

STUDY OF THE DOMESTIC MEDICAL DEVICE MARKET

Dissertation Submitted to



The IIHMR University, Jaipur

for the partial fulfilment for the award of the degree of

Master of Business Administration (MBA)

in

Pharmaceutical Management

By

Simran Sharma

Under the Supervision and Guidance of

Dr. Ashok Peepliwal

2024

Completion Certification

CERTIFICATE

This is to certify that **SIMRAN SHARMA** in partial fulfilment of the requirements for the award of the degree of MBA (Hospital and Health Management)/MBA (Pharmaceutical Management)/MBA (Development Management) from the IIHMR University, Jaipur has successfully completed her internship at **WINGLOBE HEALTHCARE PVT LTD** during **March 20 - June 20, 2024.**



Preceptor/Head of the Organization: **KUNAL KISHORE, CEO**

Name of the organization: **WINGLOBE HEALTHCARE PVT LTD**

Place: Bangalore

Date: 02-07-2024

Winglobe Healthcare Pvt. Ltd.

Reg. Office:

No. 1783, 2nd Floor, Phoenix House, 19th Main Road,
1st Sector, HSR Layout, Bengaluru - 560 102 KA

Corporate Office:

GR Tower, 3rd Floor, Plot No. L-127, 4th Main Road,
14th Cross, VI Sector, HSR Layout, Bengaluru - 560 102 KA

T: +91 80 356 94730, +91 96671 77664 | **E:** customercare@winglobe.in

www.winglobe.in

DECLARATION BY STUDENT

I hereby declare that this dissertation titled "Study of the Domestic Medical Device Market" is the bonafide record of my original research work. I declare that it has not been submitted to any other university or institution for the award of any degree or diploma. Information derived from the published or unpublished work of others has been duly acknowledged in the text.



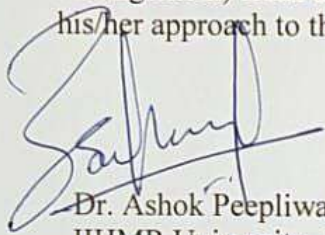
(Signature)

Simran Sharma

Date: 4/7/24

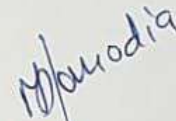
CERTIFICATE

This is to certify that dissertation titled “**STUDY OF DOMESTIC MEDICAL DEVICE MARKET**” is a record of the research work undertaken by **Simran Sharma** in partial fulfillment of the requirements for the award of the degree of MBA (Pharmaceutical Management) from the IIHMR University, Jaipur under my guidance and supervision and his/her approach to the research study has been sincere, scientific, and analytical.



Dr. Ashok Peepliwal
IIHMR University, Jaipur

Date 03/07/2024



School Dean
IIHMR University, Jaipur

Date 03/07/2024

ABSTRACT

Using secondary data sources to explore the intricacies and dynamics of the medical device industry, the report offers a comprehensive analysis of the medical devices market in India. This study clarifies the processes underlying the expansion and development of this industry. The research includes crucial applications that are necessary to understand the growing market for medical devices and the role that Indian enterprises play in this field.

The market segmentation for medical devices indicates a lot of potential and opportunities in this industry, which encourages more research into its present state and potential future growth. The report emphasises the COVID-19 pandemic's effects, showing how the market has changed, the difficulties businesses have experienced, and the potential for growth that have arisen as a result. The significance of having strong access to the healthcare system has been further highlighted by this change.

The study projects the market's growth trajectory in India by looking at broad patterns within the Medical Devices market and offering insights into future implications and trends. According to the analysis, the medical device industry is expanding quickly due to its higher cost than that of conventional drugs. Population increase and rising treatment costs are two factors that will have a big impact on how the industry develops.

The report also looks at how investment patterns, technology developments, and regulatory frameworks are influencing the Indian market for medical devices. Important elements of this market's landscape include the interaction between public and private sector activities and government policies meant to promote affordability and innovation.

All things considered; the study highlights how revolutionary medical devices can be in improving patient outcomes in India. The analysis offers a thorough knowledge of the market's current position and future outlook by identifying major growth drivers and barriers. This provides insightful information for players and policymakers who intend to capitalise on this rising sector.

Keywords: medical device industry, secondary data sources, market segmentation, healthcare system access, market growth trajectory, & innovation and affordability.

ACKNOWLEDGEMENT

Embarking on a project is like venturing into an endless ocean, and one needs the support and guidance of many to uncover its treasures. A major project like this is never accomplished alone. The contributions of many different individuals, in various ways, have made this endeavor possible. I extend my heartfelt gratitude to all those who have supported me throughout this journey.

First and foremost, I thank God for the wisdom and perseverance He has granted me during this training and throughout my life: "I can do everything through Him who gives me strength."

I would like to express my deepest gratitude and sincere thanks to my respected mentor, Dr. Ashok Peepliwal, for his constant assistance and for being readily available to guide me through each step, helping to clarify my doubts and provide invaluable insights.

I am also profoundly grateful to Mr. Anoop Sagar, my organisation mentor (Country Sales Manager), for his mentorship and for creating a conducive environment for gaining essential practical knowledge during this training. His guidance and support have been indispensable.

Lastly, I would like to express my deepest appreciation to my parents for their unwavering support, understanding, encouragement, and faith in me. They have been my pillars of strength, offering their help and support behind the scenes from the beginning to the end of this training.

