

SYNOPSIS

Name- Purva Pandya

Batch- MBA-PM15

Title: Adoption Barriers and Opportunities for Energy-Based Surgical Devices in Tier 2 and Tier 3 Indian Cities

1. Introduction

Energy-Based Surgical Devices (ESDs) have transformed surgical practice by improving precision, reducing operative time, and minimizing blood loss. These devices are widely used in developed healthcare settings and metropolitan cities. However, their adoption in Tier 2 and Tier 3 Indian cities remains limited. Factors such as lack of awareness, high costs, limited training, and maintenance issues may contribute to this gap. Surgeons working in smaller cities often face unique challenges due to infrastructure limitations and resource constraints. This study aims to explore both the barriers and opportunities associated with the use of ESDs in such cities, with a focus on understanding surgeon perspectives

2. Research Question

What are the main barriers and potential opportunities for adopting energy-based surgical devices among surgeons in Tier 2 and Tier 3 Indian cities?

3. Objectives

- To assess the current level of awareness and usage of ESDs among surgeons in Tier 2 and Tier 3 cities.
- To identify the major barriers (technical, financial, training-related) affecting the adoption of ESDs.
- To compare surgeon preferences between new and older ESD technologies.
- To explore potential opportunities and motivators that could improve adoption in the future.

4. Hypothesis

- H1: Surgeons in Tier 2 and Tier 3 cities face significant barriers to adopting energy-based surgical devices.

- H2: There is a preference for traditional surgical tools or older ESD models due to cost, familiarity, or lack of training.
- H3: Improving training access and technical support could enhance adoption rates in these regions.

5. Materials and Methods

- **Study Design:** Descriptive, cross-sectional study
- **Sample:** Practicing surgeons from Tier 2 and Tier 3 cities (e.g., Indore, Ujjain, Dewas)
- **Sample Size:** 30 participants
- **Data Collection Tool:** Structured questionnaire with multiple-choice and Likert-scale questions
- **Key Variables:** Awareness level, perceived benefits, barriers to use, training received, technical support, and willingness to adopt

6. Data Analysis Plan

- Data will be entered in Microsoft Excel.
- Descriptive statistics (percentages, averages) will be used to summarize responses.
- Simple charts (bar graphs and pie charts) will illustrate patterns in surgeon opinions and experiences.
- No advanced statistical software or tests will be used for this project.

7. Ethical Considerations

- Participation will be voluntary and anonymous.
- Informed consent will be taken from all participants.
- Data will be used only for academic purposes and stored securely.
- No personally identifiable information will be published.

8. Implication of Research

This study will help identify the real-world challenges and opportunities that influence the adoption of energy-based surgical devices in India's smaller cities. Findings could guide medical institutions, policymakers, and device manufacturers in designing targeted training programs and affordable solutions to increase ESD usage in underrepresented regions.