboratory reviews the performance of its existing products/ services on regular basis	90	50.8	59	33.3	28	15.8	177	100
3	New product/service development is a continuous phenomenon in the Diagnostic Laboratory	68	38.4	63	35.6	46	26.0	177	100
4	The product/service portfolio of the Diagnostic Laboratory enhances its brand image	88	49.7	51	28.8	38	21.5	177	100
5	Case history of customers maintained by your Diagnostic Laboratory is always available and helpful	77	43.5	57	32.2	43	24.3	177	100
6	In emergency situations you recommend the customers to go some other Diagnostic Laboratories	61	34.5	69	39.0	47	26.6	177	100
7	In your opinion, the package services/products at your Diagnostic Laboratory are helpful to the customers	82	46.3	58	32.8	37	20.9	177	100
8	Your Diagnostic Laboratory is having good customer	77	43.5	65	36.7	35	19.8	177	100
9	Your Diagnostic Laboratory reception services are	74	41.8	64	36.2	39	22.0	177	100
10	You will believe that the equipment's you have are all	76	42.9	57	32.2	44	24.9	177	100
11	When compared to other Diagnostic Laboratory, this is providing better services/products to the customers	82	46.3	58	32.8	37	20.9	177	100
	Average	**78**	**44.2**	**59**	**33.3**	**40**	**22.4**	**177**	**100**

CHART NO. 5.2.7.

BAR CHART SHOWING PRODUCT RELATED MARKETING PRACTICES

- % OF RESPONSES

PRODUCT - % RESPONSES

Category	Neutral	Disagree	Agree
Average	22.4	33.3	44.2
When compared to other Diagnostic Laboratory, this is providing better services/products to the…	20.9	32.8	46.3
You will believe that the equipment's you have are all latest	24.9	32.2	42.9
Your Diagnostic Laboratory reception services are good	22.0	36.2	41.8
Your Diagnostic Laboratory is having good customer care	19.8	36.7	43.5
In your opinion, the package services/products at your Diagnostic Laboratory are helpful to the…	20.9	32.8	46.3
In emergency situations you recommend the customers to go some other Diagnostic Laboratories	26.6	39.0	34.5
Case history of customers maintained by your Diagnostic Laboratory is always available and…	24.3	32.2	43.5
The product/service portfolio of the Diagnostic Laboratory enhances its brand image	21.5	28.8	49.7
New product/service development is a continuous phenomenon in the Diagnostic Laboratory	26.0	35.6	38.4
The Diagnostic Laboratory reviews the performance of its existing products/ services on regular basis	15.8	33.3	50.8
The product/service portfolio up to the customer's expectations	24.3	27.1	48.6

From the table, it can be interpreted that on an average 44.2% of the respondents of the diagnostic laboratories have agreed to Product as Marketing Practices. While an average 33.3% of the respondents of the diagnostic laboratories have disagreed and 22.4% of the respondents of the diagnostic laboratories are neutral to Product as Marketing Practices. Thus it is stated that respondents of the diagnostic laboratories have agreed to Product as Marketing Practices.

PRICE

Pricing is one of the most important element of the health care marketing mix. The delivery of services is varying from one diagnostic laboratory to another. Therefore, determination of pricing is not an easy task.

The researcher has made an attempt to study the pricing tactics of the diagnostic laboratories and see how effective the same are. A discussion follows:

- **PRICING OBJECTIVES**

  Pricing objectives are the most important thing in deciding the pricing policy of an organisation. Table no. 5.2.8. reflects the pricing objectives being kept by the diagnostic laboratories.

- **PRICING METHODS**

  There are various methods through which price is finalised by an organisation. It includes mark up pricing, target rate of return pricing, value pricing, perceived value pricing and going rate pricing. In mark up pricing method, an additional mark up is added to the unit cost of the product. In target rate of return method, a fixed return on investment is added to the investment involved in the particular product. In value pricing, low prices are set for high quality products. In perceived value pricing, prices are set as perceived by customers. In going rate pricing method, prices are set keeping in mind the competitors prices. Last but not the least social pricing aims in serving society without aiming profit. Table no. 5.2.8. throws light on the pricing methods used by the diagnostic laboratories to finalise the price of their products/services.

- **PRICING EFFECTIVENESS**

Price is a potent weapon in the armoury of the marketers to gain customer loyalty and competitive advantage. This is especially true in a price sensitive country like India. The extent to which pricing policy of the diagnostic laboratories helps them has been discussed with the help of table no.5.2.8.

TABLE NO. 5.2.8.

MARKETING PRACTICES – PRICE

Sr.No.	Price	Agree		Disagree		Neutral		Total	
		Responses	%	Responses	%	Responses	%	Responses	%
1	In your Diagnostic Laboratory the quality of diagnostic test depends on price	55	31.1	72	40.7	50	28.2	177	100
2	Your Diagnostic Laboratory follows charges, what the other Diagnostic Laboratories follows	77	43.5	67	37.9	33	18.6	177	100
3	The charges for conducting, laboratory tests at your Diagnostic Laboratory are reasonable	85	48.0	55	31.1	37	20.9	177	100
Objectives									
4	Maximising current profit and ROI (Return on Investment)	72	40.7	72	40.7	33	18.6	177	100
5	Product/Service quality leadership	78	44.1	52	29.4	47	26.6	177	100
6	Quality diagnostic services at affordable prices	90	50.8	57	32.2	30	16.9	177	100
7	Quality diagnostic services for every section of the society	87	49.2	60	33.9	30	16.9	177	100
8	Survival in the competitive market	78	44.1	50	28.2	49	27.7	177	100
Methods									
9	Mark up pricing	68	38.4	73	41.2	36	20.3	177	100
10	Target return pricing	69	39.0	74	41.8	34	19.2	177	100
11	Skimming pricing	72	40.7	66	37.3	39	22.0	177	100
12	Penetration pricing	80	45.2	61	34.5	36	20.3	177	100
13	Value pricing	73	41.2	68	38.4	36	20.3	177	100
14	Perceived value pricing	75	42.4	60	33.9	42	23.7	177	100
15	Going rate pricing	70	39.5	70	39.5	37	20.9	177	100
16	Social Pricing	63	35.6	65	36.7	49	27.7	177	100
Pricing Effectiveness									
17	Pricing policy of the Diagnostic Laboratory gives it the competitive edge	81	45.8	61	34.5	35	19.8	177	100
18	Pricing policy of the Diagnostic Laboratory gives value for money to customers	78	44.1	67	37.9	32	18.1	177	100
19	Pricing policy of the Diagnostic Laboratory helps in maximising the profit	91	51.4	54	30.5	32	18.1	177	100
	Average	**76**	**42.9**	**63**	**35.8**	**38**	**21.3**	**177**	**100**

CHART NO. 5.2.8.

BAR CHART SHOWING PRICE RELATED MARKETING PRACTICES -% OF RESPONSES

PRICE - % RESPONSES

Category	Neutral	Disagree	Agree
Average	21.3	35.8	42.9
Pricing policy of the Diagnostic Laboratory helps in maximising the profit	18.1	30.5	51.4
Pricing policy of the Diagnostic Laboratory gives value for money to customers	18.1	37.9	44.1
Pricing policy of the Diagnostic Laboratory gives it the competitive edge	19.8	34.5	45.8
Social Pricing	27.7	36.7	35.6
Going rate pricing	20.9	39.5	39.5
Perceived value pricing	23.7	33.9	42.4
Value pricing	20.3	38.4	41.2
Penetration pricing	20.3	34.5	45.2
Skimming pricing	22.0	37.3	40.7
Target return pricing	19.2	41.8	39.0
Mark up pricing	20.3	41.2	38.4
Survival in the competitive market	27.7	28.2	44.1
Quality diagnostic services for every section of the society	16.9	33.9	49.2
Quality diagnostic services at affordable prices	16.9	32.2	50.8
Product/Service quality leadership	26.6	29.4	44.1
Maximising current profit and ROI (Return on Investment)	18.6	40.7	40.7
The charges for conducting, laboratory tests at your Diagnostic Laboratory are reasonable	20.9	31.1	48.0
Your Diagnostic Laboratory follows charges, what the other Diagnostic Laboratories follows	18.6	37.9	43.5
In your Diagnostic Laboratory the quality of diagnostic test depends on price	28.2	40.7	31.1

From the table no. 5.2.8., it can be interpreted that on average 42.9 % of the respondents of the diagnostic laboratories have agreed to Price as Marketing Practices. While an average 35.8 % of the respondents of the diagnostic laboratories have disagreed and 21.3 % of the respondents of the diagnostic laboratories are neutral to Price as Marketing Practices.

PLACE

Place is the element which is associated with the channel of distribution by which services can be delivered. In case of health care services, channel of distribution should be devised according to the need of their customers. That is, it fulfills the criteria of being accessible and being available at the time of service requirement.

DISTRIBUTION EFFECTIVENESS

Any distribution arrangement essentially aims at giving proximity advantage to customers, managing the demand of customers by prompt supply, making the services timely available to customers and selecting and retaining efficient channel partners.

The effectiveness of diagnostic laboratories distribution has been assessed with the help of table no.5.2.9.

TABLE NO. 5.2.9.

MARKETING PRACTICES – PLACE

Sr.No.	Place	Agree		Disagree		Neutral		Total	
		Responses	%	Responses	%	Responses	%	Responses	%
1	The Diagnostic Laboratory is able to give location benefits to its customers	88	49.7	54	30.5	35	19.8	177	100.0
2	Diagnostic Laboratory is able to match its demand and supply functions well	78	44.1	67	37.9	32	18.1	177	100.0
3	The Diagnostic Laboratory is able to serve its customers well in time	80	45.2	61	34.5	36	20.3	177	100.0
4	The customers of Diagnostic Laboratory can access the test reports through electronic media	88	49.7	58	32.8	31	17.5	177	100.0
	Average	84	47.2	60	33.9	34	18.9	177	100

CHART NO. 5.2.9.

BAR CHART SHOWING PLACE RELATED MARKETING PRACTICES -% OF RESPONSES

PLACE - % RESPONSES
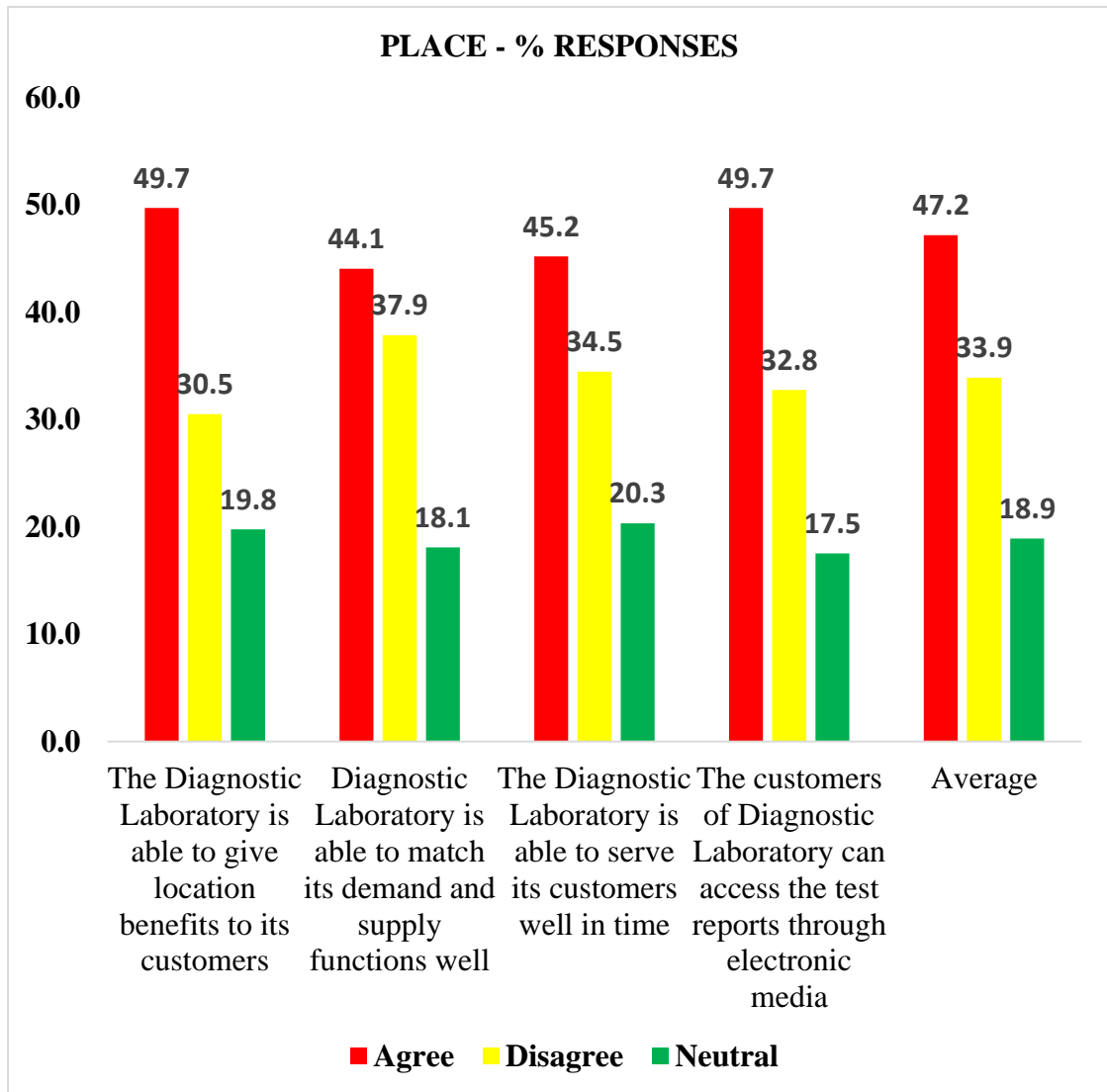
From the table no. 5.2.9., it can be interpreted that on average 47.2 % of the respondents of the diagnostic laboratories have agreed to Place as Marketing Practices. While an average 33.9% of the respondents of the diagnostic laboratories have disagreed and 18.9 % of the respondents of the diagnostic laboratories are neutral to Place as Marketing Practices. Thus it is stated that Place as marketing practice is important in diagnostic laboratories.

PROMOTION

An idea, image, brand or product/service can be promoted by the variety of techniques which comes under the term promotion. It communicates the message to the customer or potential customer by various means such as PR, advertising, sales promotion, direct marketing and personal selling. The rationale of the promotion is to fulfill the customer's needs or wants by maintaining relationship with them. An attempt has been made to study the promotion tools used by the diagnostic laboratories and measure their effectiveness.

TABLE NO. 5.2.10.

MARKETING PRACTICES – PROMOTION

Sr.No.	Promotion	Agree		Disagree		Neutral		Total	
		Responses	%	Responses	%	Responses	%	Responses	%
1	In your opinion special campaigns like, heart-checkup, Diabetes checkup etc. at concession rates are getting good response from customers	73	41.2	67	37.9	37	20.9	177	100
Promotion Mix									
2	Advertising	93	52.5	48	27.1	36	20.3	177	100
3	Sales promotion	83	46.9	59	33.3	35	19.8	177	100
4	Public relations and publicity	83	46.9	61	34.5	33	18.6	177	100
5	Direct marketing	75	42.4	62	35.0	40	22.6	177	100
6	Personal selling	81	45.8	60	33.9	36	20.3	177	100
Media									
7	Television	77	43.5	64	36.2	36	20.3	177	100
8	Newspaper/magazines	68	38.4	63	35.6	46	26.0	177	100
9	Brochures/pamphlets	69	39.0	67	37.9	41	23.2	177	100
10	Signboards/hoardings	80	45.2	63	35.6	34	19.2	177	100
11	Internet	80	45.2	62	35.0	35	19.8	177	100
12	By Medical Camps & exhibitions	82	46.3	65	36.7	30	16.9	177	100
13	Any other	68	38.4	56	31.6	53	29.9	177	100
Advertising objectives									
14	To inform	84	47.5	67	37.9	26	14.7	177	100
15	To persuade	78	44.1	59	33.3	40	22.6	177	100
16	To remind	83	46.9	65	36.7	29	16.4	177	100
Promotion Effectiveness									
17	The Diagnostic Laboratory is able to inform its customers about new product /service well in time	64	36.2	62	35.0	51	28.8	177	100
18	The promotion policies of the Diagnostic Laboratory gives it a competitive edge	74	41.8	59	33.3	44	24.9	177	100
19	The promotion policies of the Diagnostic Laboratory are good enough to persuade/convince customers	80	45.2	61	34.5	36	20.3	177	100
20	The promotion policies of the Diagnostic Laboratory helps out in the attainment of objectives	90	50.8	59	33.3	28	15.8	177	100
21	The Diagnostic Laboratory maintains and updates its website to advertise and provide other useful information	81	45.8	68	38.4	28	15.8	177	100
	Average	78	44.3	62	34.9	37	20.8	177	100

CHART NO. 5.2.10.