Date-

Simran Sharma

Place- Jaipur

TABLE OF CONTENTS		Page No.
Chapter 1	INTRODUCTION	1
1.1.1	Medical Device Classification	3
1.1.2	Market Size	3
1.1.3	Significance of the Study	4
1.1.4	Methodology Overview	4
Chapter 2	LITERATURE REVIEW	5
2.1.1	Introduction	6
Chapter 3	METHODOLOGY	10
3.1.1	Research Questions	11
3.1.2	Objective	11
3.1.3	Materials and Procedures	11
3.1.4	Plan for Data Analysis	11
3.1.5	Ethical Considerations	11
3.1.6	Operational Definition	11
3.2	Sample Size	12
Chapter 4	RESULTS	13
Chapter 5	DISCUSSION	19
5.1.1	Medical Device's Favorability	20
5.1.2	Effects on Operative Techniques	20
5.1.3	Preference for Conventional Medicine	20
5.1.4	Dependency on Foreign Medical Equipment	20
5.1.5	Medical Devices Improving Patient Outcomes	21
5.1.6	Cost-Effectiveness of Medical Devices	21
5.1.7	Preference of Locally Manufactured Medical Devices Over Imported Ones	21
Chapter 6	CONCLUSION & RECOMMENDATION	22
6.1	Conclusion	23
6.2	Recommendation	23
6.3	Limitations of Study	24
Chapter 7	REFERENCES	25

LIST OF FIGURES		Page No.
Fig 1.1	Classification of Medical Devices	3
Fig 4.1	Extent to Which respondents favor medical devices	14
Fig 4.2	Extent to which medical devices ease the process of surgery	15
Fig 4.3	Advocacy of medical devices over traditional medicine	16
Fig 4.4	Perception of respondents regarding medical devices improving patient outcomes	16
Fig 4.5	Perception of respondents regarding whether the cost of medical devices is justified by their benefits	17
Fig 4.6	Preference of medical devices over imported ones	18

Chapter 1

INTRODUCTION

1.1 INTRODUCTION

A tool or piece of equipment used for medical reasons, such as condition monitoring, diagnosis, or therapy, is called a medical device. Medical devices include sophisticated diagnostic and monitoring equipment, simple tools, and fixation devices. They can be used in surgical procedures, emergency rooms, and other medical settings. A "medical device" is any apparatus, tool, or piece of equipment that is specifically designed to identify, treat, or prevent physiological disorders and is utilised in medical treatments on humans or animals.

A "medical device" is any apparatus, tool, or piece of equipment that is specifically designed to identify, treat, or prevent physiological disorders and is utilised in medical treatments on humans or animals.

The medical device industry contributes significantly to the healthcare sector by offering essential instruments and technologies that simplify patient care, diagnosis, and treatment. As healthcare needs evolve and technology advances, there is a growing desire for innovative medical equipment. Stakeholders such as manufacturers, healthcare providers, legislators, and investors need to be well-versed on the ins and outs of the regional medical device market in order to navigate and capitalise on new opportunities.

This study provides a comprehensive analysis of the domestic medical device market, outlining its growth opportunities, existing state, and key influences. Through the use of secondary data sources, this study examines the intricacies and dynamics of the industry, offering insight into the causes underlying its expansion and advancement.

This study also looks at how public-private sector initiatives, investment trends, technological advancements, and regulatory frameworks interact. When taken as a whole, these elements impact the structure of the domestic medical device market, promoting affordability and innovation.

1.1.1 Medical Device Classification

Medical devices are classified based on their intended use, level of risk to patients and users, and the regulatory controls necessary to ensure their safety and effectiveness. These classifications help with the regulation and management of medical devices by imposing standards before they can be marketed and utilised.

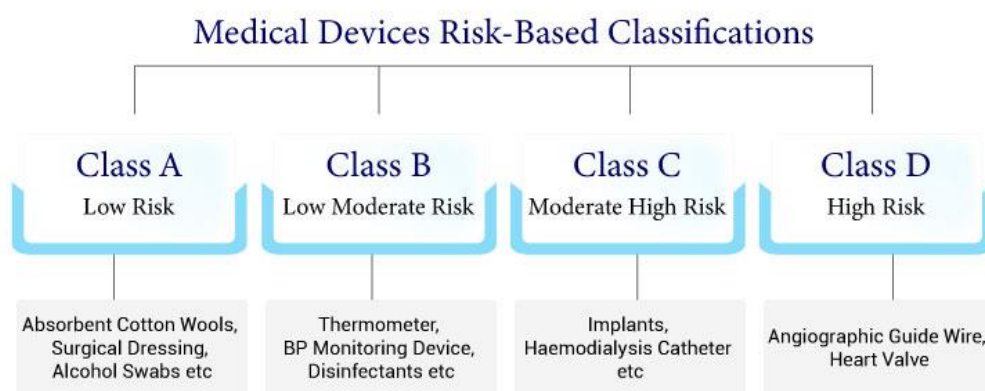


Fig 1.1: Classification of medical Devices

1.1.2 Market Size

Major worldwide firms and small and medium-sized enterprises make up India's medical device industry. By 2020, the medical device industry in India is expected to be worth US\$ 12 billion, growing at a compound annual growth rate (CAGR) of 15%, or 2.5 times the pace of growth observed globally. Ranking fourth in Asia behind South Korea, China, and Japan, India is among the top 20 global markets for medical equipment.

From 2020 to 2025, the diagnostic imaging market is projected to expand at a compound annual growth rate (CAGR) of 1.5%.

Medical equipment exports from India were valued at \$2.90 billion in FY22, and by 2025, they are expected to reach \$10 billion. to increase the country's medical device exports. The Central Drugs Standard Control Organisation (CDSCO) and the Ministry of Health and Family Welfare (MOHFW) initiated the following initiatives:

- Schedule MIII, which outlines the standards for facilities and good manufacturing processes, has to be reviewed and put back into effect.
- System for export labelling
- Explanation of unfavourable reporting and clinical evaluation

- The state licencing body will extend the validity of free sales certificates from two to five years in order to encourage exports.
- Compile a list of manufacturers with export permits so that regulatory bodies around the globe can easily contact them.

