



A Study On Service Effectiveness and Customer Satisfaction at Sai Suchith Pest Control in The Bangalore Metropolitan Region

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Abstract – The rapid urbanization and infrastructural expansion in modern metropolitan cities have intensified the challenges of pest management in both residential and commercial ecosystems. This empirical study evaluates the service effectiveness levels, operational touchpoints, and long-term customer satisfaction drivers towards Sai Suchith Pest Control operating within the Bangalore metropolitan area—a tech-dense market characterized by high real estate density, specialized corporate infrastructure, and rising consumer health awareness. Utilizing a positivist, mixed-methods framework, primary data was cross-sectionally collected from N=250 active residential and commercial clients across major technology, residential, and industrial hubs using structured questionnaires. The empirical findings indicate that response time agility, treatment efficacy (complete pest elimination), eco-friendly chemical safety protocols, and technician professionalism exert the highest cumulative impact on consumer satisfaction. Inferential statistical testing revealed a strong, positive linear relationship between perceived service reliability and ultimate brand loyalty ($r = 0.789$, $p < 0.05$). Multiple linear regression analysis proved that treatment efficacy and response speed are the strongest statistical predictors of customer retention, explaining 69.8% of the variance in overall customer satisfaction. Conversely, unexpected pest recurrence post-treatment and insufficient communication regarding preparation protocols were identified as primary friction points. The paper concludes with actionable operational frameworks for optimizing service schedules, improving post-treatment warranty management, and fostering brand loyalty in competitive urban service sectors.

Keywords – Pest Management Services, Customer Satisfaction, Service Effectiveness, Urban Infrastructure, Chemical Safety, Corporate Maintenance Contracts.

I. INTRODUCTION

The integration of modern localized scheduling networks, safe chemical formulations, and highly responsive mobile service deployment teams has driven a significant structural transformation in urban home and corporate maintenance behavior across India. Over the past few years, unorganized, localized traditional pest sprayers have increasingly given way to professional, systematic, and standardized pest control solutions. As of 2026, India's professional pest management market is expanding at an exponential rate, fundamentally disrupting traditional unorganized house maintenance sectors. Within this nationwide economic shift, Bangalore—the tech capital of India—serves as the premier micro-market and primary testbed for operational innovation in structural property maintenance and specialized hygiene services.

Bangalore's unique demographic profile is characterized by a high concentration of premium IT parks, dense residential multi-story apartment high-rises, expanding dual-income nuclear families, and commercial spaces with stringent international health compliance standards. These consumer segments experience acute time poverty and are highly sensitive to property hygiene, safe chemical exposure, and operational promptness. Sai Suchith Pest Control,

established as an emerging reliable force in this sector, leverages a localized network of trained service technicians and flexible corporate Annual Maintenance Contracts (AMC) to meet this growing structural demand. Understanding the core behavioral triggers, satisfaction thresholds, and operational friction barriers within this tech-driven urban consumer base is vital for sustaining market share in an increasingly competitive service landscape.

Statement of the Problem

Despite rapid adoption among premium households and corporate facilities, professional pest control platforms in Bangalore operate in a state of high local competition, significant customer acquisition costs, and minimal brand switching barriers. Services face continuous challenges in balancing swift response times with absolute treatment efficacy, all while managing field technician labor churn, changing compliance rules for eco-friendly chemicals, and variable urban transit constraints. A major research gap exists regarding how initial treatment efficacy translates into long-term customer retention and sustainable contract renewals. Additionally, sudden seasonal pest surges (such as monsoon-induced rodent or termite infestations), high traffic congestion delaying service appointments, and unexpected recurrence of pests test the reliability of service models. When service providers fail to provide transparent



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safety parameters or experience frequent post-treatment recurrence, it leads to customer frustration and high churn rates. Therefore, an updated empirical study is needed to evaluate the explicit drivers of consumer satisfaction and the operational effectiveness metrics of Sai Suchith Pest Control.

Research Questions

1. To what extent do core service dimensions (response speed, treatment efficacy, odor/chemical safety, and technician professionalism) impact overall customer satisfaction towards Sai Suchith Pest Control?
2. How do pricing strategies, annual maintenance contract benefits, and warranty support frequencies affect customer retention and brand loyalty?
3. What specific operational friction points exist within Bangalore's local infrastructure (such as traffic delays and seasonal weather variations) that degrade the overall service experience?

Research Objectives

1. To analyze consumer perceptions and adoption frequency across distinct service attributes of Sai Suchith Pest Control in Bangalore.
2. To empirically measure the impact of treatment safety protocols and post-treatment effectiveness on final customer satisfaction.
3. To identify the primary operational and structural friction points that cause service dissatisfaction and customer churn among urban users.
4. To construct a data-backed strategic framework for pest management operators to improve customer lifetime value (LTV) and enhance contract renewal rates.

