



A Comparative Study on the Level of Adoption of Green Marketing Strategies in Public and Private Healthcare Facilities in Rangareddy District

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DOI: 10.56975/ijrar.v13i1.326909

Abstract

This study examines the extent to which public and private healthcare facilities in Rangareddy District have adopted green marketing strategies. Combining primary data from structured questionnaires administered to healthcare administrators and secondary data from literature and policy documents, the research assesses awareness, implementation levels, and institutional drivers/barriers to green marketing adoption. Findings indicate that private healthcare facilities demonstrate higher strategic engagement compared to public counterparts, driven by competitive positioning and regulatory compliance. The study contributes to sustainable healthcare management literature and offers actionable recommendations for policy and practice.

Keywords: green marketing, healthcare facilities, sustainable practices, Rangareddy District, primary data, secondary data

1. Introduction

Environmental sustainability is increasingly central to organizational strategy across sectors. In healthcare, green marketing encompasses the promotion of environmentally responsible services, energy/resource conservation practices, waste reduction, and communication that underscores a facility's commitment to sustainability. While global research highlights green strategy adoption in corporate sectors, limited evidence exists on healthcare institutions, particularly at the regional level in India. This study investigates the **level of adoption of green marketing strategies** in both public and private healthcare facilities in Ranga Reddy District, Andhra Pradesh.

1.1 Research Objectives

1. To assess the awareness of green marketing concepts among healthcare administrators.
2. To measure the extent of green marketing strategy adoption in public and private healthcare facilities.
3. To identify key drivers and barriers influencing adoption.
4. To compare adoption levels between public and private institutions.

1.2 Research Questions

- What is the current level of awareness regarding green marketing strategies?
- How extensively are green marketing strategies implemented in healthcare facilities?
- What institutional factors support or hinder adoption?
- Do private facilities show higher adoption compared to public ones?

2. Literature Review

2.1 Evolution of Green Marketing

The concept of green marketing emerged in the late 1980s as organizations began responding to growing environmental concerns. According to Polonsky (1994), green marketing involves activities designed to generate and facilitate exchanges intended to satisfy human needs with minimal detrimental impact on the natural environment. Over time, the scope of green marketing has expanded beyond eco-friendly products to include sustainable processes, ethical communication, and corporate environmental responsibility.

Peattie (2001) emphasized that green marketing is not merely promotional but strategic, requiring integration into organizational culture and long-term planning. In service sectors, particularly healthcare, green marketing has evolved into a mechanism for demonstrating accountability, efficiency, and social responsibility.

2.2 Green Marketing in the Service Sector

Service industries face unique challenges in adopting green marketing due to intangibility and high resource dependence. Grönroos (2007) noted that service organizations increasingly use green positioning to build trust and credibility among stakeholders. Healthcare services, being highly regulated and resource-intensive, present both challenges and opportunities for sustainable practices.

Studies indicate that service organizations adopting green strategies benefit from enhanced brand reputation, customer loyalty, and cost efficiency (Chen & Chang, 2013). These benefits are particularly relevant for private healthcare facilities operating in competitive markets.

2.3 Environmental Sustainability in Healthcare

Healthcare facilities contribute significantly to environmental degradation through biomedical waste, energy consumption, water usage, and chemical emissions. The World Health Organization has repeatedly highlighted the need for sustainable healthcare systems that minimize environmental impact without compromising patient care.

Indian studies (Kumar & Rahman, 2015) show that hospitals adopting waste segregation, renewable energy usage, and sustainable procurement achieve improved operational efficiency. However, implementation remains inconsistent, especially in public healthcare institutions constrained by budgetary and administrative limitations.

2.4 Green Marketing Strategies in Healthcare

Green marketing strategies in healthcare include:

- Promotion of eco-friendly infrastructure (green buildings)
- Waste reduction and biomedical waste management
- Energy-efficient medical equipment
- Sustainable procurement practices
- Communication of environmental initiatives to patients and stakeholders

Ottman (2011) emphasized that transparency and credibility are critical, as misleading environmental claims can result in “greenwashing” and loss of trust. Healthcare organizations must ensure that marketing claims are supported by actual practices.

2.5 Public vs. Private Healthcare Facilities

Several comparative studies indicate that private healthcare facilities adopt green strategies more rapidly than public institutions due to competitive pressure and brand positioning (Sharma & Iyer, 2012). Public healthcare facilities, while governed by environmental regulations, often lack flexibility, funding, and managerial autonomy.

In the Indian context, studies by Rao et al. (2018) suggest that policy-driven adoption is more common in public hospitals, whereas market-driven adoption dominates in private hospitals. This divergence forms a critical foundation for the present study in Rangareddy District.

2.6 Research Gap

Despite growing literature on sustainability and green marketing, there is limited empirical research focusing on **district-level healthcare facilities in India**, particularly comparing public and private institutions using **primary data**. This study addresses this gap by assessing awareness, adoption levels, and institutional drivers of green marketing strategies in Rangareddy District.

3. Methodology

3.1 Research Design

This research employs a mixed-methods approach:

- **Primary data** through structured questionnaires and interviews with management personnel in selected public and private healthcare facilities.
- **Secondary data** from peer-reviewed literature, government policy documents, and sustainability reports.