1.1.3 Significance of the Study

This analysis of the domestic medical device market is essential to understanding the dynamics and growth opportunities of this important healthcare business. By analysing secondary data sources, the research offers valuable insights into the factors driving market expansion and advancement in India. These insights can be very helpful to investors, manufacturers, politicians, and healthcare experts in helping them make decisions.

A crucial aspect of this research is acknowledging the significance of having robust access to the healthcare system. By examining how medical devices might improve patient outcomes and healthcare access, the research provides significant insights for improving the standard of healthcare in India. The study also examines technological advancements, investment trends, and regulatory frameworks, giving legislators and regulatory bodies knowledge to support creative and economical environments.

1.1.4 Methodology Overview

The current study uses a methodology that includes a comprehensive analysis of secondary data sources to look into the dynamics and complexities of the Indian domestic medical device market. This study collects and analyses current data from industry reports, market surveys, academic journals, and government publications in order to understand market segmentation, growth drivers, and regulatory frameworks. The research assesses the impact of the COVID-19 pandemic on the medical device business, highlighting challenges as well as opportunities. Through an examination of investment trends, technological advancements, and the interactions between the public and private sectors, the study provides insights into the factors driving the market landscape. This rigorous methodology offers a complete grasp of the market's current position and future possibilities for stakeholders wishing to navigate and profit from the increase.

Chapter 2

LITERATURE REVIEW

2.1 LITERATURE REVIEW

2.1.1 Introduction

Over the past ten years, India's healthcare industry has experienced phenomenal growth. In many parts of the nation, it is still difficult to find affordable, high-quality healthcare, and the distribution of healthcare services is still unequal. Over this time, the medical device business has grown dramatically, and now days, medical devices are necessary at every step of the healthcare process. Although it has contributed to the affordability and accessibility of healthcare services, a variety of ecosystem constraints have made it challenging to meet domestic demand, leading to a significant reliance on imports.

The current dynamics of supply and demand support the potential and logic for medical device production in India. The market has the chance to assess the "Make in India" effort of the Indian government, pinpoint key growth factors, and investigate workable avenues for transforming the medical device sector. NATHEALTH and Deloitte collaborated to assess the state of affairs and the role of the medical device sector in order to identify the main challenges and requirements for capitalising on the "Make in India." opportunity. The findings of this study are the product of extensive research and multiple interviews with influential figures in the public and private healthcare sectors. 2016 Deloitte report. (1)

India's healthcare industry has become one of the largest in terms of employment and earnings. Since 2016, it has grown at a rate of 22%, adding 4.7 million new direct employment. Between 2017 and 22 in India, this industry may create about 500,000 new jobs annually, or 2.7 million new jobs total. The Indian healthcare sector has grown over the past 20 years due to a number of factors, including the prevalence of lifestyle diseases, an ageing population, an expanding middle class, a focus on public-private partnerships, the quick adoption of digital technologies like telemedicine, increased investor interest, and foreign direct investment inflows. NitiAyog in 2016. (2)

India's healthcare system has advanced significantly in the twenty-first century. It is anticipated that this Indian business will grow at a rate of 10% per year and reach \$280 billion by 2025. In 2016, India's per capita healthcare expenditure was barely \$75, while the US, EU, China, and the world average spent \$9403, \$3613, \$420, and \$1061 on healthcare. Over the next four years, the \$128 billion Indian healthcare sector is anticipated to grow at a rate of 12% annually.

Today, any healthcare system in a growing country that cares about patient quality needs to incorporate medical technology. In the healthcare sector, these are useful for a variety of tasks, such as monitoring, treatment and care, recovery, and screening and diagnosis. India is among the top 20 global markets for medical devices. It is expected to reach \$50 billion by 2025 since it is growing rapidly, at a 15% annual pace. In India, the market shares of various products supplied in various market segments vary. Medical equipment and gadgets hold a dominant 34 percent of the market, followed by diagnostic imaging equipment at 31 percent, patient assistance, and other nonmedical items at 19 percent. (3)

Worldwide, there is a shortage of vital materials required for COVID-19 prevention, detection, and treatment; price rises and speculation may have negatively impacted supply. According to this study, there were differences in the costs of goods purchased under contracts driven by the government during Ecuador's first pandemic response, which resulted in the highest death rates ever documented in a single day.

A statistical descriptive study was performed to ascertain the relevant metrics for products such as prescription drugs, medical equipment, and commonly purchased items. The three most expensive goods were RTPCR kits (\$2.2 million), face masks (\$4.5 million), and paracetamol (\$2.2 million). 2019 Ortiz-Parado. (4)

For a \$6 billion market, India's current medical device regulatory framework is insufficient. Up until recently, medical equipment in India was not subject to any legal regulations. As per the Drugs & Cosmetics Act (DCA), 1940 & Rules, 22 medical devices are presently categorised as "drugs" and are managed appropriately.

The MoHFW released the initial drafts of the Medical Device Rules in July 2016. After conversations with industry participants and stakeholders, the second draft was released to the public in October 2016. The Medical Devices Rules, 2017, published by the MoHFW, indicated that they will take effect on January 1, 2018, giving the industry time to become used to the new regulations. The Regulations enable the industry overcome certain obstacles by clearly defining the difference between pharmaceuticals and medical devices. The government must strive towards a complete legal distinction between medical devices and medications, even though the DCA still views them as drugs.