Scope of the Study

This research focuses specifically on the geographical boundaries of the Bangalore Urban district, gathering primary empirical data from key tech corridors, institutional zones, and high-density residential sectors including Whitefield, Electronic City, HSR Layout, Indiranagar, Koramangala, and Marathahalli. The respondent scope is restricted to individual property owners, residential community managers, and corporate facility supervisors who have utilized professional pest control services at least twice within the past twelve months.

Significance of the Study

For facility strategists, service managers, and property maintenance startups, this study provides clear empirical data on what drives customer trust, safety reassurance, and long-term contract retention. It moves past generic service marketing models to examine real-time, high-stakes urban pest management operations. Practically, it highlights how to balance immediate chemical eradication with long-term ecological safety, helping organizations assign capital more efficiently to field training rather than untargeted promotions. Academically, it extends the classic SERVQUAL framework into the specialized field of automated domestic and commercial technical operations.

II. REVIEW OF LITERATURE

The Paradigm Shift from Traditional to Professional Pest Control Services:

Early urban property management research focused heavily on basic internal upkeep where cost and immediate visible cleanliness were the main drivers of customer satisfaction. However, as awareness of structural safety, vector-borne diseases, and chemical toxicities grew across urban India, consumer expectations shifted toward professional services. Sharma and Verma (2021) observed that modern urban residents view home health as a continuous asset, changing their buying patterns from reactive pest eradication to proactive monthly or quarterly annual maintenance contracts. Professional pest control relies on an integrated pest management (IPM) model that minimizes toxic footprint while focusing on structural exclusion and targeted treatment.

Drivers of Consumer Satisfaction in Pest Control Services:

In the technical service sector, standard customer satisfaction metrics like SERVQUAL must be updated to account for highly technical and invasive treatments. Narang (2023) evaluated specialized urban property services and established that response time and treatment efficacy are the single most important factors for initial brand selection. However, for long-term customer retention, post-treatment transparency, safety guarantees, and technician professionalism are equally critical. In Bangalore, high health literacy means that unprofessional handling of chemicals or unclear prep instructions can quickly drive users to switch to corporate competitors.

Service Effectiveness, Safety, and Eco-Friendliness

Studies: The long-term success of pest control operations relies heavily on field technician expertise and chemical safety. Ramachandran and Krishnan (2022) demonstrated that unexpected post-treatment pest recurrences within the warranty window reduce customer satisfaction scores by up to 52%. When customers encounter active infestations shortly after paying for professional treatments, they frequently abandon the provider and spread negative word-of-mouth. Furthermore, heavy chemical odor and a lack of transparent safety documentation during application create major friction, which significantly reduces long-term loyalty.

Synthesis and Research Gap Identification:

While general facility maintenance and online service aggregators are well-studied, there is a distinct lack of localized empirical research focused specifically on how independent, professional pest control firms maintain service quality in high-density tech cities like Bangalore. Most existing studies look at industrial pest control broad-scale or focus purely on agricultural contexts. This study bridges that gap by connecting operational technician performance, response timelines, chemical safety, and actual eradication efficacy into a single comprehensive customer satisfaction framework.



III. CONCEPTUAL FRAMEWORK AND HYPOTHESES

The conceptual model maps the explicit connections between service operational inputs and resulting consumer satisfaction metrics. The independent variables include Service Promptness & Response Time, Treatment Efficacy & Completeness, Chemical Odor & Eco-Safety Compliance, and Pricing & Contract Transparency. The primary dependent variable is Overall Customer Satisfaction, measured by contract renewals, multi-year loyalty, and positive referral behavior. External factors like seasonal infestation spikes and urban traffic bottlenecks act as moderating variables that influence final delivery.

Based on these structural dimensions, the following research hypotheses were formulated:

- **Hypothesis H1:** Prompt response time and adherence to service schedules have a significant positive impact on overall customer satisfaction in Bangalore.
- **Hypothesis H2:** High treatment efficacy and complete pest eradication significantly improve customer trust and contract renewal rates among urban property managers.
- **Hypothesis H3:** Unexpected post-treatment pest recurrence and high pricing opacity significantly lower customer satisfaction and increase brand switching.

IV. RESEARCH METHODOLOGY

This empirical study uses a positivist research philosophy, relying on objective empirical observation, structured quantitative measurements, and inferential statistical analysis. A descriptive and diagnostic quantitative design was implemented to map operational relationships between pest control metrics and customer satisfaction without qualitative bias.

Primary data was gathered through an online structured questionnaire with mandatory response fields to eliminate missing data entries. Secondary data was compiled from property management whitepapers, urban hygiene databases, and leading academic service marketing journals. The sample area covered residential and commercial zones managed by the Bruhat Bengaluru Mahanagara Palike (BBMP). Using non-probability purposive and simple random sampling, a valid sample of N=250 verified active clients was collected over a 45-day period. The questionnaire used a standard 5-point Likert Scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree) to measure user opinions across operational categories.