BAR CHART SHOWING PROMOTION RELATED MARKETING

PRACTICES -% OF RESPONSES

PROMOTION - % RESPONSES

Category	Neutral	Disagree	Agree
Average	20.8	34.9	44.3
The Diagnostic Laboratory maintains and updates its website to advertise and provide other useful information	15.8	38.4	45.8
The promotion policies of the Diagnostic Laboratory helps out in the attainment of objectives	15.8	33.3	50.8
The promotion policies of the Diagnostic Laboratory are good enough to persuade/convince customers	20.3	34.5	45.2
The promotion policies of the Diagnostic Laboratory gives it a competitive edge	24.9	33.3	41.8
The Diagnostic Laboratory is able to inform its customers about new product /service well in time	28.8	35.0	36.2
To remind	16.4	36.7	46.9
To persuade	22.6	33.3	44.1
To inform	14.7	37.9	47.5
Any other	29.9	31.6	38.4
By Medical Camps & exhibitions	16.9	36.7	46.3
Internet	19.8	35.0	45.2
Signboards/hoardings	19.2	35.6	45.2
Brochures/pamphlets	23.2	37.9	39.0
Newspaper/magazines	26.0	35.6	38.4
Television	20.3	36.2	43.5
Personal selling	20.3	33.9	45.8
Direct marketing	22.6	35.0	42.4
Public relations and publicity	18.6	34.5	46.9
Sales promotion	19.8	33.3	46.9
Advertising	20.3	27.1	52.5
In your opinion special campaigns like, heart-checkup, Diabetes checkup etc. at concession rates are getting good response from customers	20.9	37.9	41.2

From the table no. 5.2.10., it can be interpreted that on average 44.3 % of the respondents of the diagnostic laboratories have agreed to Promotion as Marketing Practices. While an average 34.9% of the respondents of the diagnostic laboratories have disagreed and 20.8 % of the respondents of the diagnostic laboratories are neutral to Promotion as Marketing Practices.

PEOPLE

People element is critical in determining the perceived quality of services. People include all those persons who are involved directly and indirectly in service delivery process. In health care services, people element is essential in every stage of dealing. These dealings are performed by various people like for outdoor and indoor services (frontline employees are the people). The basic objective of internal marketing for a service organisation is to develop motivated and consumer-conscious employees. Therefore, people must be selected and further trained for their well-mannered behaviour and face-to-face contact with customers, because in health care services, it builds up confidence among the customers.

<div align="center">

TABLE NO. 5.2.11.

MARKETING PRACTICES – PEOPLE

</div>

Sr.No.	People	Agree		Disagree		Neutral		Total	
		Responses	%	Responses	%	Responses	%	Responses	%
1	The Diagnostic Laboratory hires for service inclination and competency	86	48.6	62	35.0	29	16.4	177	100
2	The Diagnostic Laboratory provides extensive training to its employees	90	50.8	53	29.9	34	19.2	177	100
3	The Diagnostic Laboratory empowers its front line employees	80	45.2	65	36.7	32	18.1	177	100
4	The Diagnostic Laboratory motivates and energizes its employees through incentives etc.	75	42.4	64	36.2	38	21.5	177	100
5	The Diagnostic Laboratory is having doctor with Excellent knowledge	79	44.6	66	37.3	32	18.1	177	100
6	The Diagnostic Laboratory is having doctor with Excellent Skills	78	44.1	62	35.0	37	20.9	177	100
7	The Diagnostic Laboratory is having doctor with right attitude	76	42.9	64	36.2	37	20.9	177	100
8	The house keeping personnel in the Diagnostic Laboratory are well mannered, gentle, hygienic and meticulous	84	47.5	58	32.8	35	19.8	177	100
	Average	**81**	**45.8**	**61.75**	**34.9**	**34.25**	**19.4**	**177**	**100**

CHART NO. 5.2.11.

BAR CHART SHOWING PEOPLE RELATED MARKETING PRACTICES -

% OF RESPONSES

PEOPLE - % RESPONSES

	Agree	Disagree	Neutral
The Diagnostic Laboratory hires for service inclination and competency	48.6	35.0	16.4
The Diagnostic Laboratory provides extensive training to its employees	50.8	29.9	19.2
The Diagnostic Laboratory empowers its front line employees	45.2	36.7	18.1
The Diagnostic Laboratory motivates and energizes its employees through incentives etc.	42.4	36.2	21.5
The Diagnostic Laboratory is having doctor with Excellent knowledge	44.6	37.3	18.1
The Diagnostic Laboratory is having doctor with Excellent Skills	44.1	35.0	20.9
The Diagnostic Laboratory is having doctor with right attitude	42.9	36.2	20.9
The house keeping personnel in the Diagnostic Laboratory are well mannered, gentle, hygienic and meticulous	47.5	32.8	19.8
Average	45.8	34.9	19.4

From the table no. 5.2.11., it can be interpreted that on average 45.8 % of the respondents of the diagnostic laboratories have agreed to People as Marketing Practices. While an average 34.9% of the respondents of the diagnostic laboratories have disagreed and 19.4 % of the respondents of the diagnostic laboratories are neutral to People as Marketing Practices.

PHYSICAL EVIDENCE

Physical evidence plays an important role in healthcare services. It includes the appearance of physical facilities, equipments, personnel and communication materials etc., which helps out in tangiblising the intangible services.

Impressive physical evidence helps out the organisation to effectively deliver services to their customers.

Diagnostic Laboratories may bring in various facilities such as state-of-art infrastructure, modern facilities, dress code for their personnel, maintaining right kind of temperature, cleanliness and hygiene in rooms, pleasing behaviour of personnel, availability of facilities; water, electricity, canteen, lifts, parking facilities etc. so as to create favourable physical evidence.

TABLE NO. 5.2.12.

MARKETING PRACTICES – PHYSICAL EVIDENCE

Sr.No.	Physical evidence	Agree		Disagree		Neutral		Total	
		Responses	%	Responses	%	Responses	%	Responses	%
1	Cleanliness and hygiene of rooms	82	46.3	58	32.8	37	20.9	177	100
2	Interior and exterior infrastructure is good	87	49.2	62	35.0	28	15.8	177	100
3	Adequate physical facilities	85	48.0	47	26.6	45	25.4	177	100
4	Appealing material associated with services	78	44.1	66	37.3	33	18.6	177	100
5	Diagnostic Laboratory is able to build up confidence in the customers by displaying awards won by doctors and the service certificates won by the Diagnostic Laboratory	92	52.0	59	33.3	26	14.7	177	100
	Average	**85**	**47.9**	**58**	**33.0**	**34**	**19.1**	**177**	**100**

BAR CHART SHOWING PHYSICAL EVIDENCE RELATED MARKETING

PRACTICES -% OF RESPONSES

PHYSICAL EVIDENCE - % RESPONSES
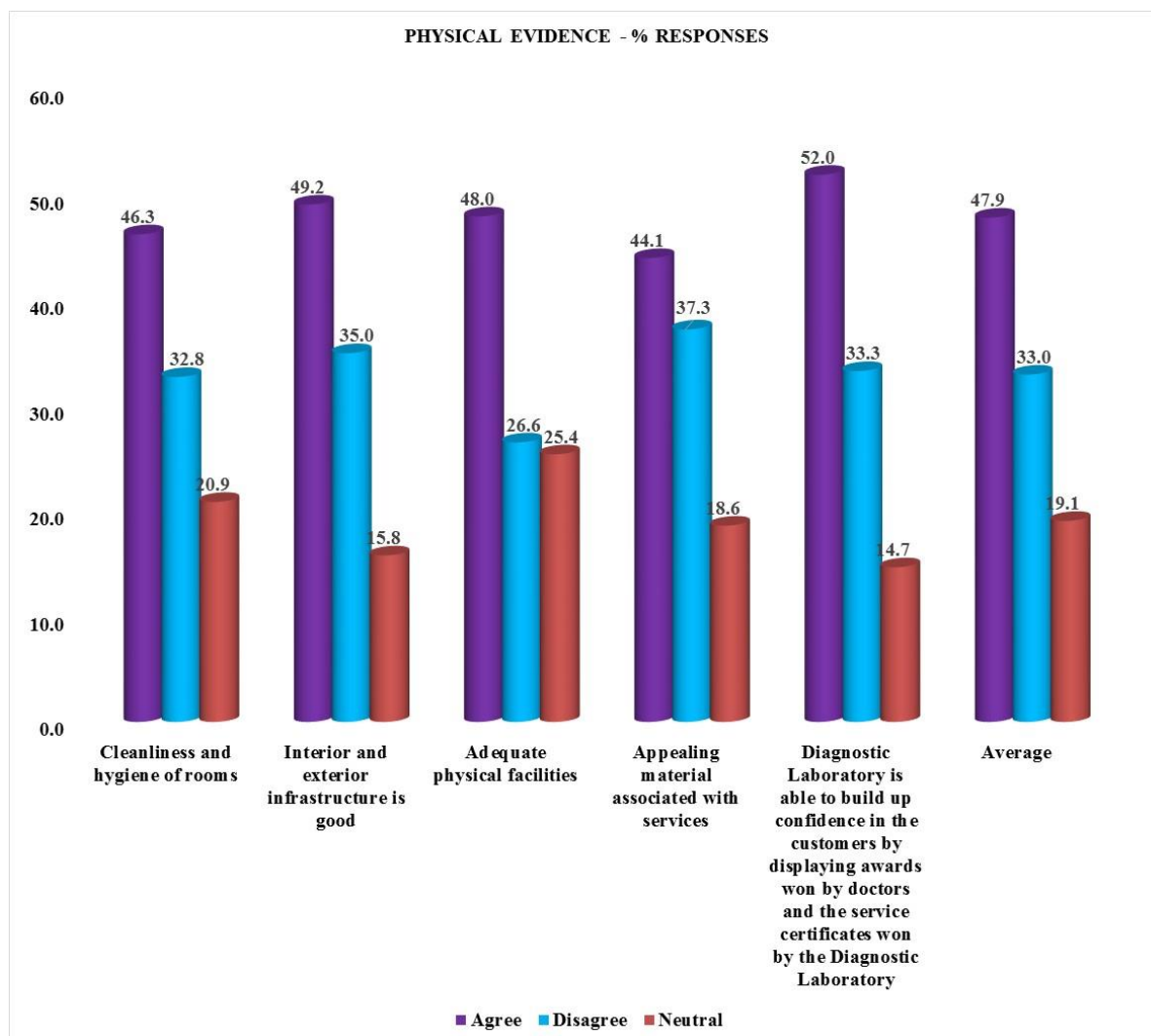
From the table no.5.2.12. it can be interpreted that on average 47.9 % of the respondents of the diagnostic laboratories have agreed to Physical Evidence as Marketing Practices. While an average 33.0 % of the respondents of the diagnostic laboratories have disagreed and 19.1 % of the respondents of the diagnostic laboratories are neutral to Physical Evidence as Marketing Practices.

PROCESS

It refers to the steps, procedures, mechanism and all those activities by which the service is delivered. Service delivery is the outcome of the service process. As healthcare services are inseparable in nature, it is the service delivery process through which customers get into contact with the service provider. In diagnostic laboratories, the process generally includes the different tasks such as pre-testing registration, counseling programs, post testing billing procedures, etc. How effective are the services delivery process of diagnostic laboratories has been explained with the help of table no.5.2.13.

TABLE NO. 5.2.13.

MARKETING PRACTICES – PROCESS

Sr.No.	Process	Agree		Disagree		Neutral		Total	
		Responses	%	Responses	%	Responses	%	Responses	%
1	The services/products offered by the Diagnostic Laboratory are simple to understand and easy to avail	84	47.5	61	34.5	32	18.1	177	100
2	The Diagnostic Laboratory has proper blueprint of its service delivery in place	84	47.5	69	39.0	24	13.6	177	100
3	The Diagnostic Laboratory takes care of its customer's precious time	80	45.2	67	37.9	30	16.9	177	100
4	In this Diagnostic Laboratory, to get the Test done process is very lengthy and time consuming	64	36.2	75	42.4	38	21.5	177	100
5	The Diagnostic Laboratory bill settlement process is simple	85	48.0	58	32.8	34	19.2	177	100
6	Service counters provided in this Diagnostic Laboratory are sufficient	82	46.3	64	36.2	31	17.5	177	100
7	The length of waiting time of customers in this Diagnostic Laboratory is reasonable	85	48.0	58	32.8	34	19.2	177	100
	Average	81	45.5	65	36.5	32	18.0	177	100

BAR CHART SHOWING PROCESS RELATED MARKETING PRACTICES -

% OF RESPONSES

PROCESS - % RESPONSES

Category	Neutral	Disagree	Agree
Average	18.0	36.5	45.5
The length of waiting time of customers in this Diagnostic Laboratory is reasonable	19.2	32.8	48.0
Service counters provided in this Diagnostic Laboratory are sufficient	17.5	36.2	46.3
The Diagnostic Laboratory bill settlement process is simple	19.2	32.8	48.0
In this Diagnostic Laboratory, to get the Test done process is very lengthy and time consuming	21.5	42.4	36.2
The Diagnostic Laboratory takes care of its customer's precious time	16.9	37.9	45.2
The Diagnostic Laboratory has proper blueprint of its service delivery in place	13.6	39.0	47.5
The services/products offered by the Diagnostic Laboratory are simple to understand and easy to avail	18.1	34.5	47.5

From the table no. 5.2.13., it can be interpreted that on average 45.5 % of the respondents of the diagnostic laboratories have agreed to Process as Marketing Practices. While an average 36.5 % of the respondents of the diagnostic laboratories have disagreed and 18.0 % of the respondents of the diagnostic laboratories are neutral to Process as Marketing Practices.

SEGMENTATION

A market consists of various segments. It consists of individuals with different needs so same strategy is not efficient for selling a similar product to them. So, Market segmentation is used as a technique to divide a market into smaller groups of buyers with similar wants or needs. Through segmentation, it is easier for marketers to target each segment effectively.

Market can be segmented on various traits of individual such as demographics, psychographics, usage pattern and so on. An organisation has to try different variables alone or in combination to find the best way to segment the market.

The effectiveness of market segments can be judged by their ability to meet the basic requirements of the target markets. The prominent characteristics of an effective segment are accessibility, actionablility and profitability. The effectiveness of segments in the opinion of respondents of diagnostic laboratories has been noticed with the help of table no. 5.2.14.

TABLE NO. 5.2.14.

MARKETING PRACTICES – SEGMENTATION

Sr.No.	Segmentaion	Agree		Disagree		Neutral		Total	
		Responses	%	Responses	%	Responses	%	Responses	%
1	Benefit sought	75	42.4	63	35.6	39	22.0	177	100
2	Purchase occasion	75	42.4	61	34.5	41	23.2	177	100
3	Brand loyalty	84	47.5	53	29.9	40	22.6	177	100
4	Usage rate	72	40.7	63	35.6	42	23.7	177	100
5	Paying capacity	70	39.5	61	34.5	46	26.0	177	100
6	According to psychographic variables	80	45.2	62	35.0	35	19.8	177	100
7	According to demographic variables	82	46.3	55	31.1	40	22.6	177	100
8	According to geographic variables	89	50.3	48	27.1	40	22.6	177	100
Segmentaion Effectiveness									
9	The Diagnostic Laboratory's choice of segments is judicious and it addresses them well	71	40.1	70	39.5	36	20.3	177	100
10	The segments are easily accessible	79	44.6	64	36.2	34	19.2	177	100
11	The segments are actionable	80	45.2	58	32.8	39	22.0	177	100
12	The segments are profitable	72	40.7	70	39.5	35	19.8	177	100
	Average	**77**	**43.7**	**61**	**34.3**	**39**	**22.0**	**177**	**100**

CHART NO. 5.2.14.

BAR CHART SHOWING SEGMENTATION RELATED MARKETING

PRACTICES -% OF RESPONSES

SEGMENTATION - % RESPONSES

Category	Neutral	Disagree	Agree
Average	22.0	34.3	43.7
The segments are profitable	19.8	39.5	40.7
The segments are actionable	22.0	32.8	45.2
The segments are easily accessible	19.2	36.2	44.6
The Diagnostic Laboratory's choice of segments is judicious and it addresses them well	20.3	39.5	40.1
According to geographic variables	22.6	27.1	50.3
According to demographic variables	22.6	31.1	46.3
According to psychographic variables	19.8	35.0	45.2
Paying capacity	26.0	34.5	39.5
Usage rate	23.7	35.6	40.7
Brand loyalty	22.6	29.9	47.5
Purchase occasion	23.2	34.5	42.4
Benefit sought	22.0	35.6	42.4

■ Neutral ■ Disagree ■ Agree

From the table 5.2.14., it can be interpreted that on average 43.7 % of the respondents of the diagnostic laboratories have agreed to Segmentation as Marketing Practices. While an average 34.3 % of the respondents of the diagnostic laboratories have disagreed and 22.0 % of the respondents of the diagnostic laboratories are neutral to segmentation as Marketing Practices.

POSITIONING

Positioning refers to a strategy to find a place in customers mind. After segmenting and targeting, the next job of the organisation is to position its products and services to target that market. What are the various positioning strategies and whether the respondents of the diagnostic laboratories feel that their respective diagnostic laboratory is able to position a distinct image in customers mind has been discussed in the table no. 5.2.15.

TABLE NO. 5.2.15.