The guidelines typically adhere to the Global Harmonisation Task Force (GHTF) medical device guidelines, which are based on international standards. Procedural problems are also covered by the Rules, including the requirement to regularly renew manufacturing licences and the removal of the need to submit import permits and registrations at the same time. Online technologies facilitate the process of tracking the status of licence applications. The new Rules have confused medical device companies, despite the fact that they are intended to close some of the gaps in the current framework. As the Indian market and manufacturers expand, it is anticipated that consumers' perceptions of electronics made in India would shift. These regulations should contribute to improving the calibre of the products. (5)

The WHO Priority Medical Devices programme was established in 2011 to develop the process for choosing medical devices needed for therapeutic, rehabilitative, or diagnostic purposes related to disease or clinical intervention. The list has expanded throughout time to include additional illnesses and ailments. The primary aim of the priority medical equipment lists is to function as a point of reference for Member States during the development or update of their national lists. This is done to guarantee patient access, procurement, availability in healthcare facilities, and proper utilisation. Countries and environments should modify these lists based on their infrastructure, health workforce, financial resources, and local aspirations. (WHO, 2020) (6)

A wearable medical device provides vital sign monitoring. One or more of the physiological vitals listed below, along with any others, such as blood pressure, blood sugar, pulse rate, electrocardiogram (ECG) patterns, respiration rate, and respiration efficiency (such as blood oxygen saturation), must be monitored in order to assess fitness and conduct medical diagnostics. As such, wearable medical technology is a very useful preventive tool. These days, such devices are widely available. In India, they are not well known even though they are valuable. This may be due to a lack of awareness, given the largest markets for these devices are found in metropolitan regions. (Nanda, 2018) (7)

Access to high-quality, fairly priced, and appropriate health items is crucial for the growth of universal health care, the management of medical emergencies, and the promotion of healthy communities.

It would be impossible to undertake any procedure—including bandaging a broken ankle, diagnosing HIV/AIDS, implanting an artificial hip, and performing any other operation—without the use of medical equipment. Medical gadgets are used by laypeople at home, paramedics and clinicians in remote clinics, patients getting palliative care, optometrists,

dentists, and other healthcare professionals working in state-of-the-art medical facilities. These medical technologies assist those with disabilities and are used for the diagnosis and treatment of both acute and chronic illnesses.

There are about 7000 generic device groups and about 2 million unique types of medical devices accessible on the global market. Any equipment that was designed with the intention of being used for medical purposes, either alone or in combination with other objects, is referred to as a medical device. This includes equipment like tools, materials, appliances, machinery, reagents for in vitro use, software, implants, and other comparable or related items. (8)

Chapter 3

METHODOLOGY

3.1 METHODOLOGY

3.1.1 Research Questions

- What is the extent to which you favour medical devices?
- How much do medical devices ease the process of surgery?
- To what extent do you advocate medical devices over traditional medicine?
- To what extent does India rely on the importation of medical devices?
- Do you believe that medical devices improve patient outcomes?
- Do you think the cost of medical devices is justified by their benefits?
- Would you prefer locally manufactured medical devices over imported ones?

3.1.2 Objective

Understanding India's current usage and acceptance level of medical devices.

3.1.3 Materials and Procedures

- Research Design: Descriptive Type Setting: It would be primary research with the aim of gathering information from reports, legal, regulatory, and survey records that are already out there.
- Study Population: People working in the healthcare industry.
- Method of Sampling: Non-Probability Easy Sampling Procedure.
- Technique of Sampling: Primary and secondary research

3.1.4 Plan for Data Analysis

Use Microsoft Excel to examine surveys and reports as needed.

3.1.5 Ethical Considerations

The research will be conducted in accordance with the necessary research standards. In order to guarantee the utilisation of the information provided by the respondents, both appropriate authorization and their consent will be sought. Before the respondent's identify is disclosed, their consent must be obtained.

3.1.6 Operational Definition

An apparatus, machine, tool, or other item utilised for illness prevention, diagnosis, or treatment is referred to as a medical device. They can also be used to measure, fix, detect, or change the body's structure or function in order to enhance one's health. Medical devices can be used separately or in combination, and they vary widely in size and

complexity. Examples include blood glucose monitors, prosthetic kidneys, wheelchairs, walking sticks, contact lenses, ventilators, scalpels, and needles.

CDSCO: Central Drug Standards Control Organization.

MHFW: Ministry of Health and Family Welfare.

MDRA: the Indian Medical Device Regulatory Authority

3.2 SAMPLE SIZE

A sample size of 48 respondents was employed in this study to gather information on a variety of subjects pertaining to the Indian medical device market. To ensure a comprehensive grasp of the market dynamics, a wide range of stakeholders, including industry experts and healthcare professionals, were included in this sample. A number of questions were asked of the respondents to determine their views on the value of medical devices, their impact on the ease of surgical procedures, and their preference for them over traditional treatment. They discussed India's reliance on imports of medical devices as well.

The sample was expanded to include yes/no questions that gauged respondents' support for various aspects of the medical device sector in order to improve the research. Despite its limited sample size, the data and insights are valuable and serve as a foundation for understanding the broader trends and challenges that the industry faces. Further inquiries could increase the size of this sample in order to validate the findings and explore the market in greater detail.

Chapter 4

RESULTS

4.1 RESULTS

This chapter presents the findings from the primary research that was done in order to understand the dynamics and growth potential of the Indian medical device market. A standardised questionnaire was completed by 48 respondents, comprising healthcare professionals and industry experts, in order to collect data. The main goals of the investigation are covered, including the degree to which respondents favour medical devices, how these devices affect surgical operations, if they prefer them over conventional treatment, and how dependent India is on imported medical devices. Using yes/no questions, the survey also looks at respondents' support for several facets of the medical device business.

