

Proposed Title of Dissertation:

A Study of the Indian Medical Device Market: Insights into Usage, Acceptance, and Impact on Healthcare

(a) Introduction:

India's medical device industry has emerged as a key pillar in the country's healthcare ecosystem. With technological innovation, rising demand for healthcare services, and the push toward self-reliance through initiatives like "Make in India," this sector is growing at a compound annual growth rate (CAGR) of 15%. Despite the growth, the market faces regulatory gaps, dependence on imports, and a need for public awareness.

This study investigates the perceptions, preferences, and experiences of stakeholders—including healthcare professionals and policy experts—toward the usage and impact of medical devices in India. It aims to identify opportunities for local manufacturing, policy refinement, and market expansion.

(b) Review of Literature:

The literature spans key areas such as:

- **Growth and regulation** of the medical device sector in India (Manu M. et al., 2021)
- **Barriers to innovation** (Jarosławski & Saberwal, 2013)
- **Make in India initiative** and its impact on domestic manufacturing
- **Wearable and digital medical technologies** and their adoption (Nanda, 2020)
- **COVID-19 supply chain challenges** and pricing anomalies (Ortiz-Prado et al., 2021)

The reviewed studies offer context on market dynamics, global comparisons, and the evolving role of medical devices in the Indian healthcare system.

(c) Theoretical/Conceptual Framework:

This study adopts a **descriptive and analytical framework** using both primary and secondary data sources. It evaluates:

- Favorability toward medical devices
- Perceptions on surgical effectiveness, patient outcomes, and cost-benefit

- Preferences for local vs. imported devices
- Insights into regulatory, technological, and market constraints

(d) Research Gap:

Despite increasing relevance, few empirical studies directly assess stakeholder perceptions across multiple domains (cost, preference, clinical value, etc.) in the Indian medical device sector. This study addresses that gap by providing both qualitative and quantitative insights from professionals within the healthcare ecosystem.

(e) Research Questions:

1. How favorable are stakeholders toward the use of medical devices in healthcare?
2. What are the perceived advantages or limitations of medical devices in surgery and patient care?
3. Is the cost of medical devices justified by their benefits?
4. What is the level of dependence on imported vs. domestically manufactured devices?

(f) Research Objectives:

- To evaluate stakeholder perceptions regarding the use and impact of medical devices
- To assess attitudes toward cost-effectiveness and surgical facilitation
- To analyze preferences for locally manufactured versus imported devices
- To recommend strategies for improving adoption and reducing import dependency

(g) Methodology:

- **Study Design:** Descriptive cross-sectional

- **Study Area:** Indian medical device market (nationwide scope)
- **Sample Size:** 48 stakeholders (healthcare professionals, policymakers, device manufacturers)
- **Sampling Method:** Non-probability convenience sampling
- **Data Collection:** Structured survey questionnaire
- **Analysis Tool:** Microsoft Excel (quantitative and thematic analysis)

(h) Plan of Analysis:

Descriptive statistics were applied to Likert scale and yes/no responses. Charts and frequency tables were generated to show trends in:

- Device favorability
- Ease of surgery
- Perceived outcomes