MARKETING PRACTICES – POSITIONING

Sr.No.	Positioning	Agree		Disagree		Neutral		Total	
		Responses	%	Responses	%	Responses	%	Responses	%
1	Symbols and branding	91	51.4	54	30.5	32	18.1	177	100
2	Wide product mix	87	49.2	60	33.9	30	16.9	177	100
3	Price positioning	81	45.8	67	37.9	29	16.4	177	100
4	Service attributes and benefits	81	45.8	54	30.5	42	23.7	177	100
5	Service user positioning	83	46.9	59	33.3	35	19.8	177	100
6	Competitive positioning	82	46.3	48	27.1	47	26.6	177	100
7	Quality positioning	87	49.2	55	31.1	35	19.8	177	100
8	Leadership positioning	75	42.4	67	37.9	35	19.8	177	100
9	Excellence positioning	75	42.4	61	34.5	41	23.2	177	100
Positioning Effectiveness									
10	The Diagnostic Laboratory tries to establish a distinct image in the minds of its customers	73	41.2	60	33.9	44	24.9	177	100
11	The positioning of its services/products sets the Diagnostic Laboratory apart from its competitors	68	38.4	62	35.0	47	26.6	177	100
12	Effective brand positioning by the Diagnostic Laboratory results in greater sales and profits	73	41.2	69	39.0	35	19.8	177	100
	Average	**80**	**45.0**	**60**	**33.7**	**38**	**21.3**	**177**	**100**

BAR CHART SHOWING POSITIONING RELATED MARKETING

PRACTICES -% OF RESPONSES

POSITIONING - % RESPONSES

Category	Neutral	Disagree	Agree
Average	21.3	33.7	45.0
Effective brand positioning by the Diagnostic Laboratory results in greater sales and profits	19.8	39.0	41.2
The positioning of its services/products sets the Diagnostic Laboratory apart from its competitors	26.6	35.0	38.4
The Diagnostic Laboratory tries to establish a distinct image in the minds of its customers	24.9	33.9	41.2
Excellence positioning	23.2	34.5	42.4
Leadership positioning	19.8	37.9	42.4
Quality positioning	19.8	31.1	49.2
Competitive positioning	26.6	27.1	46.3
Service user positioning	19.8	33.3	46.9
Service attributes and benefits	23.7	30.5	45.8
Price positioning	16.4	37.9	45.8
Wide product mix	16.9	33.9	49.2
Symbols and branding	18.1	30.5	51.4

■ Neutral ■ Disagree ■ Agree

From the table, it can be interpreted that on average 45.0 % of the respondents of the diagnostic laboratories have agreed to Relationship Marketing as Marketing Practices. While an average 33.7 % of the respondents of the diagnostic laboratories have disagreed and 21.3 % of the respondents of the diagnostic laboratories are neutral to Relationship Marketing as Marketing Practices.

RELATIONSHIP MARKETING

Relationship marketing is defined as attracting, maintaining, and enhancing consumer relationships in order to meet the objectives of both parties involved. With the help of relationship marketing, an organisation can effectively establish its products" position in the market. The following paragraph have explained the respondents responses to various aspects of relationship marketing with the support of table no.5.2.16.

TABLE NO. 5.2.16.

MARKETING PRACTICES – RELATIONSHIP MARKETING

Sr.No.	Relationship Marketing	Agree		Disagree		Neutral		Total	
		Responses	%	Responses	%	Responses	%	Responses	%
1	The Diagnostic Laboratory maintains multiple communication channels to communicate with its customers	85	48.0	63	35.6	29	16.4	177	100
2	The Diagnostic Laboratory works on the maxim "Satisfaction First, Profit Next"	82	46.3	61	34.5	34	19.2	177	100
3	The Diagnostic Laboratory maintains a relationship rather than transaction focus.	80	45.2	55	31.1	42	23.7	177	100
4	The Diagnostic Laboratory places greater emphasis on customer retention	83	46.9	58	32.8	36	20.3	177	100
5	The Diagnostic Laboratory motivates dissatisfied customers to lodge complaints	84	47.5	55	31.1	38	21.5	177	100
6	The Diagnostic Laboratory takes extra care of its satisfied customers	78	44.1	63	35.6	36	20.3	177	100
	Average	**82**	**46.3**	**59**	**33.4**	**36**	**20.2**	**177**	**100**

CHART NO. 5.2.16.

BAR CHART SHOWING RELATIONSHIP MARKETING RELATED

MARKETING PRACTICES -% OF RESPONSES

RELATIONSHIP MARKETING - % RESPONSES

Category	Neutral	Disagree	Agree
Average	20.2	33.4	46.3
The Diagnostic Laboratory takes extra care of its satisfied customers	20.3	35.6	44.1
The Diagnostic Laboratory motivates dissatisfied customers to lodge complaints	21.5	31.1	47.5
The Diagnostic Laboratory places greater emphasis on customer retention	20.3	32.8	46.9
The Diagnostic Laboratory maintains a relationship rather than transaction focus.	23.7	31.1	45.2
The Diagnostic Laboratory works on the maxim "Satisfaction First, Profit Next"	19.2	34.5	46.3
The Diagnostic Laboratory maintains multiple communication channels to communicate with its customers	16.4	35.6	48.0

From the table 5.2.16., it can be interpreted that on average 46.3 % of the respondents of the diagnostic laboratories have agreed to Relationship Marketing as Marketing Practices.

While an average 33.4 % of the respondents of the diagnostic laboratories have disagreed and 20.2 % of the respondents of the diagnostic laboratories are neutral to Relationship Marketing as Marketing Practices.

MARKETING EFFECTIVENESS REVIEW

An organization's marketing effectiveness is judged with the help of five major attributes of a marketing orientation: strategic orientation, adequate marketing information, integrated marketing organization, customer philosophy and operational efficiency.

The researcher has made an attempt to review the effectiveness of marketing practices through respondent's survey.

The results are discussed in tables 5.2.17. - 5.2.21.

- **STRATEGIC ORIENTATION:**

  Strategic orientation aims at enhancing the performance of any organization by focusing on formal planning system with an eye on the competition. How far the diagnostic laboratories keep a strategic orientation for their marketing function has been explained with the help of table 5.2.17.

TABLE NO. 5.2.17.

MARKETING EFFECTIVENESS REVIEW – STRATEGIC ORIENTATION

Sr.No.	Strategic Orientation	Agree		Disagree		Neutral		Total	
		Responses	%	Responses	%	Responses	%	Responses	%
1	The Diagnostic Laboratory does a formal marketing planning	72	40.7	61	34.5	44	24.9	177	100
2	Current marketing strategies of Diagnostic Laboratory are impressive	77	43.5	66	37.3	34	19.2	177	100
3	Contingencies are planned well in the Diagnostic Laboratory	90	50.8	65	36.7	22	12.4	177	100
	Average	80	45.0	64	36.2	33	18.8	177	100

CHART NO. 5.2.17.

BAR CHART SHOWING MARKETING EFFECTIVENESS REVIEW

RELATED TO STRATEGIC ORIENTATION - % OF RESPONSES

STRATEGIC ORIENTATION - % RESPONSES
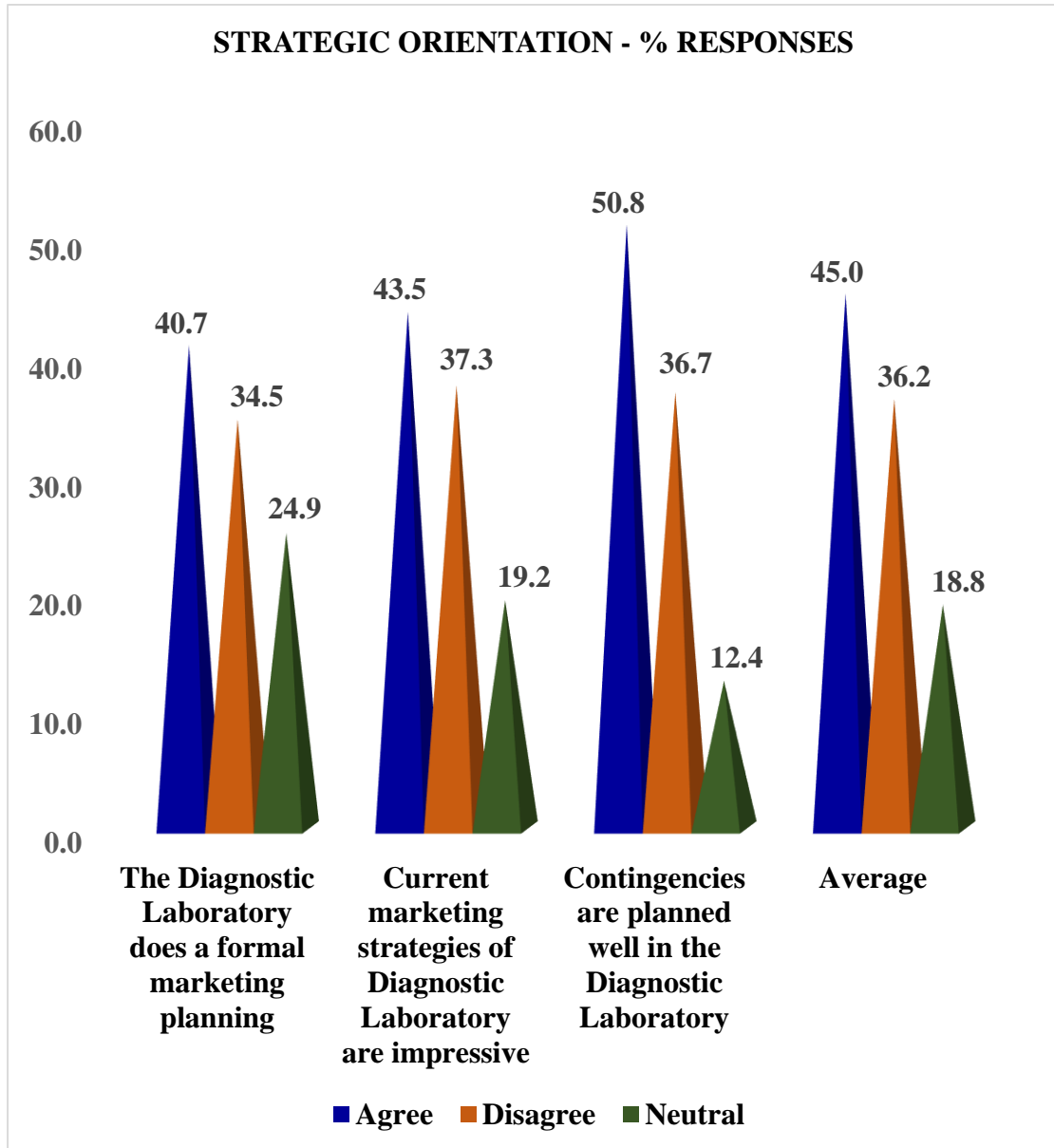
From the table no.5.2.17. it can be interpreted that on average 45.0 % of the respondents of the diagnostic laboratories have agreed to marketing effectiveness review related to strategic orientation. While an average 36.2 % of the respondents of the diagnostic laboratories have disagreed and 18.8 % of the respondents of the diagnostic laboratories are neutral.

- **ADEQUATE MARKETING INFORMATION:**

Marketing information system consists of people, equipment and procedures to gather, sort, analyse, evaluate and distribute needed, timely and accurate information to marketing decision makers.

Whether the respondents of the diagnostic laboratories are having access to adequate marketing information to carry out their decision making has been discussed with the help of table no. 5.2.18.

TABLE NO. 5.2.18.

MARKETING EFFECTIVENESS REVIEW – ADEQUATE MARKETING INFORMATION

Sr.No.	Adequate Marketing Information	Agree		Disagree		Neutral		Total	
		Responses	%	Responses	%	Responses	%	Responses	%
1	Diagnostic Laboratory is involved in continuous marketing research	67	37.9	69	39.0	41	23.2	177	100
2	Diagnostic Laboratory does a continuous appraisal of sale and profitability	79	44.6	56	31.6	42	23.7	177	100
3	Diagnostic Laboratory measures and improves the cost of direct marketing	78	44.1	62	35.0	37	20.9	177	100
	Average	75	42.2	62	35.2	40	22.6	177	100

CHART NO. 5.2.18.

BAR CHART SHOWING MARKETING EFFECTIVENESS REVIEW

RELATED TO ADEQUATE MARKETING INFORMATION - % OF

RESPONSES

ADEQUATE MARKETING INFORMATION - % RESPONSES
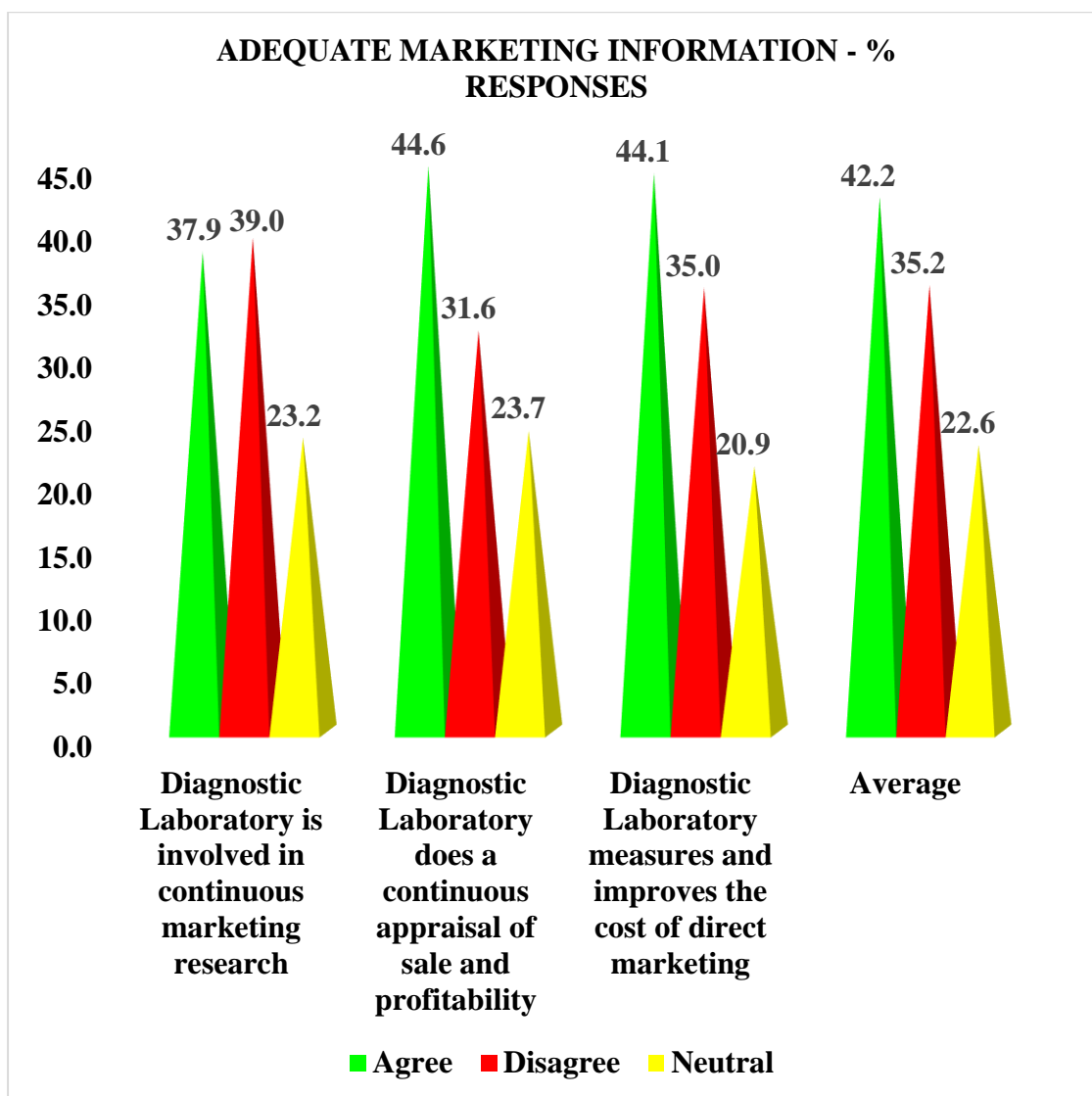
From the table no. 5.2.18., it can be interpreted that on average 42.2 % of the respondents of the diagnostic laboratories have agreed to marketing effectiveness review related to adequate marketing information. While an average 35.2 % of the respondents of the diagnostic laboratories have disagreed and 22.6 % of the respondents of the diagnostic laboratories are neutral.

- **INTEGRATED MARKETING ORGANIZATION:**

The success of any organization's marketing program is depending upon their integration with sub functions of marketing and with other departments of the organization. It requires an integrated approach to other departments such as production, research and development, finance, sales and service etc.

Whether the diagnostic laboratories have an integrated marketing department can be understood with the help of table no. 5.2.19.

TABLE NO. 5.2.19.