Extent to which respondents favour medical devices:

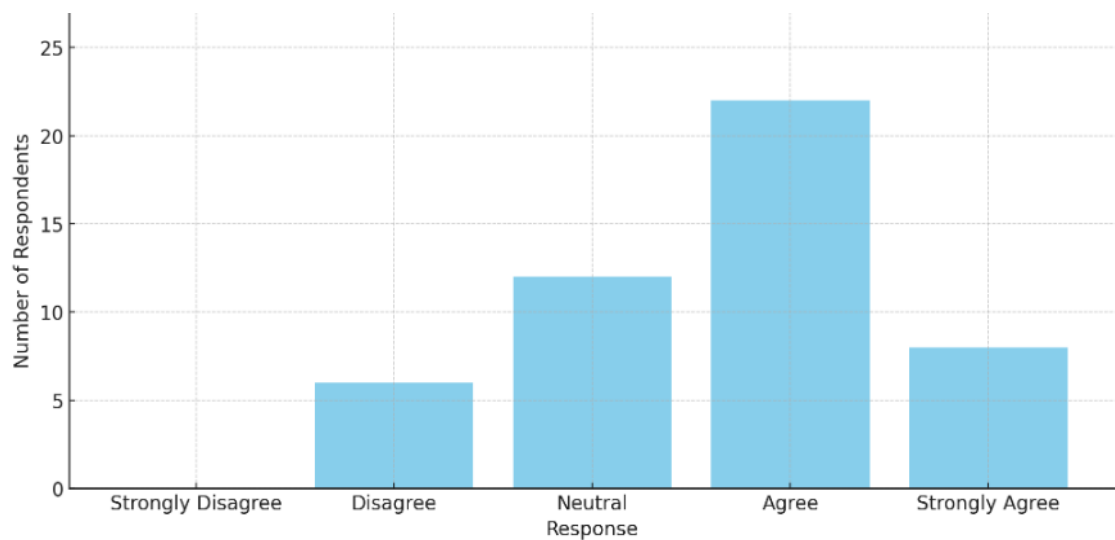


Fig 4.1: Extent to which respondents favour medical devices.

- Out of 48 respondents the chart shows that 22 agree 8 strongly agree with favouring medical devices.
- 12 respondents are neutral, 6 disagree, and none strongly disagree.

Extent to which medical devices ease the process of surgery:

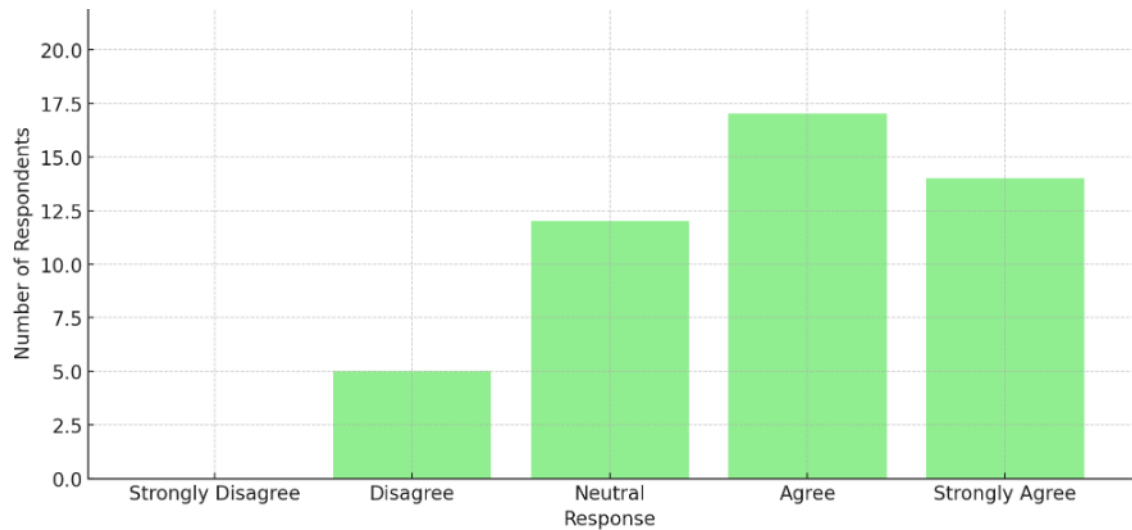


Fig 4.2: Extent to which medical devices ease the process of surgery

- The chart indicates that a majority of respondents agree (17) or strongly agree (14) that medical devices ease the process of surgery.
- A similar number of respondents are neutral (12), with fewer disagreeing (5) and none strongly disagreeing.

Advocacy of Medical Devices Over Traditional Medicine:

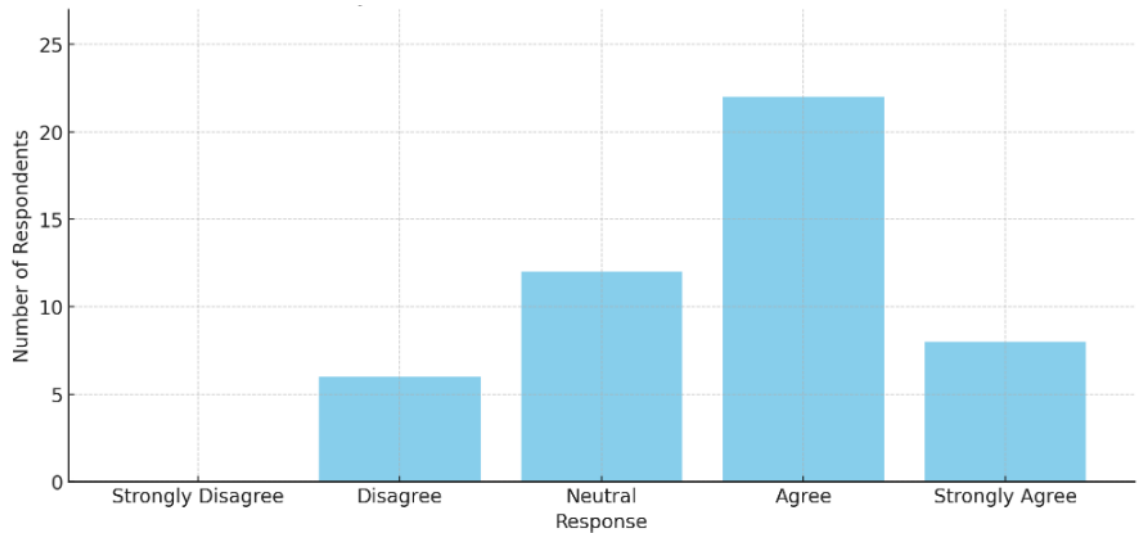


Fig 4.3: Advocacy of medical devices over traditional medicine

- The chart shows that most respondents either agree (22) or strongly agree (8) with advocating medical devices over traditional medicine.
- A smaller number of respondents are neutral (12), disagree (6), and none strongly disagree