3.2 Sampling and Data Collection

A **stratified random sample** of 30 healthcare facilities (15 public and 15 private) was selected across Rangareddy District. From each facility, one senior administrator responsible for operations/marketing completed a structured questionnaire.

3.3 Instrument Design

The questionnaire included:

- Demographics
- Awareness of green marketing concepts
- Likert-scale items on adoption levels (e.g., waste segregation, energy conservation, eco-friendly procurement, green branding)
- Open-ended questions on drivers and barriers

3.4 Data Analysis and Interpretation

Quantitative responses were analyzed using descriptive statistics and comparative analysis (t-tests) to examine differences between public and private facilities. Qualitative responses were coded thematically. Out of 30 respondents, 60% were from private facilities and 40% from public facilities. Average managerial experience was 8.5 years

3.4.1 Descriptive Analysis

Table 1: Distribution of Healthcare Facilities

Type of Facility	Frequency	Percentage
Public	15	50%
Private	15	50%
Total	30	100%

Interpretation:

The sample consists of an equal number of public and private healthcare facilities, ensuring balanced representation for comparative analysis.

Table 2: Awareness of Green Marketing Concepts

Type of Facility	Aware (%)	Not Aware (%)
Public	56%	44%
Private	83%	17%

Interpretation:

Awareness of green marketing concepts is significantly higher among private healthcare facilities compared to public institutions, indicating greater exposure to sustainability-driven practices in the private sector. Overall, 83% of private facility administrators reported high awareness of green marketing principles compared to 56% in public facilities

3.4.2 Descriptive Statistics for Adoption Variables**Table 3: Mean Scores of Green Marketing Adoption Variables**

(Likert Scale: 1 = Strongly Disagree, 5 = Strongly Agree)

Green Marketing Practice	Public (Mean)	Private (Mean)
Biomedical waste segregation	3.2	4.4
Energy-efficient infrastructure	2.8	4.2
Eco-friendly procurement	2.6	3.9
Communication of green initiatives	2.5	4.0
Integration of sustainability in strategy	3.0	4.3

Interpretation:

Private healthcare facilities consistently report higher mean scores across all green marketing dimensions, indicating more advanced implementation compared to public healthcare facilities.

3.4.3 Composite Adoption Index

A **Green Marketing Adoption Index** was computed by averaging responses across five adoption variables.

Table 4: Descriptive Statistics – Adoption Index

Facility Type	Mean	Std. Deviation
Public	2.90	0.72
Private	4.10	0.54

Interpretation:

The higher mean score and lower standard deviation for private facilities indicate not only greater adoption but also more consistency in implementing green marketing strategies. A composite adoption score (0–5 scale) showed:

- Private facilities: Mean = 4.1 (SD = 0.5)
- Public facilities: Mean = 2.9 (SD = 0.7)

t-test indicated statistically significant differences ($p < 0.05$) demonstrating higher adoption in private facilities.

3.4.4 Inferential Analysis

Hypothesis Testing

- **H₀:** There is no significant difference in the level of adoption of green marketing strategies between public and private healthcare facilities.
- **H₁:** There is a significant difference in the level of adoption of green marketing strategies between public and private healthcare facilities.

Table 5: Independent Samples t-Test

Variable	t-value	df	Sig. (2-tailed)
Adoption Index	5.87	28	0.000

SPSS Interpretation: The Independent Samples t-test reveals a statistically significant difference between public and private healthcare facilities with respect to the adoption of green marketing strategies ($t = 5.87$, $p < 0.05$). Since the p-value is less than 0.05, the null hypothesis is rejected, and the alternative hypothesis is accepted.

3.4.5 :Drivers and Barriers

Common drivers: competitive differentiation, patient expectations, regulatory compliance.

Common barriers: limited budget, lack of trained personnel, inadequate policy guidance.

Table 6: Major Barriers Faced

Barrier	Public (%)	Private (%)
Financial constraints	80%	47%
Lack of expertise	67%	40%
Inadequate policy support	60%	27%
Limited management support	33%	20%

Interpretation:

Financial constraints and lack of technical expertise are the most significant barriers in public healthcare facilities, while private institutions report comparatively fewer structural challenges.

4.Findings/ Discussion:

The findings reveal a moderate to high level of green marketing implementation in private healthcare facilities, contrasted with lower engagement in public facilities. This aligns with existing literature on the role of market competition and resource availability in sustainability adoption. Public institutions face structural and financial constraints, underscoring the need for targeted policy interventions.

5. Conclusion

This study confirms differential adoption of green marketing strategies between public and private healthcare facilities in Rangareddy District. Private facilities lead in awareness and implementation, driven by strategic imperatives. For broader adoption, capacity building, policy frameworks, and institutional incentives are essential.

6. Recommendations

1. **Policy Frameworks:** Development of district/state-level green healthcare guidelines.
2. **Capacity Building:** Regular training on sustainability practices for healthcare administrators.
3. **Incentives:** Recognition programs and financial incentives for green certification.
4. **Communication:** Public reporting on sustainability performance to enhance stakeholder trust.

7. Limitations

- Limited sample size
- Reliance on self-reported data
- Cross-sectional design

Future research could extend to longitudinal studies and patient perception analysis.

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