MARKETING EFFECTIVENESS REVIEW – INTEGRATED MARKETING ORGANIZATION

Sr.No.	Integrated Marketing Organization	Agree		Disagree		Neutral		Total	
		Responses	%	Responses	%	Responses	%	Responses	%
1	Diagnostic Laboratory has highly integrated marketing function	69	39.0	64	36.2	44	24.9	177	100
2	Diagnostic Laboratory does integration of marketing functions with other functions of management	74	41.8	58	32.8	45	25.4	177	100
3	Diagnostic Laboratory does proper organising of product development process	67	37.9	62	35.0	48	27.1	177	100
	Average	70	39.5	61	34.7	46	25.8	177	100

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BAR CHART SHOWING MARKETING EFFECTIVENESS REVIEW

RELATED TO INTEGRATED MARKETING ORGANIZATION - % OF

RESPONSES

**INTEGRATED MARKETING ORGANIZATION - %
RESPONSES**

	Agree	Disagree	Neutral
Diagnostic Laboratory has highly integrated marketing function	39.0	36.2	24.9
Diagnostic Laboratory does integration of marketing functions with other functions of management	41.8	32.8	25.4
Diagnostic Laboratory does proper organising of product development process	37.9	35.0	27.1
Average	39.5	34.7	25.8

From the table no. 5.2.19., it can be interpreted that on average 39.5 % of the respondents of the diagnostic laboratories have agreed to marketing effectiveness review related to Integrated Marketing Organization. While an average 34.7 % of the respondents of the diagnostic laboratories have disagreed and 25.8 % of the respondents of the diagnostic laboratories are neutral.

- **CUSTOMER PHILOSOPHY**

Customer is one of the most important constituent of a market. They are the one on which the success of an organization depends. Therefore, the marketing practices must be executed from customers perspective.

The scores of the respondents of the diagnostic laboratories concerning their customer philosophy have been discussed with the help of table no. 5.2.20.

TABLE NO 5.2.20.

MARKETING EFFECTIVENESS REVIEW – CUSTOMER PHILOSOPHY

Sr.No.	Customer Philosophy	Agree		Disagree		Neutral		Total	
		Responses	%	Responses	%	Responses	%	Responses	%
1	Diagnostic Laboratory has highly integrated marketing function	71	40.1	63	35.6	43	24.3	177	100
2	Diagnostic Laboratory does integration of marketing functions with other functions of management	65	36.7	68	38.4	44	24.9	177	100
3	Diagnostic Laboratory does proper organising of product development process	76	42.9	65	36.7	36	20.3	177	100
	Average	71	39.9	65	36.9	41	23.2	177	100

BAR CHART SHOWING MARKETING EFFECTIVENESS REVIEW

RELATED TO CUSTOMER PHILOSOPHY - % OF RESPONSES

CUSTOMER PHILOSOPHY - % RESPONSES

	Agree	Disagree	Neutral
Diagnostic Laboratory has highly integrated marketing function	40.1	35.6	24.3
Diagnostic Laboratory does integration of marketing functions with other functions of management	36.7	38.4	24.9
Diagnostic Laboratory does proper organising of product development process	42.9	36.7	20.3
Average	39.9	36.9	23.2
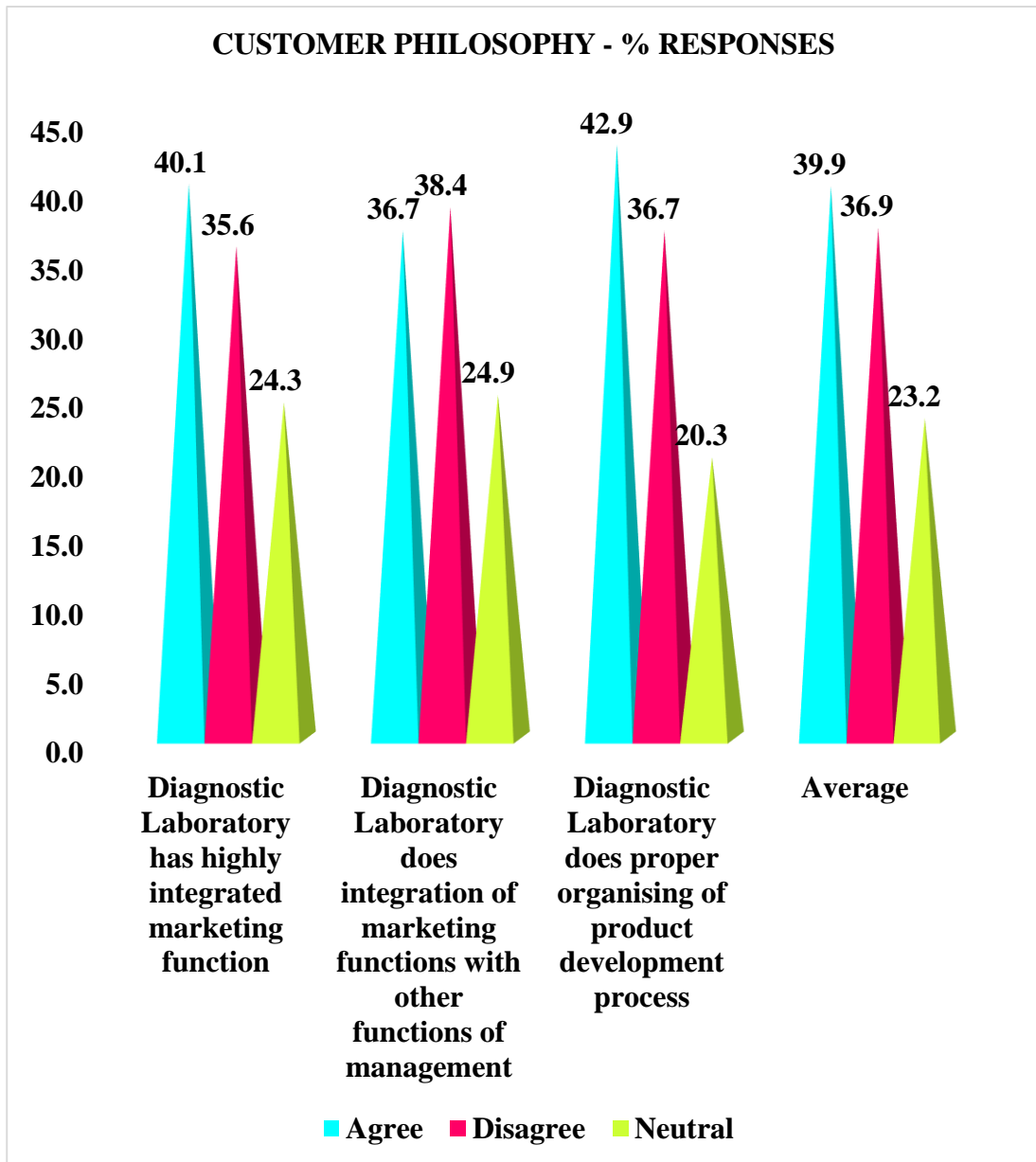
From the table, it can be interpreted that on average 39.9 % of the respondents of the diagnostic laboratories have agreed to marketing effectiveness review related to customer philosophy. While an average 36.9 % of the respondents of the diagnostic laboratories have disagreed and 23.2 % of the respondents of the diagnostic laboratories are neutral.

- **OPERATIONAL EFFICIENCY:**

Operational marketing efficiency is the ability of an organization to formulate its plans by establishing equilibrium between cost and productivity.

Table no. 5.2.21. suggests the diagnostic laboratories efforts to achieve operational efficiency in their marketing programs.

TABLE NO. 5.2.21.

MARKETING EFFECTIVENESS REVIEW – OPERATIONAL EFFICIENCY

Sr. No.	Operational Efficiency	Agree		Disagree		Neutral		Total	
		Responses	%	Responses	%	Responses	%	Responses	%
1	Diagnostic Laboratory excels in communicating and implementing marketing strategy	66	37.3	68	38.4	43	24.3	177	100
2	Generate and employ marketing resource properly	65	36.7	72	40.7	40	22.6	177	100
	Average	**66**	**37.0**	**70**	**39.5**	**42**	**23.4**	**177**	**100**

BAR CHART SHOWING MARKETING EFFECTIVENESS REVIEW

RELATED TO OPERATIONAL EFFICIENCY - % OF RESPONSES

OPERATIONAL EFFICIENCY - % RESPONSES
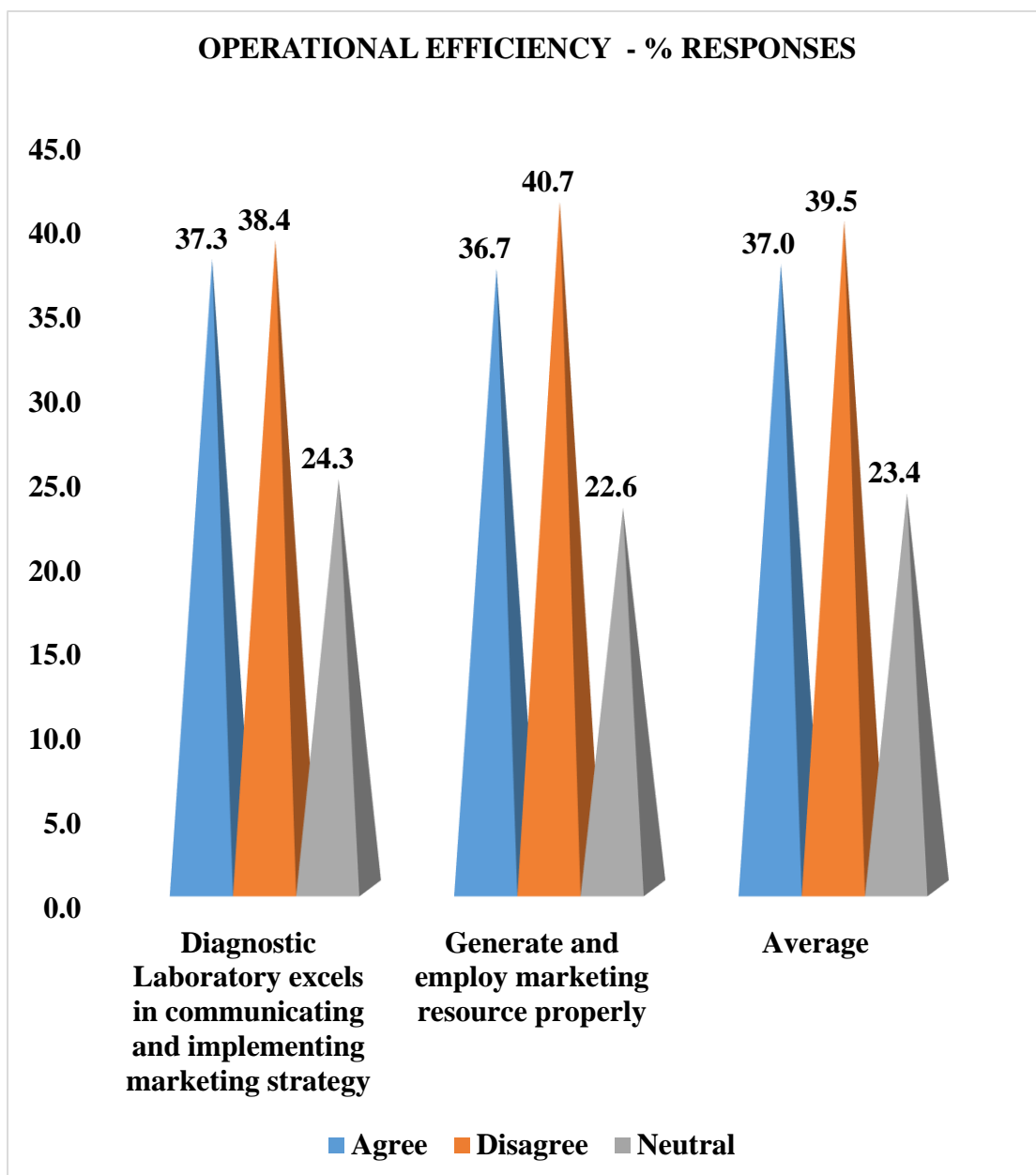
From the table no. 5.2.21., it can be interpreted that on average 37.0 % of the respondents of the diagnostic laboratories have agreed to marketing effectiveness review related to operational efficiency. While an average 39.5 % of the respondents of the diagnostic laboratories have disagreed and 23.4 % of the respondents of the diagnostic laboratories are neutral.

5.3. PART B- DESCRIPTIVE STATISTICS

TABLE NO. 5.3.1.

DESCRIPTIVE STATISTICS FOR DIFFERENT P'S OF MARKETING

Descriptive Statistics

Parameters	N	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
PRODUCT	177	3.0952	.58446	.150	.183	.017	.363
PRICING	177	3.0863	.44745	-.011	.183	-.266	.363
DISTRIBUTION	177	3.1085	.61912	-.123	.183	-.675	.363
PROMOTION	177	3.0811	.40152	.419	.183	.129	.363
PEOPLE	177	3.2101	.63956	.239	.183	-.188	.363
PHYSICALEVIDENCE	177	3.2000	.75949	-.125	.183	-.714	.363
PROCESS	177	3.1376	.44739	.289	.183	-.056	.363
POSITION	177	3.1999	.53313	.528	.183	.429	.363
RELATIONSHIP	177	3.1882	.65578	.098	.183	-.657	.363
STRATEGY	177	3.0938	.43148	.397	.183	.463	.363
Valid N (listwise)	177						

Considering that the mean is just above 3.00(on a 5 point likert scale from 1 to 5) which shows that the marketing practices are hardly present for all P's of Marketing. Also considering the Kurtosis and Skewness which is by and large negative, the data is not normal and it is negatively skeweed. However considering the standard deviation the data shows the central tendency around mean.

TABLE NO. 5.3.2.

OWNED DIAGNOSTIC LABORATORIES - DESCRIPTIVE STATISTICS

FOR DIFFERENT P'S OF MARKETING

ORGANIZATION TYPE 1	PRODUCT AVG.	PRICING AVG.	DISTRI. AVG.	PROMOTION AVG.	PEOPLE AVG.	P.E. AVG.	PROCESS AVG.	POSITION AVG.	RELATION AVG.	STRATEGY AVG.
Mean	3.16	3.11	3.04	3.04	3.08	3.14	3.07	3.12	3.21	3.02
Median	3.18	3.05	3.00	3.02	3.13	3.00	3.05	3.08	3.17	3.00
Mode	3.27	2.89	3.17	2.90	2.88	3.00	2.95	3.08	3.33	3.29
Standard Deviation	0.45	0.35	0.59	0.35	0.63	0.65	0.40	0.44	0.61	0.41
Kurtosis	0.05	0.01	-0.76	0.02	-0.34	0.04	-0.10	-0.08	-0.47	-0.50
Skewness	-0.19	0.59	-0.08	0.27	-0.12	0.07	-0.21	0.32	0.07	0.07
Range	2.18	1.63	2.50	1.76	2.88	3.60	1.79	2.17	2.67	1.79
Count	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
Confidence Level (95.0%)	0.09	0.07	0.12	0.07	0.13	0.14	0.08	0.09	0.13	0.09

Considering that the mean is just above 3.00 (on a 5 point likert scale from 1 to 5) which shows that the marketing practices are hardly present for all P's of Marketing in owned diagnostic laboratories. Also considering the Kurtosis and Skewness which is by and large negative, the data is not normal and it is negatively skeweed. However considering the standard deviation the data shows the central tendency around mean.

HOSPITAL DIAGNOSTIC LABORATORIES- DESCRIPTIVE STATISTICS

FOR DIFFERENT P'S OF MARKETING

ORGANIZATION TYPE 2	PRODUCT AVG.	PRICING AVG.	DISTRI. AVG.	PROMOTION AVG.	PEOPLE AVG.	P.E. AVG.	PROCESS AVG.	POSITION AVG.	RELATION AVG.	STRATEGY AVG.
Mean	3.07	3.08	3.15	3.06	3.13	3.11	3.10	3.14	3.12	3.06
Median	3.00	3.08	3.17	3.02	3.06	3.10	3.08	3.04	3.17	3.14
Mode	2.91	2.79	3.17	3.33	3.00	2.80	3.21	3.00	3.00	3.43
Standard Deviation	0.51	0.41	0.54	0.39	0.64	0.64	0.47	0.55	0.59	0.38
Kurtosis	-0.08	-0.92	-0.57	-0.54	-0.07	-0.64	-0.27	0.31	0.18	-0.54
Skewness	0.14	0.18	-0.23	0.15	0.09	-0.05	0.30	0.58	-0.17	-0.35
Range	2.55	1.68	2.50	1.81	2.88	2.80	2.16	2.75	3.00	1.64
Count	80.00	80.00	80.00	80.00	80.00	80.00	80.00	80.00	80.00	80.00
Confidence Level(95.0 %)	0.11	0.09	0.12	0.09	0.14	0.14	0.10	0.12	0.13	0.09

Considering that the mean is just above 3.00(on a 5 point likert scale from 1 to 5) which shows that the marketing practices are hardly present for all P's of Marketing in hospital diagnostic laboratories. Also considering the Kurtosis and Skewness which is by and large negative, the data is not normal and it is negatively skeweed. However considering the standard deviation the data shows the central tendency around mean.