Reliance on Importation of Medical Devices in India:

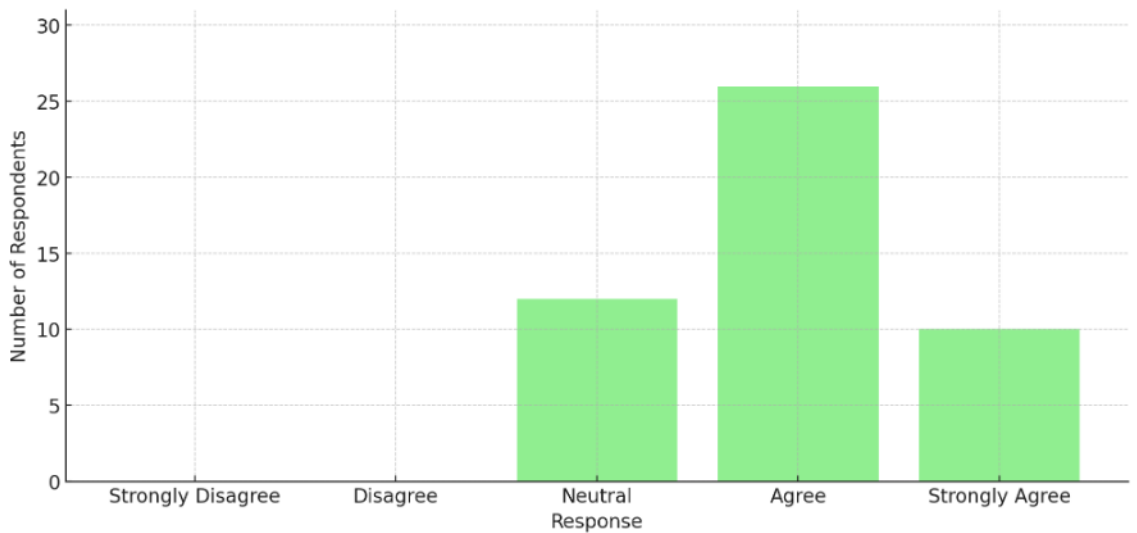


Fig 4.4: Reliance on import of medical devices in India

- The chart indicates that a majority of respondents agree (26) or strongly agree (10) that India relies on the importation of medical devices.
- A similar number of respondents are neutral (12), with none disagreeing or strongly disagreeing.

Do you believe that medical devices improve patient outcomes?

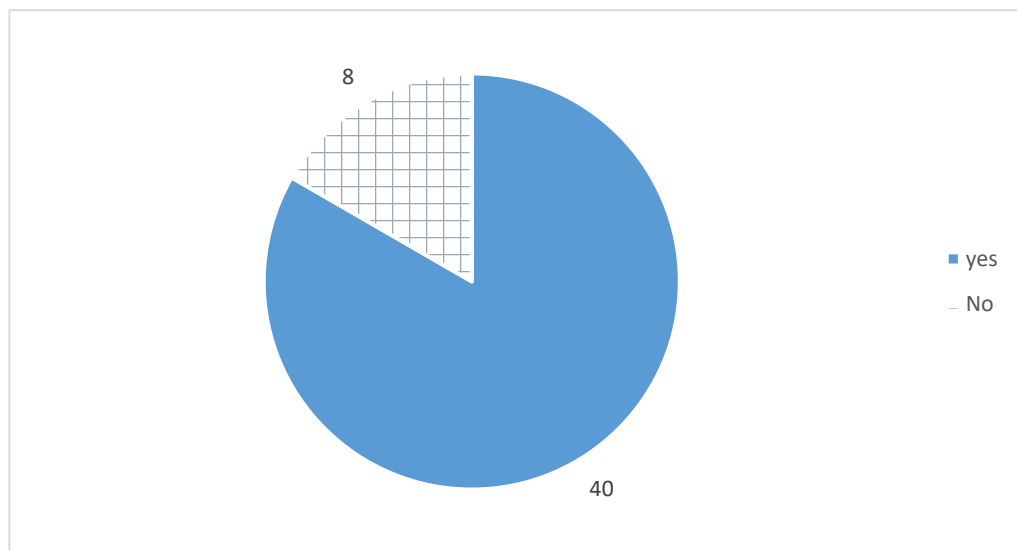


Fig 4.5: Perception of respondents regarding medical devices improving patient outcomes

The chart indicates that out of 48 respondents 40 agrees that medical devices improve patient outcome and 8 disagrees.

Do you think the cost of medical devices is justified by their benefits?

