

Synopsis: A Review on the Perception of Medical Device Adoption Among Individuals in India

(a) Introduction:

This dissertation will explore the perceptions and factors influencing the adoption of medical devices among individuals in India. With rapid advancements in medical technology, understanding the dynamics of adoption is crucial for improving healthcare delivery and outcomes. The study aims to identify the key determinants, barriers, and demographic variations in medical device adoption, offering insights for enhancing adoption strategies.

(b) Review of Literature:

The literature review will cover various studies on medical device adoption, focusing on factors such as perceived usefulness, ease of use, cost, awareness, and physician recommendations. Key studies include Gupta et al. (2023) on remote monitoring devices, Thaker et al. (2022) on wearable medical devices, and Mishra & Singh (2022) on smart inhalers. The review highlights the significant influence of socio-economic factors, health literacy, and cultural beliefs on adoption rates.

(c) Research Gap:

While several studies have explored medical device adoption, there is a lack of comprehensive research focusing specifically on the Indian population. Existing studies often do not account for the unique socio-economic and cultural factors prevalent in India. This dissertation aims to fill this gap by providing an in-depth analysis of these factors and their impact on medical device adoption.

(d) Research Questions:

1. What are the key factors influencing the adoption of medical devices among individuals in India?
2. What barriers do individuals face in adopting medical devices?
3. How do demographic factors such as age, income, and education level impact medical device adoption?
4. What role does health literacy play in the adoption of medical devices in rural and urban areas?

(e) Research Objectives:

Specific Research Objectives:

To identify the key factors influencing adoption, examine attitudes and perceptions towards medical devices, evaluate barriers and facilitators, assess demographic variations, explore the influence of health literacy, analyze market trends, and provide actionable recommendations for policymakers, healthcare providers, and manufacturers.

Generic Research Objectives:

- To identify and prioritize key factors influencing the adoption of medical devices in India, considering economic, regulatory, and technological aspects.
- To examine healthcare providers' and patients' attitudes, perceptions, and acceptance of medical devices across different regions and healthcare settings in India.
- To evaluate barriers, including cost, infrastructure limitations, and regulatory challenges, and facilitators, such as training programs and government incentives, impacting medical device adoption in India.
- To assess demographic variations, including age, income levels, and educational backgrounds, and their influence on the adoption of medical devices in urban, semi-urban, and rural areas of India.
- To analyze current market trends, including demand patterns, competitive dynamics, and technological advancements, shaping the adoption landscape of medical devices in India.

(f) Methodology:

The study utilizes a systematic literature review method, analyzing peer-reviewed articles published between 2016 and 2022. Inclusion criteria focus on studies conducted in India, addressing medical device adoption, and published in indexed journals. Data sources include PubMed, Google Scholar, Scopus, Web of Science, clinical trial registers, and official healthcare documents.

(g) Plan of Analysis:

The analysis involves synthesizing findings from the reviewed studies to identify common themes and patterns. Statistical tools and thematic analysis are used to evaluate the impact of various factors on medical device adoption. The demographic analysis examines variations in adoption rates across different age groups, income levels, and educational backgrounds.