CHAIN DIAGNOSTIC LABORATORIES - DESCRIPTIVE STATISTICS FOR

DIFFERENT P'S OF MARKETING

ORGANIZATION TYPE 3	PRODUCT AVG.	PRICING AVG.	DISTRI. AVG.	PROMOTION AVG.	PEOPLE AVG.	P.E. AVG.	PROCESS AVG.	POSITION AVG.	RELATION AVG.	STRATEGY AVG.
Mean	4.16	3.59	4.00	3.91	4.43	4.29	3.86	4.17	4.02	3.99
Median	4.27	3.68	3.83	3.90	4.50	4.40	3.95	4.25	4.00	4.07
Mode	#N/A	3.79	4.50	3.81	4.50	4.60	#N/A	#N/A	3.83	4.50
Standard Deviation	0.52	0.27	0.43	0.32	0.27	0.54	0.45	0.51	0.42	0.47
Kurtosis	0.14	-0.92	-2.33	1.34	-0.52	2.77	-0.66	-0.97	0.52	-1.99
Skewness	-0.68	-0.71	0.24	-0.77	-0.78	-1.63	-0.06	0.00	-0.14	-0.17
Range	1.55	0.74	1.00	1.00	0.75	1.60	1.32	1.42	1.33	1.14
Count	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
Confidence Level(95.0%)	0.48	0.25	0.40	0.29	0.25	0.50	0.42	0.48	0.39	0.43

Considering that the mean is just above 4.00(on a 5 point likert scale from 1 to 5) which shows that the marketing practices are present for all P's of Marketing in chain diagnostic laboratories. Also considering the Kurtosis and Skewness which is by and large negative, the data is not normal and it is negatively skeweed. However considering the standard deviation the data shows the central tendency around mean.

TABLE NO. 5.3.5.

PROMOTER'S QUALIFICATION - MEDICAL

PROMOTER'S QUALIFICATION 1	PRODUCT AVG.	PRICING AVG.	DISTRI. AVG.	PROMOTION AVG.	PEOPLE AVG.	P.E. AVG.	PROCESS AVG.	POSITION AVG.	RELATION AVG.	STRATEGY AVG.
Mean	3.11	3.08	3.06	3.04	3.12	3.13	3.07	3.14	3.16	3.08
Median	3.09	3.03	3.00	2.98	3.00	3.20	3.05	3.08	3.17	3.11
Mode	3.27	2.79	3.00	2.81	2.88	3.60	3.21	2.92	3.33	3.43
Standard Deviation	0.45	0.39	0.56	0.37	0.65	0.63	0.44	0.49	0.59	0.41
Kurtosis	0.31	-0.66	-0.41	-0.14	-0.38	-0.83	-0.34	0.04	0.24	-0.60
Skewness	-0.04	0.20	0.01	0.44	0.03	0.10	0.10	0.19	0.05	-0.07
Range	2.36	1.68	2.50	1.71	2.88	2.40	2.11	2.50	3.17	1.79
Count	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
Confidence Level(95.0%)	0.09	0.08	0.12	0.08	0.14	0.13	0.09	0.10	0.12	0.09

Promoter's qualification as an medical profession hardly impact the marketing practices for all P's of marketing diagnostic laboratories by considering that the mean is just above 3.00(on a 5 point likert scale from 1 to 5). Also considering the Kurtosis and Skewness which is by and large negative, the data is not normal and it is negatively skeweed. However considering the standard deviation the data shows the central tendency around mean.

PROMOTER QUALIFICATION – NON MEDICAL

PROMOTER'S QUALIFICATION 2	PRODUCT AVG.	PRICING AVG.	DISTRI. AVG.	PROMOTION AVG.	PEOPLE AVG.	P.E. AVG.	PROCESS AVG.	POSITION AVG.	RELATION AVG.	STRATEGY AVG.
Mean	3.21	3.16	3.20	3.12	3.20	3.22	3.16	3.21	3.25	3.08
Median	3.18	3.11	3.33	3.10	3.13	3.00	3.11	3.08	3.17	3.07
Mode	2.91	2.89	3.67	2.90	3.25	3.00	2.95	3.08	3.17	2.93
Standard Deviation	0.59	0.38	0.61	0.44	0.70	0.73	0.47	0.58	0.64	0.47
Kurtosis	-0.03	-0.67	-0.61	0.00	-0.19	-0.04	0.30	0.38	-0.53	0.97
Skewness	0.26	0.42	-0.23	0.33	0.11	0.06	0.34	0.83	-0.10	0.57
Range	2.82	1.47	2.67	2.24	3.13	3.60	2.47	2.75	2.83	2.29
Count	87.00	87.00	87.00	87.00	87.00	87.00	87.00	87.00	87.00	87.00
Confidence Level(95.0%)	0.12	0.08	0.13	0.09	0.15	0.15	0.10	0.12	0.14	0.10

Promoter's qualification as an Non-Medical profession hardly impact the marketing practices for all P's of marketing diagnostic laboratories by considering that the mean is just above 3.00(on a 5 point likert scale from 1 to 5). Also considering the Kurtosis and Skewness which is by and large negative, the data is not normal and it is negatively skeweed. However considering the standard deviation the data shows the central tendency around mean.

TABLE NO. 5.3.7.

PROMOTERS - YEARS OF EXPERIENCE (0-10 YEAR)

PROMOTER'S EXPERIENCE 1	PRODUCT AVG.	PRICING AVG.	DISTRI. AVG.	PROMOTION AVG.	PEOPLE AVG.	P.E. AVG.	PROCESS AVG.	POSITION AVG.	RELATION AVG.	STRATEGY AVG.
Mean	3.19	3.21	3.13	3.13	3.11	3.04	3.15	3.18	3.16	3.02
Median	3.09	3.18	3.08	3.12	3.13	3.00	3.08	3.08	3.17	2.96
Mode	3.00	3.32	3.67	2.90	3.50	3.00	3.42	3.08	3.50	3.21
Standard Deviation	0.56	0.36	0.63	0.41	0.66	0.66	0.45	0.55	0.70	0.48
Kurtosis	0.35	-0.62	-0.56	0.13	-0.68	0.86	0.54	0.93	-0.30	-0.47
Skewness	0.45	0.38	0.10	0.14	-0.24	-0.44	0.54	0.68	0.08	0.53
Range	2.36	1.32	2.67	1.81	2.50	3.20	2.00	2.42	2.67	1.71
Count	32.00	32.00	32.00	32.00	32.00	32.00	32.00	32.00	32.00	32.00
Confidence Level(95.0%)	0.20	0.13	0.23	0.15	0.24	0.24	0.16	0.20	0.25	0.17

Promoter's experience hardly has an impact on the marketing practices for various P's of marketing diagnostic laboratories by considering that the mean is just above 3.00(on a 5 point likert scale from 1 to 5). Also considering the Kurtosis and Skewness which is by and large negative, the data is not normal and it is negatively skeweed. However considering the standard deviation the data shows the central tendency around mean.

PROMOTERS - YEARS OF EXPERIENCE (10-20 YEAR)

PROMOTER'S EXPERIENCE 2	PRODUCT AVG.	PRICING AVG.	DISTRI. AVG.	PROMOTION AVG.	PEOPLE AVG.	P.E. AVG.	PROCESS AVG.	POSITION AVG.	RELATION AVG.	STRATEGY AVG.
Mean	3.15	3.07	3.21	3.05	3.11	3.26	3.08	3.14	3.20	3.11
Median	3.09	3.05	3.17	3.00	3.00	3.00	3.11	3.08	3.17	3.14
Mode	3.09	3.00	3.17	2.81	3.25	3.00	2.95	2.83	2.83	2.79
Standard Deviation	0.36	0.42	0.50	0.32	0.64	0.64	0.47	0.49	0.62	0.37
Kurtosis	-0.75	-0.85	-0.45	-0.27	0.07	-0.15	-0.60	0.38	0.31	-0.28
Skewness	0.09	0.17	0.10	0.60	0.24	0.55	-0.48	0.03	-0.15	-0.13
Range	1.36	1.58	2.00	1.29	2.75	2.60	1.74	2.42	2.83	1.64
Count	37.00	37.00	37.00	37.00	37.00	37.00	37.00	37.00	37.00	37.00
Confidence Level(95.0%)	0.12	0.14	0.17	0.11	0.21	0.21	0.16	0.16	0.21	0.12

Promoter's experience hardly has an impact on the marketing practices for various P's of marketing diagnostic laboratories by considering that the mean is just above 3.00 (on a 5 point likert scale from 1 to 5). Also considering the Kurtosis and Skewness which is by and large negative, the data is not normal and it is negatively skeweed. However considering the standard deviation the data shows the central tendency around mean.

TABLE NO. 5.3.9.

PROMOTERS - YEARS OF EXPERIENCE (20-30 YEAR)

PROMOTER'S EXPERIENCE 3	PRODUCT AVG.	PRICING AVG.	DISTRI. AVG.	PROMOTION AVG.	PEOPLE AVG.	P.E. AVG.	PROCESS AVG.	POSITION AVG.	RELATION AVG.	STRATEGY AVG.
Mean	3.22	3.20	3.16	3.14	3.25	3.32	3.15	3.28	3.32	3.15
Median	3.27	3.16	3.25	3.05	3.13	3.30	3.05	3.25	3.33	3.14
Mode	3.82	3.16	3.67	3.14	2.88	3.20	3.42	3.33	3.83	3.43
Standard Deviation	0.60	0.38	0.62	0.48	0.77	0.73	0.51	0.58	0.65	0.48
Kurtosis	0.13	-0.79	-0.73	-0.63	-0.47	-0.69	-0.90	0.39	-0.56	0.91
Skewness	0.05	0.05	-0.07	0.28	0.05	0.00	0.36	0.69	-0.28	0.53
Range	2.82	1.53	2.33	2.05	3.13	2.80	1.79	2.50	2.67	2.29
Count	42.00	42.00	42.00	42.00	42.00	42.00	42.00	42.00	42.00	42.00
Confidence Level(95.0%)	0.19	0.12	0.19	0.15	0.24	0.23	0.16	0.18	0.20	0.15

Promoter's experience hardly has an impact on the marketing practices for various P's of marketing diagnostic laboratories by considering that the mean is just above 3.00(on a 5 point likert scale from 1 to 5). Also considering the Kurtosis and Skewness which is by and large negative, the data is not normal and it is negatively

skeweed. However considering the standard deviation the data shows the central tendency around mean.

TABLE NO. 5.3.10.

PROMOTERS - YEARS OF EXPERIENCE (30-40 YEAR)

PROMOTER'S EXPERIENCE 4	PRODUCT AVG.	PRICING AVG.	DISTRI. AVG.	PROMOTION AVG.	PEOPLE AVG.	P.E. AVG.	PROCESS AVG	POSITION AVG.	RELATION AVG.	STRATEGY AVG.
Mean	3.12	3.06	3.13	3.01	3.15	3.13	3.03	3.16	3.06	3.07
Median	3.09	3.03	3.17	2.98	3.25	3.20	3.03	3.08	3.00	3.07
Mode	2.73	2.68	3.17	3.33	3.63	2.80	3.21	3.08	3.33	2.93
Standard Deviation	0.55	0.36	0.56	0.37	0.68	0.64	0.41	0.43	0.57	0.37
Kurtosis	-0.08	-0.28	-0.54	-0.84	-0.33	-0.34	0.32	0.19	-0.61	-0.56
Skewness	0.07	0.59	-0.34	0.22	-0.25	-0.24	-0.06	0.75	-0.01	-0.39
Range	2.36	1.42	2.17	1.43	2.88	2.60	1.84	1.83	2.17	1.43
Count	36.00	36.00	36.00	36.00	36.00	36.00	36.00	36.00	36.00	36.00
Confidence Level(95.0%)	0.18	0.12	0.19	0.12	0.23	0.22	0.14	0.15	0.19	0.12

Promoter's experience hardly has an impact on the marketing practices for various P's of marketing diagnostic laboratories by considering that the mean is just above 3.00(on a 5 point likert scale from 1 to 5). Also considering the Kurtosis and Skewness which is by and large negative, the data is not normal and it is negatively skeweed. However considering the standard deviation the data shows the central tendency around mean.

PROMOTERS - YEARS OF EXPERIENCE (40 & ABOVE YEAR)

PROMOTER'S EXPERIENCE 5	PRODUCT AVG.	PRICING AVG.	DISTRI. AVG.	PROMOTION AVG.	PEOPLE AVG.	P.E. AVG.	PROCESS AVG.	POSITION AVG.	RELATION AVG.	STRATEGY AVG.
Mean	3.08	3.03	2.97	3.07	3.16	3.04	3.16	3.08	3.24	3.03
Median	3.00	2.89	3.17	3.05	3.13	2.80	3.05	2.92	3.25	3.07
Mode	2.82	2.89	3.33	2.90	2.63	2.80	2.95	2.83	3.33	3.29
Standard Deviation	0.51	0.38	0.64	0.42	0.62	0.70	0.45	0.62	0.53	0.50
Kurtosis	0.94	0.56	-0.60	1.78	0.60	-0.68	2.17	0.30	1.09	1.22
Skewness	0.46	0.68	-0.01	0.68	0.66	0.58	0.93	0.89	0.50	0.52
Range	2.36	1.79	2.50	2.14	2.63	2.60	2.32	2.33	2.50	2.29
Count	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00
Confidence Level(95.0%)	0.19	0.14	0.24	0.16	0.23	0.26	0.17	0.23	0.20	0.19

Promoter's experience hardly has an impact on the marketing practices for various P's of marketing diagnostic laboratories by considering that the mean is just near or above 3.00(on a 5 point likert scale from 1 to 5). Also considering the Kurtosis and Skewness which is by and large negative, the data is not normal and it is negatively skeweed. However considering the standard deviation the data shows the central tendency around mean.

TABLE NO. 5.3.12.

AVERAGE DAILY SALES OF ROUTINE TESTS (RS 1000-3000)

ROUTINE AVG. SALES 2	PRODUCT AVG.	PRICING AVG.	DISTRI. AVG.	PROMOTION AVG.	PEOPLE AVG.	P.E. AVG.	PROCESS AVG.	POSITION AVG.	RELATION AVG.	STRATEGY AVG.
Mean	2.96	3.02	2.97	3.09	3.09	3.11	3.01	3.04	2.95	3.00
Median	3.00	3.00	3.00	3.05	3.13	3.20	3.05	3.08	3.00	2.93
Mode	2.73	3.11	2.67	2.86	3.13	3.40	3.16	3.08	3.17	2.86
Standard Deviation	0.52	0.36	0.51	0.32	0.47	0.62	0.39	0.45	0.59	0.40
Kurtosis	-0.70	-0.54	-0.66	-0.79	0.50	-0.19	0.04	-0.05	-0.93	-0.45
Skewness	-0.17	0.36	-0.22	0.29	-0.23	-0.21	0.06	0.37	-0.02	-0.17
Range	1.82	1.37	2.17	1.24	2.25	2.80	1.74	2.00	2.17	1.64
Count	41.00	41.00	41.00	41.00	41.00	41.00	41.00	41.00	41.00	41.00
Confidence Level(95.0 %)	0.16	0.11	0.16	0.10	0.15	0.19	0.12	0.14	0.19	0.13

Marketing practices for various P's of marketing diagnostic laboratories has hardly any impact in the increase of routine average sales by considering that the mean is just near or above 3.00(on a 5 point likert scale from 1 to 5). Also considering the Kurtosis and Skewness which is by and large negative, the data is not normal and it is negatively skeweed. However considering the standard deviation the data shows the central tendency around mean.

TABLE NO. 5.3.13.

AVERAGE DAILY SALES OF ROUTINE TESTS (RS 3000-6000)

ROUTINE AVG. SALES 3	PRODUCT AVG.	PRICING AVG.	DISTRI. AVG.	PROMOTION AVG.	PEOPLE AVG.	P.E. AVG.	PROCESS AVG.	POSITION AVG.	RELATION AVG.	STRATEGY AVG.
Mean	3.08	3.06	3.18	3.06	3.08	3.15	3.15	3.15	3.18	3.06
Median	3.00	3.05	3.17	3.10	3.00	3.00	3.16	3.08	3.17	3.07
Mode	3.00	3.05	3.33	2.90	2.88	3.00	3.37	3.00	3.00	2.79
Standard Deviation	0.40	0.36	0.55	0.42	0.73	0.67	0.44	0.50	0.56	0.37
Kurtosis	0.66	-0.33	-0.22	0.02	-0.37	-0.83	-0.26	1.09	-0.43	-0.64
Skewness	-0.43	0.41	-0.41	0.11	0.23	0.14	0.37	0.92	-0.29	-0.08
Range	1.91	1.47	2.17	1.81	2.88	2.40	1.84	2.33	2.17	1.57
Count	43.00	43.00	43.00	43.00	43.00	43.00	43.00	43.00	43.00	43.00
Confidence Level(95.0 %)	0.12	0.11	0.17	0.13	0.23	0.20	0.14	0.15	0.17	0.11

Marketing practices for various P's of marketing diagnostic laboratories has hardly any impact in the increase of routine average sales by considering that the mean is just above 3.00(on a 5 point likert scale from 1 to 5). Also considering the Kurtosis and Skewness which is by and large negative, the data is not normal and it is negatively skeweed. However considering the standard deviation the data shows the central tendency around mean.