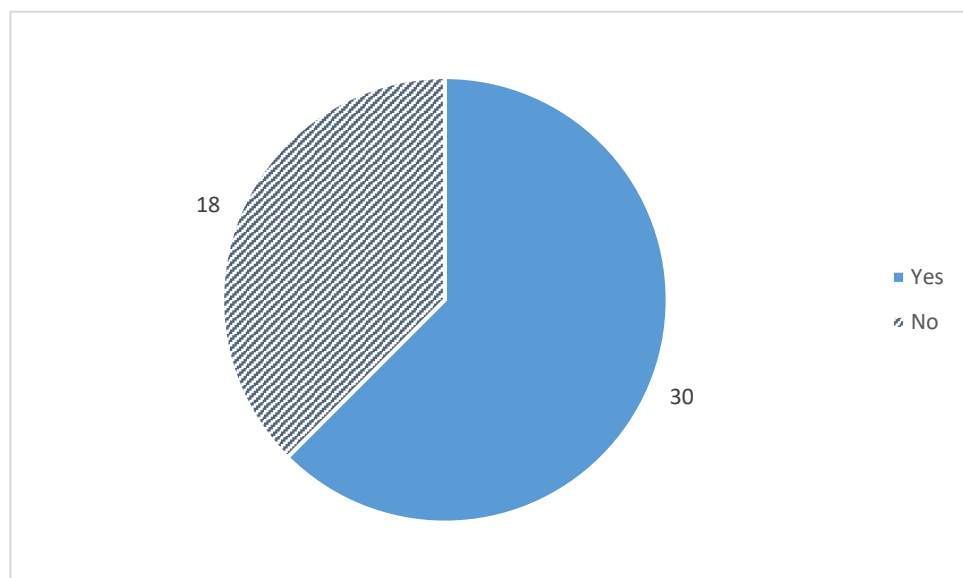


Fig 4.6: Perception of respondents regarding whether the cost of medical devices is justified by their benefits

This chart indicates that out of 48 respondents 30 agree that the cost of medical devices is justified by their benefits and 18 disagree.

Would you prefer locally manufactured medical devices over imported ones?

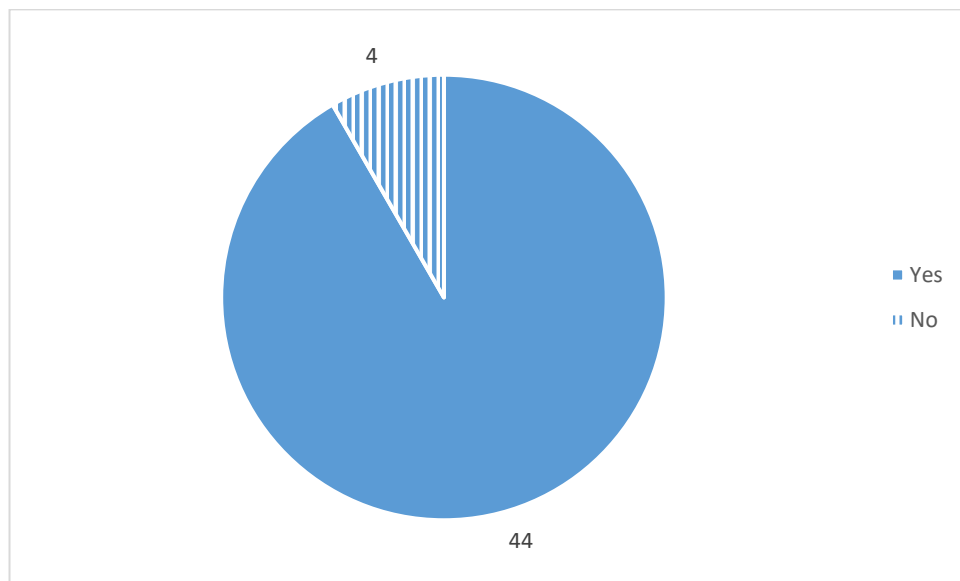


Fig 4.7: Preference of medical devices over imported ones

As per this chart out of 48 respondents 44 agree that they would prefer locally manufactured medical devices over imported ones and 4 respondents disagree.

Chapter 5

DISCUSSION

5.1 DISCUSSION

The results of the structured questionnaire that was given to 48 respondents provide important new information about the Indian medical device market. The findings point to a number of important patterns and variables affecting this quickly changing industry.

5.1.1 Medical Devices' Favorability

Medical devices are highly favoured by a sizable number of respondents, underscoring their vital role in contemporary healthcare. This favourable opinion highlights the increasing acknowledgement of medical gadgets as vital instruments for enhancing patient outcomes and expediting medical processes.

5.1.2 Effects on Operative Techniques

Most respondents concurred that the use of medical technology makes surgery much easier. This research illustrates how cutting-edge medical technologies can improve surgical accuracy, shorten operating rooms, and speed up patients' recuperation. A sustained trend towards technologically enhanced healthcare solutions is indicated by the strong patient preference for medical equipment in surgical settings.

5.1.3 Preference for Conventional Medicine

The respondents' resounding preference for medical devices over traditional care points to a broader trend of acceptance of innovative healthcare solutions. This decision aligns with the ongoing advancements in medical technology and the expanding availability of sophisticated diagnostic and therapeutic instruments. It also underlines how crucial it is for healthcare professionals to receive continuing education and training so they can effectively integrate these devices into their day-to-day job.

5.1.4 Dependency on Foreign Medical Equipment

The responses indicated that India is heavily dependent on foreign medical supplies. This reliance draws attention to the challenges that the domestic medical device industry faces, including the need for increased support for local innovation, stronger regulatory frameworks, and improved manufacturing capabilities. It might be possible to reduce dependency on imports and promote the growth of indigenous medical device manufacture by resolving these difficulties.

5.1.5 Medical devices improving patient outcomes

The majority of respondents, forty out of 48, agree that medical technology improve patient outcomes. This widespread consensus emphasises how crucial medical gadgets are to improving healthcare standards. Eight respondents disagreed, which suggests that more research and education about the benefits of medical equipment are necessary. These respondents may have concerns about the use, accessibility, or efficacy of specific technology.