AVERAGE DAILY SALES OF ROUTINE TESTS (RS 6000-9000)

ROUTINE AVG. SALES 4	PRODUCT AVG.	PRICING AVG.	DISTRI. AVG.	PROMOTION AVG.	PEOPLE AVG.	P.E. AVG.	PROCESS AVG.	POSITION AVG.	RELATION AVG.	STRATEGY AVG.
Mean	3.26	3.11	3.21	3.07	3.30	3.09	3.13	3.20	3.34	3.11
Median	3.18	3.05	3.17	2.90	3.38	3.00	3.05	3.08	3.33	3.14
Mode	3.09	2.89	3.67	3.33	3.50	3.00	2.95	2.92	3.33	2.93
Standard Deviation	0.48	0.44	0.55	0.42	0.68	0.71	0.47	0.47	0.68	0.42
Kurtosis	-0.02	-0.69	-0.38	-0.84	-0.43	0.05	-0.56	-0.76	0.06	-0.13
Skewness	0.30	0.36	-0.02	0.40	-0.25	-0.05	0.11	0.37	-0.25	-0.27
Range	2.36	1.79	2.33	1.57	2.88	3.40	2.05	1.92	3.17	1.86
Count	47.00	47.00	47.00	47.00	47.00	47.00	47.00	47.00	47.00	47.00
Confidence Level(95.0%)	0.14	0.13	0.16	0.12	0.20	0.21	0.14	0.14	0.20	0.12

Marketing practices for various P's of marketing diagnostic laboratories has hardly any impact in the increase of routine average sales by considering that the mean is just above 3.00 (on a 5 point likert scale from 1 to 5). Also considering the Kurtosis and Skewness which is by and large negative, the data is not normal and it is negatively skeweed. However considering the standard deviation the data shows the central tendency around mean.

AVERAGE DAILY SALES OF ROUTINE TESTS (ABOVE RS 9000)

ROUTINE AVG. SALES 5	PRODUCT AVG.	PRICING AVG.	DISTRI. AVG.	PROMOTION AVG.	PEOPLE AVG.	P.E. AVG.	PROCESS AVG.	POSITION AVG.	RELATION AVG.	STRATEGY AVG.
Mean	3.29	3.27	3.13	3.10	3.15	3.32	3.15	3.28	3.30	3.13
Median	3.27	3.29	3.08	3.05	3.00	3.20	3.05	3.21	3.33	3.11
Mode	3.36	3.79	3.83	2.81	3.63	2.80	3.00	3.58	3.33	3.29
Standard Deviation	0.61	0.34	0.69	0.44	0.76	0.71	0.51	0.68	0.57	0.54
Kurtosis	-0.18	-0.93	-0.98	0.80	-0.38	-0.63	0.56	-0.07	-0.10	0.37
Skewness	0.44	0.21	0.03	0.77	0.21	0.33	0.22	0.41	0.43	0.74
Range	2.73	1.21	2.67	2.10	3.13	2.80	2.47	3.08	2.50	2.21
Count	46.00	46.00	46.00	46.00	46.00	46.00	46.00	46.00	46.00	46.00
Confidence Level(95.0%)	0.18	0.10	0.21	0.13	0.23	0.21	0.15	0.20	0.17	0.16

Marketing practices for various P's of marketing diagnostic laboratories has hardly any impact in the increase of routine average sales by considering that the mean is just above 3.00(on a 5 point likert scale from 1 to 5). Also considering the Kurtosis and Skewness which is by and large negative, the data is not normal and it is negatively skeweed. However considering the standard deviation the data shows the central tendency around mean.

TABLE NO. 5.3.16.

AVERAGE DAILY SALES OF SPECIALISED TESTS (RS 1000 - 3000)

SPL. AVG. SALES 2	PRODUCT AVG.	PRICING AVG.	DISTRI. AVG.	PROMOTION AVG.	PEOPLE AVG.	P.E. AVG.	PROCESS AVG.	POSITION AVG.	RELATION AVG.	STRATEGY AVG.
Mean	3.08	3.09	3.11	3.00	3.22	3.14	3.09	3.15	3.12	3.06
Median	3.09	3.08	3.17	2.90	3.25	3.20	3.05	3.04	3.17	3.14
Mode	3.27	2.68	3.17	2.81	3.25	4.00	3.05	3.00	3.33	3.14
Standard Deviation	0.54	0.39	0.57	0.31	0.66	0.66	0.39	0.53	0.56	0.43
Kurtosis	-0.34	-0.58	-0.60	-0.18	0.12	-0.79	-0.63	0.07	1.07	-0.57
Skewness	-0.19	0.11	0.07	0.57	-0.10	0.07	0.11	0.60	-0.44	-0.10
Range	2.18	1.58	2.50	1.29	3.00	2.60	1.47	2.25	2.83	1.64
Count	42.00	42.00	42.00	42.00	42.00	42.00	42.00	42.00	42.00	42.00
Confidence Level(95.0%)	0.17	0.12	0.18	0.10	0.20	0.21	0.12	0.16	0.17	0.13

Marketing practices for various P's of marketing diagnostic laboratories has hardly any impact in the increase of specialised average sales by considering that the mean is just above 3.00(on a 5 point likert scale from 1 to 5). Also considering the Kurtosis and Skewness which is by and large negative, the data is not normal and it is negatively skeweed. However considering the standard deviation the data shows the central tendency around mean.

TABLE NO. 5.3.17.

AVERAGE DAILY SALES OF SPECIALISED TESTS (RS 3000-6000)

SPL. AVG. SALES 3	PRODUCT AVG.	PRICING AVG.	DISTRI. AVG.	PROMOTION AVG.	PEOPLE AVG.	P.E. AVG.	PROCESS AVG.	POSITION AVG.	RELATION AVG.	STRATEGY AVG.
Mean	3.22	3.19	3.15	3.16	3.18	3.27	3.20	3.19	3.27	3.13
Median	3.18	3.16	3.17	3.14	3.13	3.20	3.26	3.13	3.33	3.21
Mode	2.73	2.79	3.17	3.14	2.88	3.40	3.21	3.33	3.33	3.43
Standard Deviation	0.53	0.41	0.60	0.42	0.73	0.71	0.51	0.55	0.74	0.37
Kurtosis	-0.13	-0.86	-0.46	-0.17	-0.45	-0.90	-0.60	0.06	-0.71	0.24
Skewness	0.05	0.35	-0.21	0.05	-0.23	0.14	-0.25	0.06	-0.17	-0.17
Range	2.55	1.47	2.67	1.95	2.88	2.80	2.11	2.50	2.83	1.86
Count	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
Confidence Level(95.0%)	0.15	0.12	0.17	0.12	0.21	0.20	0.15	0.16	0.21	0.11

Marketing practices for various P's of marketing diagnostic laboratories has hardly any impact in the increase of specialised average sales by considering that the mean is just above 3.00 (on a 5 point likert scale from 1 to 5). Also considering the Kurtosis and Skewness which is by and large negative, the data is not normal and it is negatively skeweed. However considering the standard deviation the data shows the central tendency around mean.

AVERAGE DAILY SALES OF SPECIALISED TESTS (RS 6000-9000)

SPL. AVG. SALES 4	PRODUCT AVG.	PRICING AVG.	DISTRI. AVG.	PROMOTION AVG.	PEOPLE AVG.	P.E. AVG.	PROCESS AVG.	POSITION AVG.	RELATION AVG.	STRATEGY AVG.
Mean	3.10	3.12	3.16	3.11	3.20	3.12	3.14	3.24	3.16	2.99
Median	3.18	3.16	3.17	3.05	3.13	3.20	3.00	3.17	3.17	3.00
Mode	3.18	3.16	3.50	2.81	3.00	3.60	3.42	3.17	2.83	3.57
Standard Deviation	0.43	0.36	0.57	0.43	0.66	0.70	0.42	0.44	0.55	0.40
Kurtosis	0.21	-0.84	-0.71	-1.09	-0.40	0.44	-0.39	1.17	-0.82	-1.19
Skewness	-0.52	0.47	-0.19	0.21	0.14	-0.51	0.59	1.00	0.24	-0.07
Range	1.91	1.21	2.17	1.52	2.75	3.20	1.68	2.00	2.17	1.36
Count	39.00	39.00	39.00	39.00	39.00	39.00	39.00	39.00	39.00	39.00
Confidence Level(95.0%)	0.14	0.12	0.18	0.14	0.21	0.23	0.14	0.14	0.18	0.13

Marketing practices for various P's of marketing diagnostic laboratories has hardly any impact in the increase of specialised average sales by considering that the mean is just above 3.00(on a 5 point likert scale from 1 to 5). Also considering the Kurtosis and Skewness which is by and large negative, the data is not normal and it is negatively skeweed. However considering the standard deviation the data shows the central tendency around mean.

TABLE NO. 5.3.19.

AVERAGE DAILY SALES OF SPECIALISED TESTS (ABOVE RS 9000)

SPL. AVG. SALES 5	PRODUCT AVG.	PRICING AVG.	DISTRI. AVG.	PROMOTION AVG.	PEOPLE AVG.	P.E. AVG.	PROCESS AVG.	POSITION AVG.	RELATION AVG.	STRATEGY AVG.
Mean	3.21	3.06	3.09	3.04	3.06	3.14	3.02	3.12	3.23	3.11
Median	3.05	3.05	3.17	3.02	2.88	3.00	3.00	3.00	3.17	3.04
Mode	3.00	3.11	3.33	3.10	2.88	3.00	3.11	2.83	3.50	3.07
Standard Deviation	0.57	0.37	0.62	0.43	0.65	0.66	0.47	0.61	0.59	0.53
Kurtosis	0.71	-0.39	-0.40	1.43	0.57	0.34	2.29	1.10	-0.13	0.77
Skewness	0.93	0.19	0.00	0.75	0.70	0.66	0.72	1.12	0.17	0.78
Range	2.64	1.53	2.67	2.14	3.00	2.80	2.47	2.58	2.50	2.29
Count	46.00	46.00	46.00	46.00	46.00	46.00	46.00	46.00	46.00	46.00
Confidence Level(95.0 %)	0.17	0.11	0.18	0.13	0.19	0.20	0.14	0.18	0.17	0.16

Marketing practices for various P's of marketing diagnostic laboratories has hardly any impact in the increase of specialised average sales by considering that the mean is just above 3.00(on a 5 point likert scale from 1 to 5). Also considering the Kurtosis and Skewness which is by and large negative, the data is not normal and it is negatively skeweed. However considering the standard deviation the data shows the central tendency around mean.

MARKETING DEPARTMENT-YES

MKT. DEPT 1	PRODUCT AVG.	PRICING AVG.	DISTRI. AVG.	PROMOTION AVG.	PEOPLE AVG.	P.E. AVG.	PROCESS AVG.	POSITION AVG.	RELATION AVG.	STRATEGY AVG.
Mean	3.17	3.15	3.17	3.11	3.20	3.11	3.12	3.23	3.22	3.07
Median	3.14	3.16	3.17	3.05	3.13	3.00	3.18	3.13	3.17	3.00
Mode	3.36	3.16	2.67	2.81	3.63	3.00	3.42	3.08	3.50	2.79
Standard Deviation	0.55	0.38	0.63	0.41	0.69	0.69	0.52	0.53	0.59	0.51
Kurtosis	0.74	-0.72	-0.81	0.23	-0.33	-0.15	-0.03	0.94	0.12	0.32
Skewness	0.42	0.17	-0.03	0.60	0.03	0.47	0.12	0.91	-0.05	0.57
Range	2.82	1.58	2.67	2.10	3.13	3.20	2.47	2.67	3.17	2.29
Count	36.00	36.00	36.00	36.00	36.00	36.00	36.00	36.00	36.00	36.00
Confidence Level(95.0%)	0.12	0.08	0.14	0.09	0.15	0.15	0.11	0.11	0.13	0.11

The presence of marketing department in the diagnostic laboratories has hardly any impact on Marketing practices for various P's of marketing diagnostic laboratories by considering that the mean is just above 3.00(on a 5 point likert scale from 1 to 5). Also considering the Kurtosis and Skewness which is by and large negative, the data is not normal and it is negatively skeweed. However considering the standard deviation the data shows the central tendency around mean.

TABLE NO. 5.3.21.

MARKETING DEPARTMENT-NO

MKT. DEPT 2	PRODUCT AVG.	PRICING AVG.	DISTRI. AVG.	PROMOTION AVG.	PEOPLE AVG.	P.E. AVG.	PROCESS AVG.	POSITION AVG.	RELATION AVG.	STRATEGY AVG.
Mean	3.14	3.08	3.09	3.06	3.13	3.23	3.11	3.12	3.18	3.08
Median	3.09	3.05	3.17	3.05	3.13	3.20	3.05	3.08	3.17	3.14
Mode	2.91	2.89	3.17	2.90	3.25	3.00	2.95	3.00	3.33	3.43
Standard Deviation	0.50	0.39	0.54	0.39	0.66	0.67	0.40	0.54	0.65	0.36
Kurtosis	-0.36	-0.43	-0.38	-0.27	-0.14	-0.16	-0.30	-0.07	-0.45	-0.44
Skewness	-0.02	0.42	-0.27	0.21	0.13	-0.26	0.49	0.40	0.03	-0.33
Range	2.27	1.79	2.50	1.86	2.88	3.40	1.79	2.67	2.83	1.64
Count	141.00	141.00	141.00	141.00	141.00	141.00	141.00	141.00	141.00	141.00
SConfidence Level(95.0%)	0.10	0.08	0.11	0.08	0.14	0.14	0.08	0.11	0.14	0.08

The absence of marketing department in the diagnostic laboratories has hardly any impact on Marketing practices for various P's of marketing diagnostic laboratories by considering that the mean is just above 3.00(on a 5 point likert scale from 1 to 5). Also considering the Kurtosis and Skewness which is by and large negative, the data is not normal and it is negatively skeweed. However considering the standard deviation the data shows the central tendency around mean.

5.4. PART C –INFERENTIAL STATISTICS

5.4.1. HYPOTHESIS 1:

In diagnostic laboratories marketing principles summarized as 7P's (Product, Price, Place, Promotion, People, Process & Physical Evidence) have no significant relationship with marketing practices.

TABLE NO. 5.4.1.

HYPOTHESIS 1 - TESTING BY MULTIVARIATE TEST - MANOVA

Multivariate Tests[c]

Effect		Value	F	Hypothesis df	Error df	Sig.
Intercept	Pillai's Trace	.651	14.369[a]	7.000	54.000	.000
	Wilks' Lambda	.349	14.369[a]	7.000	54.000	.000
	Hotelling's Trace	1.863	14.369[a]	7.000	54.000	.000
	Roy's Largest Root	1.863	14.369[a]	7.000	54.000	.000
STRATEGY	Pillai's Trace	.078	.653[a]	7.000	54.000	.711
	Wilks' Lambda	.922	.653[a]	7.000	54.000	.711
	Hotelling's Trace	.085	.653[a]	7.000	54.000	.711
	Roy's Largest Root	.085	.653[a]	7.000	54.000	.711
DISTRIBUTION	Pillai's Trace	1.629	1.070	119.000	420.000	.311
	Wilks' Lambda	.139	1.074	119.000	362.055	.308
	Hotelling's Trace	2.447	1.075	119.000	366.000	.304
	Roy's Largest Root	.882	3.112[b]	17.000	60.000	.001
RELATIONSHIP	Pillai's Trace	1.550	.948	126.000	420.000	.635
	Wilks' Lambda	.137	1.026	126.000	364.879	.422
	Hotelling's Trace	2.691	1.116	126.000	366.000	.217
	Roy's Largest Root	1.281	4.270[b]	18.000	60.000	.000
DISTRIBUTION * RELATIONSHIP	Pillai's Trace	3.808	.895	560.000	420.000	.890
	Wilks' Lambda	.003	.874	560.000	390.698	.927
	Hotelling's Trace	9.091	.849	560.000	366.000	.959
	Roy's Largest Root	1.873	1.405[b]	80.000	60.000	.084

a. Exact statistic

b. The statistic is an upper bound on F that yields a lower bound on the significance level.

c. Design: Intercept + STRATEGY + DISTRIBUTION + RELATIONSHIP + DISTRIBUTION * RELATIONSHIP

This hypothesis is being tested by using Multivariate test – MANOVA. (For MANOVA See Page No. 117, Point No.4.11.1 of Chapter No.4 - Research Methodology).

Controlled by strategy as an independent variable representing the impact of marketing practices, and distribution and relationship being the fixed factors, the insignificant F indicates that there are no significant differences among the strategy and 7P's (Product, Price, Place, Promotion, People, Process & Physical Evidence – Dependent Variable) on a linear combination of dependent variables.

Thus the hypothesis is proved.

5.4.2. HYPOTHESIS 2:

In diagnostic laboratories marketing strategies have no significant impact on marketing practices.

TABLE NO. 5.4.2.

HYPOTHESIS 2 - TESTING BY ANALYSIS OF VARIANCES (ANOVA) TEST

Measures of Association

	R	R Squared	Eta	Eta Squared
PRODUCT * STRATEGY	.194	.038	.533	.284
PRICING * STRATEGY	.216	.047	.413	.170
DISTRIBUTION * STRATEGY	.200	.040	.450	.202
PROMOTION * STRATEGY	.289	.083	.519	.270
PEOPLE * STRATEGY	.251	.063	.456	.208
PHYSICALEVI * STRATEGY	.184	.034	.429	.184

	.193	.037	.448	.201
PROCESS * STRATEGY	.193	.037	.448	.201
POSITION * STRATEGY	.232	.054	.467	.219
RELATIONSHIP * STRATEGY	.183	.033	.451	.203

- **ANOVA Table**

			Sum of Squares	df	Mean Square	F	Sig.
PRODUCT * STRATEGY	Between Groups	(Combined)	17.056	26	.656	2.285	.001
		Linearity	2.255	1	2.255	7.856	.006
		Deviation from Linearity	14.801	25	.592	2.062	.004
	Within Groups		43.063	150	.287		
	Total		60.120	176			
PRICING * STRATEGY	Between Groups	(Combined)	5.999	26	.231	1.184	.261
		Linearity	1.641	1	1.641	8.419	.004
		Deviation from Linearity	4.358	25	.174	.894	.613
	Within Groups		29.237	150	.195		
	Total		35.237	176			
DISTRIBUTION * STRATEGY	Between Groups	(Combined)	13.633	26	.524	1.461	.083
		Linearity	2.704	1	2.704	7.536	.007
		Deviation from Linearity	10.929	25	.437	1.218	.232
	Within Groups		53.830	150	.359		
	Total		67.463	176			
PROMOTION * STRATEGY	Between Groups	(Combined)	7.657	26	.295	2.132	.003
		Linearity	2.366	1	2.366	17.133	.000
		Deviation from Linearity	5.291	25	.212	1.532	.062
	Within Groups		20.717	150	.138		
	Total		28.374	176			
PEOPLE * STRATEGY	Between Groups	(Combined)	14.950	26	.575	1.512	.066
		Linearity	4.524	1	4.524	11.897	.001
		Deviation from Linearity	10.426	25	.417	1.097	.353
	Within Groups		57.040	150	.380		
	Total		71.991	176			
PHYSICALEVI * STRATEGY	Between Groups	(Combined)	18.676	26	.718	1.301	.166
		Linearity	3.452	1	3.452	6.251	.013
		Deviation from Linearity	15.224	25	.609	1.103	.346
	Within Groups		82.844	150	.552		
	Total		101.520	176			
PROCESS * STRATEGY	Between Groups	(Combined)	7.078	26	.272	1.451	.087
		Linearity	1.309	1	1.309	6.975	.009
		Deviation from Linearity	5.769	25	.231	1.230	.223
	Within Groups		28.150	150	.188		
	Total		35.228	176			
POSITION * STRATEGY	Between Groups	(Combined)	10.931	26	.420	1.613	.040
		Linearity	2.697	1	2.697	10.348	.002
		Deviation from Linearity	8.234	25	.329	1.264	.196
	Within Groups		39.093	150	.261		

			Sum of Squares	df	Mean Square	F	Sig.
	Total		50.024	176			
RELATIONSHIP * STRATEGY	Between Groups	(Combined)	15.377	26	.591	1.471	.080
		Linearity	2.534	1	2.534	6.303	.013
		Deviation from Linearity	12.843	25	.514	1.278	.185
	Within Groups		60.310	150	.402		
	Total		75.688	176			

This hypothesis is being tested by using Univariate test – ANOVA.

As strategy is taken as an independent variable and compared with different P's of marketing, the F value suggest that there is a statistical difference between all P's and strategy.

However it is not significant difference in case of Pricing, Distribution (Place), People, Physical evidence, Process and Relationship. Thus out of different P's six P's show insignificant difference hence the hypothesis is proved.

5.4.3. HYPOTHESIS 3:

In diagnostic laboratories the 7 P's (Product, Price, Place, Promotion, People, Process & Physical Evidence stated as marketing principles) have no significant correlation between themselves.

TABLE NO. 5.4.3.

HYPOTHESIS 3- TESTING BY PARTIAL CORRELATION TEST

Correlations

Control Variables			PRODUCT	PRICING	DISTRIBUTION	PROMOTION	PEOPLE	PHYSICALEVI	PROCESS	POSITION	RELATIONSHIP
STRATEGY	PRODUCT	Correlation	1.000	.358	.247	.345	.371	.291	.396	.381	.287
		Significance (1-tailed)	.	.000	.000	.000	.000	.000	.000	.000	.000
		Df	0	174	174	174	174	174	174	174	174
	PRICING	Correlation	.358	1.000	.255	.399	.298	.276	.380	.291	.373
		Significance (1-tailed)	.000	.	.000	.000	.000	.000	.000	.000	.000
		Df	174	0	174	174	174	174	174	174	174
	DISTRIBUTION	Correlation	.247	.255	1.000	.278	.273	.246	.225	.228	.201
		Significance (1-tailed)	.000	.000	.	.000	.000	.001	.001	.001	.004
		Df	174	174	0	174	174	174	174	174	174

PROMOTION	Correlation	.345	.399	.278	1.000	.401	.317	.427	.348	.377
	Significance (1-tailed)	.000	.000	.000	.	.000	.000	.000	.000	.000
	Df	174	174	174	0	174	174	174	174	174
PEOPLE	Correlation	.371	.298	.273	.401	1.000	.277	.473	.391	.333
	Significance (1-tailed)	.000	.000	.000	.000	.	.000	.000	.000	.000
	Df	174	174	174	174	0	174	174	174	174
PHYSICALEVI	Correlation	.291	.276	.246	.317	.277	1.000	.260	.270	.273
	Significance (1-tailed)	.000	.000	.001	.000	.000	.	.000	.000	.000
	Df	174	174	174	174	174	0	174	174	174
PROCESS	Correlation	.396	.380	.225	.427	.473	.260	1.000	.474	.453
	Significance (1-tailed)	.000	.000	.001	.000	.000	.000	.	.000	.000
	Df	174	174	174	174	174	174	0	174	174
POSITION	Correlation	.381	.291	.228	.348	.391	.270	.474	1.000	.235
	Significance (1-tailed)	.000	.000	.001	.000	.000	.000	.000	.	.001
	Df	174	174	174	174	174	174	174	0	174
RELATIONSHIP	Correlation	.287	.373	.201	.377	.333	.273	.453	.235	1.000
	Significance (1-tailed)	.000	.000	.004	.000	.000	.000	.000	.001	.
	Df	174	174	174	174	174	174	174	174	0

This hypothesis is being tested by using Partial Correlation (For Partial Correlation See Page No. 118 -119, Point No.4.11.3 of Chapter No.4 - Research Methodology).

Keeping strategy as a constant each P is compared with other P's for correlation. If any P has a correlation greater than 0.5, it is called as significant correlation.

It is found that there is a weak and insignificant positive correlation between various P's. Hence the hypothesis is proved.

5.4.4. HYPOTHESIS 4:

In diagnostic laboratories the form of organization (Chain, Owned, and Hospital) has significant impact on marketing practices.

TABLE NO. 5.4.4.
HYPOTHESIS 4 - TESTING BY NON PARAMETRIC –KENDALL'S W TEST

Non Parametric Tests - Kendall's W Test

Ranks	
Type	**Mean Rank**
OWNED	1.60
HOSPITAL	1.40
CHAIN	3.00

Test Statistics	
N	**10**
Kendall's W[a]	**.760**
Chi-Square	**15.200**
Df	**2**
Asymp. Sig.	**.001**
a. Kendall's Coefficient of Concordance	

This hypothesis is being tested by using Non Parametric Tests - Kendall's W Test (For Non Parametric Tests - Kendall's W Test see Page No. 119-120, Point No.4.11.4 of Chapter No. 4 - Research Methodology)

It is reported that the form of organization has significant impact on the marketing practices. In chain diagnostic laboratories marketing practices are carried over significantly as compared to owned and hospital diagnostic laboratories.

Hence the hypothesis is proved.

CHAPTER - 6

CONCLUSIONS, AREA'S FOR FURTHER RESEARCH & THEORETICAL CONTRIBUTIONS AND MANAGERIAL IMPLICATIONS

6.1. INTRODUCTION:

Coming to the end of this research work, this chapter discusses the conclusions and area for further research. This chapter is divided in four parts:

- **Hypotheses Specific Conclusions**

- **General Conclusions**

- **Areas For Further Research**

- **Theoretical Contributions and Managerial Implications**

6.2. HYPOTHESES SPECIFIC CONCLUSIONS:

HYPOTHESIS 1

In diagnostic laboratories marketing principles summarized as 7P's (Product, Price, Place, Promotion, People, Process & Physical Evidence) have no significant relationship with marketing practices.

TESTING OF THE HYPOTHESIS

The researcher has treated strategy as an independent variable and distribution and relationship being the fixed factors, there is no significant difference found among the strategy and 7 P's (Product, Price, Place, Promotion, People, Process & Physical Evidence) as indicated by insignificant F.

Thus the hypothesis is proved by using Multivariate test - MANOVA.

HYPOTHESIS 2

In diagnostic laboratories marketing strategies have no significant impact on marketing practices.

TESTING OF THE HYPOTHESIS

Using ANOVA and using strategy as a constant the F value of all the 7 P's (Product, Price, Place, Promotion, People, Process & Physical Evidence) is found to be insignificant hence the hypothesis is proved.

HYPOTHESIS 3

In diagnostic laboratories the 7 P's (Product, Price, Place, Promotion, People, Process & Physical Evidence stated as marketing principles) have no significant correlation between themselves.

TESTING OF THE HYPOTHESIS

All the 7 P's (Product, Price, Place, Promotion, People, Process & Physical Evidence) correlation's has been tested keeping strategy as a constant. As there is a week positive correlation between various P's the hypothesis is proved.

HYPOTHESIS 4

In diagnostic laboratories the form of organization (Chain, Owned, and Hospital) has significant impact on marketing practices.

TESTING OF THE HYPOTHESIS

As has been elaborated earlier the respondent's form of organization (Chain, Owned, and Hospital) has been compared by using non parametric Kendall's W test it is found that the marketing practices of chain diagnostic laboratories are significantly better than owned and hospital diagnostic laboratories.

Thus the form of organization has significant impact on marketing practices has been proved.

6.3. GENERAL CONCLUSIONS:

1. The following table shows a comparative picture of three types of organization (Owned, Hospital & Chain Diagnostic Laboratories) vis-a –vis, the seven P's and strategy score as compiled by the researcher.

The other general conclusions are also broadly based on this given below table.

TABLE NO. 6.3.1.

COMPARATIVE DATA OF 7P's VERSUES STRATEGY

AVERAGE SCORE	OWNED	HOSPITAL	CHAIN
PRODUCT	3.12	3.08	4.16
PRICE	3.15	3.03	3.59
PLACE	3.04	3.12	4.00
PROMOTION	3.11	3.09	3.91
PEOPLE	3.09	3.22	4.43
PHYSICAL EVIDENCE	3.15	3.08	4.29
PROCESS	3.13	3.11	3.86
POSITIONING	3.07	3.15	4.17
RELATIONSHIP MARKETING	3.21	3.16	4.02
STRATEGY	3.01	3.05	3.99

2. Except for chain diagnostic laboratories the respondent's appeared to be a little above neutral in case of all marketing practices. This suggests the apparent apathy of diagnostic laboratories towards marketing practices.

3. Considering the promoter's qualification it is surprising to note that promoter's having medical background are close to neutral when compared

with non -medical background about 7 P's (Product, Price, Place, Promotion, People, Process & Physical Evidence) of marketing.

4. Considering the experience of promoter's in number of years the graph of significance of 7 P's (Product, Price, Place, Promotion, People, Process & Physical Evidence) goes on increasing till 30 years of experience. However after 30 years it shows close to neutrality about 7 P's.

5. As expected, the rise of daily income of routine tests results into drifting away positively from neutrality about marketing practices.

6. However in so far as daily income of specialized tests is concerned it shows the mixed results about neutrality of marketing practices.

7. The organizations having marketing department has shown a little more inclination towards marketing practices as compared to the organizations who do not have marketing department.

8. The 177 responses received by the researcher has been further analyzed from 7 P's separately. For such analysis under each P various segments made by the researcher for that P of the marketing has been tested as the responses in the agreement of the statements, the responses where here is disagreement and he neural responses. For each P the conclusions are as follows:

   a. In so far Product is considered there appears to be more responses for disagreement and neutrality. The respondents believe that the performance of the existing products is revived regularly and the product portfolio meets the customer's expectations. However the percentage of the neutral responses suggests that little above 50% doesn't believe in this. Also when asked about the emergency situations (that too in medical profession) the responses are showing are showing unethical inclinations.

b. In so far Price is concerned there appears to be dilemma in the mind of respondents. On the one hand a little over 50% of the respondents believe that pricing policy helps in maximizing profit. On the other hand they don't agree that quality of diagnostic tests depend on price. Also about 20% of the respondents have shown neutrality towards the price.

c. In so far Place is concerned overall a little above 50% of the respondents either disagree or neutral towards the location of laboratory. It appears to be that the mismatch between demand and supply makes it unable to serve customers well in time.

d. In so far as Promotion is concerned the majority of the respondents either disagree or neutral to the special promotion campaigns. It appears that the respondents believe more in direct advertising than any other indirect promotional method. It is interesting to note that the respondents believe more in just informing about the product then persuading.

e. In so far as People is concerned though the respondents agree about extensive training to its employees they neither agree with enough of motivating and energizing of its employees nor do they empower there frontline employees. About 20% respondents are neutral towards People issues suggesting there negligent approach towards people.

f. In so far as Physical Evidence is concerned the diagnostic laboratories being a part of medical profession shows a little more inclination towards interior and infrastructure. However here again interior has more score than cleanliness and hygiene. So it seems that the more importance is given for the 'pomp and show'.

g. In so far as Process is concerned the respondents are more worried about the Pre-diagnostic waiting time and post diagnostic bill settlement time. About 63 % of the respondents feel that the processes for conducting the test are lengthy and time consuming. Thus by and large the respondents are in disagreement or neutral about the processes.

9. Though there is a hype created on relationship marketing yet majority of the respondents either disagree or neutral on 'Satisfaction first Profit next'. They don't even motivate dissatisfied customers to lodge complaint about their dissatisfaction.

10. A different aspect of positioning, such as image building and effective brand, does not have any direct impact on the marketing practices of the diagnostic laboratories.

6.4. AREAS FOR FURTHER RESEARCH:

The present research has made an endeavour to assess marketing practices of Owned, Chain and Hospital diagnostic laboratories of Pune city. Taking clues from the study, the future researchers may make an attempt to work in the following areas:

1. Whether the form of organization or something else has an impact on marketing practices?

2. Whether the Promoters qualification and / or qualities have positive impact on marketing practices?

3. A separate research can be done on whether the experience of promoter's contributes towards the successful running of business in different sectors of healthcare.

4. The future researchers may investigate whether the routinely required tests are promoted regularly or their sales is due to relationship marketing.

5. The research to be carried over to know whether the separate marketing department has an impact on sales and marketing practices in different sectors of healthcare.

6. The research can be done in knowing that the Product related marketing practices are carried over in different sectors of healthcare and also it has an impact on the sales. Also researcher can investigate the reasons behind unethical inclinations (medical profession) in the emergency situations.

7. The future researchers need to investigate whether Price related marketing practices are carried over in different sectors of healthcare and also it has an impact on the profit.

8. The research can be done in knowing that the Place related marketing practices are carried over in different sectors of healthcare and it has an impact on the sales. Also the different factors which contributes to increase in turnaround time in diagnostic laboratories.

9. Research can be done in understanding that the Promotion related marketing practices are carried over in different sectors of healthcare and also it has an impact on the brand equity and brand loyalty. Also research can be carried over in knowing the reasons behind promotion as a purpose of information than to persuade

10. There needs to be further investigation in knowing People related marketing practices are carried over in different sectors of healthcare and also the need of extensive training to its employees along with motivating and energizing of its employees.

11. The future researcher can investigate whether Physical Evidence related marketing practices are carried over in different sectors of healthcare and also

reasons behind more inclination towards interior and infrastructure than cleanliness and hygiene.

12. The research can be done in understanding Process related marketing practices are whether carried over in different sectors of healthcare and also the factors related to more Pre-diagnostic waiting time and post diagnostic bill settlement time.

13. The research can be done in investigating whether relationship marketing is carried over in different sectors of healthcare.

14. The research can be done in knowing whether positioning, such as image building and effective brand is carried over in different sectors of healthcare.

15. At the outset, the researcher may pick any particular sub-theme of marketing to assess Diagnostic Laboratories. The present study has studied their marketing practices in totality and hence in depth study of individual aspects like service quality, marketing mix etc. perhaps has not been carried out. Picking researching any prominent particular aspect of marketing makes a lot of sense.

16. As discussed earlier, this study deals with Owned, Chain and Hospital diagnostic laboratories only. For convenience, the Diagnostic Laboratories selected for the study were all from Pune City. It is suggested to select Diagnostic Laboratories from different parts of India to see if difference in marketing practices has anything to do with zonal difference.

17. Less constrained researchers may compare and contrast marketing practices of Indian Diagnostic Laboratories with those of such Diagnostic Laboratories situated across other countries. Obviously, this may help us in knowing where

the Indian Diagnostic Laboratories stand in comparison to their global counterparts.