5.1.6 Cost-effectiveness of medical devices

The overwhelming consensus suggests that many stakeholders value the benefits that medical devices bring to healthcare, even in spite of their high cost. Among these benefits are improved patient outcomes, shorter recovery times, and more efficient healthcare delivery. However, a sizable minority of people disagree, which raises concerns about the affordability and cost-effectiveness of medical technology. This discussion emphasises the necessity of cost-cutting strategies such supporting regional manufacturing, encouraging competition, and providing financial assistance or subsidies to patients and healthcare providers.

5.1.7 Preference of locally manufactured medical devices over imported ones

A large majority, say they prefer locally made medical gadgets over ones that are imported. This clear preference suggests that there is a big chance for the homegrown medical device business to expand and satisfy local demands. The four respondents who said they preferred foreign equipment might be worried about the inventiveness, dependability, or quality of domestic goods. The production and adoption of domestic medical devices can be further increased by fostering public-private partnerships, improving regulatory frameworks, and encouraging investment in local manufacture.

Chapter 6

**CONCLUSION &
RECOMMENDATIONS**

6.1 CONCLUSION

The application of technology in healthcare has improved patient diagnosis and treatment over time. Without a doubt, the healthcare industry has profited the most from technology. It thus raised living standards gradually and contributed to the saving of numerous lives. It is unreasonable to ignore how disruptive technology can be in the healthcare industry. Although there is a great need for highly qualified workers with extensive educational backgrounds in this industry, there are also significant infrastructural and tool requirements. The world's ageing populations and rising life expectancy have created an intensely competitive market for healthcare innovation and technology. Nonetheless, it appears that the sector is experiencing a great deal of innovation, which alters the landscape every year.

According to the survey, medical devices play a crucial role in facilitating surgery and making it easier for doctors to conduct, among many other ways that they contribute to the improvement of the healthcare system.

6.2 RECOMMENDATIONS

1. Boost Education and Awareness

Aim for Neutral Target Respondents: Create educational efforts aimed at people who support medical equipment but have a neutral attitude or who rely on imports. Give information about the advantages, safety, and efficacy of medical gadgets over conventional treatment.

Emphasise Successful Tales: Provide case studies and success stories that demonstrate how medical gadgets have improved patient outcomes and paid for themselves.

2. Enhance Local Manufacturing

Encourage Local Production: Policies should encourage local manufacturers through subsidies, tax incentives, and research grants, given the high preference for locally created devices.

Quality assurance: Ensure that locally made devices meet international requirements in order to maintain high standards and inspire confidence.

3. Cost-Effectiveness Measures

Handle Financial Issues: In response to the section on the cost-effectiveness of medical equipment, conduct and distribute cost-benefit analyses that clearly demonstrate long-term savings and improved health outcomes.

Strategies for Reasonably Priced Products: Collaborate with producers to create price plans that increase accessibility to cutting-edge medical equipment without sacrificing performance.

4. Cut Down on Import Dependency by Investing in Local R&D

To cut down on imports, invest in research and development in India to create and manufacture cutting-edge medical gadgets locally.

Collaborations & Partnerships: To transfer technology and knowledge, encourage partnerships between regional manufacturers and international medical device corporations.

6.3 LIMITATIONS OF STUDY

1. Limited Sample Size

Only 48 people's replies are included in the study. There could be bias in the results because of this tiny sample size's probable lack of representativeness of the whole population.

2. Limited Demographic Diversity

The lack of information in the study regarding the respondents' demographic diversity may restrict how far the results may be applied.

3. Social Desirability Bias

When asked questions on technology and health in particular, respondents may give answers they feel will be more socially acceptable than those that reflect their actual beliefs.

4. Moment in Time

The research offers a moment in time view of the opinions. To understand how attitudes and trends change over time, especially in reaction to policy and technological advances, longitudinal data would be required

Chapter 7

REFERENCES

7.1 REFERENCES

1. nevarpp. Second line optional lorem ipsum B Subhead lorem ipsum, date quatueriure Medical Devices Making in India-A Leap for Indian Healthcare. 2016.
2. India - Life Sciences, Biotechnology & Nanotechnology - Medical Devices: Compliances And Regulations In India [Internet]. [cited 2024 Jun 26]. Available from: <https://www.mondaq.com/india/life-sciences-biotechnology--nanotechnology/1143212/medical-devices-compliances-and-regulations-in-india>
3. Manu M, Anand G. A review of medical device regulations in India, comparison with European Union and way-ahead. *Perspect Clin Res* [Internet]. 2021 Jul 12 [cited 2024 Jun 26];13(1):3–11. Available from: <https://europepmc.org/articles/PMC8815674>
4. Ortiz-Prado E, Fernandez-Naranjo R, Torres-Berru Y, Lowe R, Torres I. Exceptional prices of medical and other supplies during the COVID-19 pandemic in Ecuador. *American Journal of Tropical Medicine and Hygiene*. 2021 Jul 1;105(1):81–7.
5. Saini G, Vikas Budhwar , Choudhary M. Review on people's trust on home use medical devices during Covid-19 pandemic in India. [cited 2024 Jun 26];1:3. Available from: <https://doi.org/10.1007/s12553-022-00645-y>
6. Priority medical devices list for the COVID-19 response and associated technical specifications. 2020;
7. A Study of the Awareness of Wearable Medical Devices in India: A Potential Market Perspective | Nanda | *Journal of Business Theory and Practice* [Internet]. [cited 2024 Jun 26]. Available from: <http://www.scholink.org/ojs/index.php/jbtp/article/view/1293/1453>
8. Jarosławski S, Saberwal G. Case studies of innovative medical device companies from India: barriers and enablers to development. 2013 [cited 2024 Jun 26]; Available from: <http://www.>