6.5. THEORETICAL CONTRIBUTIONS AND MANAGERIAL IMPLICATIONS:

1. The Principles of marketing cannot be summarized as 7 P's, as it appears to be a simplistic and narrow approach towards marketing. We need to develop some more context - specific and contain - specific marketing principles.

2. The 7 P's of marketing have different weightages for different situations amongst themselves. Each P may not have the same or the average weightage in any given situation.

3. The form of organization - and not the strategy of the organization - has significant impact on marketing practices resulting out of seven P's of marketing.

4. The concept of marketing strategy appears to be less relevant than marketing principles and policies, especially in the context of healthcare sector.

5. In the noble field of medical and para medical profession, marketing shall not be treated as a sin. It is rather an aid to serve patients in a better and cost effective ways.

6. In the noble field of medical and para medical profession, pricing is perhaps not so relevant issue than the quality of output.

7. In the noble field of medical and para medical profession, the indirect promotional and persuading methods are having less relevance then direct and informative promotional methods.

8. In the noble field of medical and para medical profession, cleanliness and hygiene shall have edge over "Pomp and Show".

9. The concept of relationship marketing appears to be just a hype in the context of a noble profession like medical and para medical.

10. Though the employees are required to be trained on regular basis, the apparent and fundamental motivational and energizing training seems to be less relevant in the context of noble profession like medical and para medical.

11. As the medical and para medical field is directly related to well-being of personal health, the place of diagnostic laboratories losses its relevance.

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QUESTIONNAIRE ON MARKETING PRACTICES

Dear Respondent,

The investigator wants to seek your opinion and share your experiences regarding "A Study of Marketing Practices of Owned, Hospital and Chain Diagnostic Laboratories in Pune City". Any comments/suggestions/feedback from your side shall be of great importance to me. The information provided by you will be kept strictly confidential and will be used for research purpose (Ph.D) only. Hope to get full co-operation from your side.

Regards

Pravin Subhash Gosavi
Research scholar,
Tilak Maharashtra Vidyapeeth
Pune.

1	Personal Particulars of Respondents	
I.	Name	
II.	Department	
III.	Name of the establishment	
IV.	Year of the establishment	
V.	Owned Diagnostic Laboratory	
VI.	Hospital Diagnostic Laboratory	
VII.	Chain Diagnostic Laboratory	

2	Details of the Promoters					
	Qualification		**Years of Experience**		**Specialization**	
I.	Medical		Less than 10			
II.	Non-medical		10-20			
III.			20-30			
IV.			30-40			
V.			40 and above			

3	Average daily sales of routine tests	
I.	Up to Rs 1000	
II.	Rs 1000-3000	
III.	Rs 3000-6000	
IV.	Rs 6000-9000	
V.	Above Rs 9000	

4	Average daily sales of Specialised tests	
I.	Up to Rs 1000	
II.	Rs 1000-3000	
III.	Rs 3000-6000	
IV.	Rs 6000-9000	
V.	Above Rs 9000	

5	**Do you have marketing Department?**	
I.	Yes	
II.	No	
5.1	**If Yes sate whether**	
I.	Formal	
II.	Informal	

6	**The person in-charge of Marketing**					
	Designation		**Qualification**		**Year of Experience**	
I.	Marketing Manager		Technician		0-5	
II.	Administrative Officer		Non-technician		5-10	
III.	Manager				10-15	
IV.	Other				15 and above	

7	**What are the additional services you offer?**	
I.	ECG	
II.	Scanning	
III.	X-Ray	
IV.	Ultrasound Sonography	
V.	Home collection of samples	
VI.	Stress Test	
VII.	Blood Pressure	
VIII.	Any Other (Specify)	

8	**What makes you to develop marketing practices?**	
I.	Fluctuating demand	
II.	Organisational image	
III.	Service Expansion	
IV.	To identify prospective customer's	
V.	Desire for sustained demand, growth and profitability	
VI.	Any other	

9	How does marketing approach help your Professional Services?	
I.	An Insurance for survival	
II.	An opportunity to increase turnover	
III.	To overcome competition	
IV.	To maximize profit	
V.	To make awareness of services	
VI.	To serve effectively	
VII.	To achieve social benefit?	
VIII.	To overcome insufficient demand	
IX.	Any other	

11	How do you motivate and influence the prospective customers to seek your services?	
I.	Best quality services	
II.	Sharp pricing and discounting	
III.	Slick brochures	
IV.	Social Services	
V.	Any other	

12	Do you seek feedback from your customer's about their satisfaction?	
I.	Yes	
II.	No	
12.1	If yes, how do you measure this satisfaction?	
I.	Repeated Calls	
II.	Influencing other customer's	
III.	Appreciation	
IV.	Soliciting (Doctors) for social and family function	

13	**Do you reward customers for frequent use of your services/products?**	
I.	Yes	
II.	No	
13.1	**If yes, by?**	
I.	Giving discount	
II.	No fee for certain consultation	
III.	Free home collection of test samples	
IV.	Others	

14	**Do you offer additional service and benefits apart from the Diagnostic tests to your customer's?**	
I.	Yes	
II.	No	
14.1	**If yes, what are they**	
I.	Easy payment option	
II.	Accept Credit/Debit Cards	
III.	Service out of office	
IV.	Free supply of educational materials	
V.	Others	

15. Please rate the following statements on a scale of 1to 5. Here

1- Strongly Disagree   **2 - Disagree**   **3 - Neither Agree nor Disagree**

4 - Agree   **5 – Strongly Agree**

A) PRODUCT

		1 S.D.	2	3	4	5 S.A.

Sr. No.	Statements	1	2	3	4	5
1	The product/service portfolio up to the customer's expectations					
2	The Diagnostic Laboratory reviews the performance of its existing products/ services on regular basis					
3	New product/service development is a continuous phenomenon in the Diagnostic Laboratory					
4	The product/service portfolio of the Diagnostic Laboratory enhances its brand image					
5	Case history of customers maintained by your Diagnostic Laboratory is always available and helpful					
6	In emergency situations you recommend the customers to go some other Diagnostic Laboratories					
7	In your opinion, the package services/products at your Diagnostic Laboratory are helpful to the customers					
8	Your Diagnostic Laboratory is having good customer care					
9	Your Diagnostic Laboratory reception services are good					
10	You will believe that the equipment's you have are all latest					
11	When compared to other Diagnostic Laboratory, this is providing better services/products to the customers					

B) PRICE
Please rate the following statements on a scale of 1to 5. Here

1- Strongly Disagree   **2 - Disagree**   **3 - Neither Agree nor Disagree**

4 - Agree   **5 – Strongly Agree**

		1 S.D.	2	3	4	5 S.A.

Sr. No.	Statements	1	2	3	4	5
1	In your Diagnostic Laboratory the quality of diagnostic test depends on price					
2	Your Diagnostic Laboratory follows charges, what the other Diagnostic Laboratories follows					
3	The charges for conducting, laboratory tests at your Diagnostic Laboratory are reasonable					

OBJECTIVES

VI

- **Pricing objectives of the Diagnostic Laboratory aims at (tick the relevant one)**

1- Strongly Disagree   **2 - Disagree**   **3 - Neither Agree nor Disagree**

4 - Agree   **5 – Strongly Agree**

	1	2	3	4	5
	S.D.				S.A.

Sr. No.	Statements	1	2	3	4	5
1	Maximising current profit and ROI (Return on Investment)					
2	Product/Service quality leadership					
3	Quality diagnostic services at affordable prices					
4	Quality diagnostic services for every section of the society					
5	Survival in the competitive market					

METHODS
- **Mention the extent to which following pricing methods are being used by the Diagnostic Laboratory (tick the relevant one)**

Sr. No.	Statements	1	2	3	4	5
1	Mark up pricing					
2	Target return pricing					
3	Skimming pricing					
4	Penetration pricing					
5	Value pricing					
6	Perceived value pricing					
7	Going rate pricing					
8	Social Pricing					

PRICING EFFECTIVENESS

Sr. No.	Statements	1	2	3	4	5
1	Pricing policy of the Diagnostic Laboratory gives it the competitive edge					
2	Pricing policy of the Diagnostic Laboratory gives value for money to customers					
3	Pricing policy of the Diagnostic Laboratory helps in maximising the profit					

C) PLACE

DISTRIBUTION

1   The (TAT) Turn Around Time for routine test is

< 1 hr   2-4 hr   5-8 hr   9-12hr   >13hr

2   The (TAT) Turn Around Time for specialized test is
< 10 hr   11 -24 hr   1-2 days   > 2 days

DISTRIBUTION EFFECTIVENESS
Please rate the following statements on a scale of 1to 5. Here
1- Strongly Disagree   2 - Disagree   3 - Neither Agree nor Disagree

4 - Agree   5 – Strongly Agree

1	**2**	**3**	**4**	**5**
S.D.				**S.A**.

Sr. No.	Statements	1	2	3	4	5
1	The Diagnostic Laboratory is able to give location benefits to its customers					
2	Diagnostic Laboratory is able to match its demand and supply functions well					
3	The Diagnostic Laboratory is able to serve its customers well in time					
4	The customers of Diagnostic Laboratory can access the test reports through electronic media					

D) PROMOTION
Please rate the following statement on a scale of 1to 5. Here
1- Strongly Disagree   2 - Disagree   3 - Neither Agree nor Disagree

4 - Agree   5 – Strongly Agree

1	**2**	**3**	**4**	**5**
S.D.				**S.A**.

Sr. No.	Statements	1	2	3	4	5
1	In your opinion special campaigns like, heart-checkup, Diabetes checkup etc. at concession rates are getting good response from customers					

PROMOTION MIX
Please rate the following statement on a scale of 1to 5. Here
1- Strongly Disagree   2 - Disagree   3 - Neither Agree nor Disagree

4 - Agree   5 – Strongly Agree

To what extent the following elements of promotion mix are being employed by the Diagnostic Laboratory (tick the relevant one)

		1	2	3	4	5
		S.D.				S.A.

Sr. No.	Statements	1	2	3	4	5
1	Advertising					
2	Sales promotion					
3	Public relations and publicity					
4	Direct marketing					
5	Personal selling					

To what extent the following media/public relations is/are used by the Diagnostic Laboratory for promoting its products (tick the relevant one)

Sr. No.	Statements	1	2	3	4	5
1	Television					
2	Newspaper/magazines					
3	Brochures/pamphlets					
4	Signboards/hoardings					
5	Internet					
6	By Medical Camps & exhibitions					
7	Any other mean………………………					

To what extent the advertising objective is given due importance by the Diagnostic Laboratory most of the time (tick the relevant one)

Advertising objective

Sr. No.	Statements	1	2	3	4	5
1	To inform					
2	To persuade					
3	To remind					

PROMOTION EFFECTIVENESS
Please rate the following statement on a scale of 1to 5. Here
1- Strongly Disagree   2 - Disagree   3 - Neither Agree nor Disagree

4 - Agree   5 – Strongly Agree

IX

		1	2	3	4	5
		S.D.				S.A.

Sr. No.	Statements	1	2	3	4	5
1	The Diagnostic Laboratory is able to inform its customers about new product /service well in time					
2	The promotion policies of the Diagnostic Laboratory gives it a competitive edge					
3	The promotion policies of the Diagnostic Laboratory are good enough to persuade/convince customers					
4	The promotion policies of the Diagnostic Laboratory helps out in the attainment of objectives					
5	The Diagnostic Laboratory maintains and updates its website to advertise and provide other useful information					

E) PEOPLE

Sr. No.	Statements	1	2	3	4	5
1	The Diagnostic Laboratory hires for service inclination and competency					
2	The Diagnostic Laboratory provides extensive training to its employees					
3	The Diagnostic Laboratory empowers its front line employees					
4	The Diagnostic Laboratory motivates and energizes its employees through incentives etc.					
5	The Diagnostic Laboratory is having doctor with Excellent knowledge					
6	The Diagnostic Laboratory is having doctor with Excellent Skills					
7	The Diagnostic Laboratory is having doctor with right attitude					
8	The house keeping personnel in the Diagnostic Laboratory are well mannered, gentle, hygienic and meticulous					

F) PHYSICAL EVIDENCE

Sr. No.	Statements	1	2	3	4	5
1	Cleanliness and hygiene of rooms					
2	Interior and exterior infrastructure is good					
3	Adequate physical facilities					
4	Appealing material associated with services					
5	Diagnostic Laboratory is able to build up confidence in the customers by displaying awards won by doctors and the service certificates won by the Diagnostic Laboratory					

G) PROCESS

X

Please rate the following statement on a scale of 1to 5. Here
1- Strongly Disagree   2 - Disagree   3 - Neither Agree nor Disagree
4 - Agree   5 – Strongly Agree

		1	2	3	4	5
		S.D.				S.A.

Sr. No.	Statements	1	2	3	4	5
1	The services/products offered by the Diagnostic Laboratory are simple to understand and easy to avail					
2	The Diagnostic Laboratory has proper blueprint of its service delivery in place					
3	The Diagnostic Laboratory takes care of its customer's precious time					
4	In this Diagnostic Laboratory, to get the Test done process is very lengthy and time consuming					
5	The Diagnostic Laboratory bill settlement process is simple					
6	Service counters provided in this Diagnostic Laboratory are sufficient					
7	The length of waiting time of customers in this Diagnostic Laboratory is reasonable					

H) SEGMENTATION
Bases of segmentation
- **To what extent the following bases are used by the Diagnostic Laboratory for segmenting the market**

Sr. No.	Statements	1	2	3	4	5
1	Benefits sought					
2	Purchase occasion					
3	Brand loyalty					
4	Usage rate					
5	Paying capacity					
6	According to psychographic variables					
7	According to demographic variables					
8	According to geographic variables					

SEGMENTATION EFFECTIVENESS

Sr. No.	Statements	1	2	3	4	5
1	The Diagnostic Laboratory's choice of segments is judicious and it addresses them well					
2	The segments are easily accessible					
3	The segments are actionable					
4	The segments are profitable					

I) POSITIONING

To what extent the following positioning planks are used by the Diagnostic Laboratory for positioning its products/services among the customers.

Please rate the following statement on a scale of 1to 5. Here

1- Strongly Disagree   2 - Disagree   3 - Neither Agree nor Disagree

4 - Agree   5 – Strongly Agree

	1 S.D.	2	3	4	5 S.A.

Sr. No.	Statements	1	2	3	4	5
1	Symbols and branding					
2	Wide product mix					
3	Price positioning					
4	Service attributes and benefits					
5	Service user positioning					
6	Competitive positioning					
7	Quality positioning					
8	Leadership positioning					
9	Excellence positioning					

POSITIONING EFFECTIVENESS

Sr. No.	Statements	1	2	3	4	5
1	The Diagnostic Laboratory tries to establish a distinct image in the minds of its customers					
2	The positioning of its services/products sets the Diagnostic Laboratory apart from its competitors					
3	Effective brand positioning by the Diagnostic Laboratory results in greater sales and profits					

J) RELATIONSHIP MARKETING

Sr. No.	Statements	1	2	3	4	5
1	The Diagnostic Laboratory maintains multiple communication channels to communicate with its customers					
2	The Diagnostic Laboratory works on the maxim "Satisfaction First, Profit Next"					
3	The Diagnostic Laboratory maintains a relationship rather than transaction focus					
4	The Diagnostic Laboratory places greater emphasis on customer retention					
5	The Diagnostic Laboratory motivates dissatisfied customers to lodge complaints					
6	The Diagnostic Laboratory takes extra care of its satisfied customers					

K) MARKETING EFFECTIVENESS REVIEW
Please rate the following statement on a scale of 1to 5. Here
1- Strongly Disagree   2 - Disagree   3 - Neither Agree nor Disagree
4 - Agree   5 – Strongly Agree

(i) STRATEGIC ORIENTATION

Sr. No.	Statements	1	2	3	4	5
1	The Diagnostic Laboratory does a formal marketing planning					
2	Current marketing strategies of Diagnostic Laboratory are impressive.					
3	Contingencies are planned well in the Diagnostic Laboratory					

(ii) ADEQUATE MARKETING INFORMATION

Sr. No.	Statements	1	2	3	4	5
1	Diagnostic Laboratory is involved in continuous marketing research					
2	Diagnostic Laboratory does a continuous appraisal of sale and profitability					
3	Diagnostic Laboratory measures and improves the cost of direct marketing					

(iii) INTEGRATED MARKETING ORIENTATION

Sr. No.	Statements	1	2	3	4	5
1	Diagnostic Laboratory has highly integrated marketing function					
2	Diagnostic Laboratory does integration of marketing functions with other functions of management					
3	Diagnostic Laboratory does proper organising of product development process					

(iv) CUSTOMER PHILOSOPHY

Sr. No.	Statements	1	2	3	4	5
1	Diagnostic Laboratory designs and serves the segments efficiently					
2	Diagnostic Laboratory follows a holistic approach					
3	Diagnostic Laboratory provides different plans for different segments					

(v) OPERATIONAL EFFICIENCY

Sr. No.	Statements	1	2	3	4	5
1	Diagnostic Laboratory excels in communicating and implementing marketing strategy					
2	Generate and employ marketing resource properly					

- **Any note/additional information you would like to give about the recent developments in the Diagnostic Laboratory which may add to the quality of this study**

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Thank you for your valuable time and cooperation………