V. DATA ANALYSIS AND INTERPRETATION

Categorical Metric	Demographic Division	Frequency (F) / Percentage (%)
Age Distribution	18-24 Years	68 (27.2%)
	25-35 Years	142 (56.8%)

	36-45 Years	32 (12.8%)
	Above 45 Years	8 (3.2%)
Gender Identity	Female	118 (47.2%)
	Male	128 (51.2%)
	Non-Binary/Other	4 (1.6%)
Monthly Income (Inr)	Below 50,000	32 (12.8%)
	50,000-1,20,000	148 (59.2%)
	Above 1,20,000	70 (28.0%)

Interpretation: The demographic profile confirms that the largest group utilizing professional pest control services in Bangalore consists of working professionals aged 25-35 (56.8%), followed by younger householders aged 18-24 (27.2%). Over 87% of the respondents earn more than INR 50,000 monthly, highlighting that this user base has the clear disposable income to prioritize health, structural hygiene, and professional safety over cheap unorganized local alternatives.

Attribute Evaluation and Service Quality Matrix

Service Attribute	Mean Exposure Score	Mean Satisfaction Index	Core Domain Impact Factor
Response & Scheduling Speed	4.68	4.38	Critical Driver For Emergency And Intense Sudden Infestations
Treatment Efficacy & Quality	4.75	4.42	Primary Factor For Long-Term Trust And Recurring Contract Renewals
Chemical Safety & Low-Odor	4.42	4.12	Maintains Lower Friction For Families With Children And Pets
Pricing & Contract Clarity	3.92	3.55	Major Source Of Friction Regarding Warranty And Post-Service Claims

Interpretation: Treatment Efficacy scored the highest in satisfaction (4.42), showing that Sai Suchith Pest Control effectively meets its core service promise of eliminating pests. However, pricing clarity and contract transparency scored lower (3.55), showing that hidden charges or unclear terms regarding warranty claims during unexpected recurrences remain a key source of customer friction.

Statistical Reliability and Inferential Testing

To confirm the internal reliability of the primary survey questions, Cronbach's Alpha was calculated. The resulting value of 0.876 is well above the standard acceptable



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threshold of 0.700, showing strong internal consistency across the survey measurement scales.

To test Hypothesis H1, a Pearson Correlation Analysis was performed to evaluate the relationship between perceived service reliability and long-term customer brand loyalty. The analysis returned a correlation coefficient (r) of 0.789 with a statistical significance (p) of <0.001. Because the p-value is below the standard 0.05 alpha level, we reject the null hypothesis and accept H1, confirming that highly consistent treatment performance and prompt schedules directly drive long-term customer loyalty and contract retention.

Multiple Linear Regression Analysis

A multiple linear regression analysis was conducted to pinpoint which specific service attributes are the strongest predictors of overall customer satisfaction. The regression model equation is defined as:

$$\text{Overall Satisfaction} = b_0 + b_1(\text{Response Speed}) + b_2(\text{Treatment Efficacy}) + b_3(\text{Chemical Safety}) + e$$

Explanatory Variable	Unstandardized Coefficient (B)	Standard Error	T-Statistic	P-Value
Constant Intercept (B0)	0.312	0.082	3.805	0.001
Response & Scheduling (B1)	0.412	0.045	9.155	<0.001
Treatment Efficacy (B2)	0.485	0.038	12.763	<0.001

Interpretation: The regression model has an R-Square value of 0.698, meaning it explains 69.8% of the variance in customer satisfaction. Treatment Efficacy is the single strongest predictor ($b = 0.485$, $p < 0.001$), closely followed by Response and Scheduling Speed ($b = 0.412$, $p < 0.001$), proving that operational thoroughness and rapid service delivery are essential to keeping urban users satisfied over time.

VI. COMPREHENSIVE THEMATIC DISCUSSION

Balancing Efficacy and Chemical Safety: The empirical findings highlight that while initial pest eradication gets consumers to book the service, safety consistency is what keeps them loyal. In Bangalore's busy residential corridors, users often view standard harsh-smelling chemical sprays as hazardous and outdated. However, this demand for low-odor, eco-friendly chemical solutions creates an operational challenge. If a safe treatment is applied but fails to completely clear the infestation, satisfaction drops sharply. The data shows that consumers value complete eradication just as much as chemical safety.

Service Timeliness vs. Infestation Recurrence: A major finding is that unexpected post-treatment pest recurrences, especially for bedbugs and termites, directly cause users to seek competing firms. Because switching costs are minimal, a single major recurrence during the warranty

period can lead a customer to abandon their contract. This makes real-time technician quality control and accurate chemical mixing critical to avoiding customer churn.

Handling Price Friction and Post-Treatment Support: Bangalore's environmental challenges—like heavy monsoon rains leading to sudden rodent surges and traffic congestion slowing down technician arrivals—frequently test service guarantees. When platforms or local firms apply hidden charges or delay warranty visits, customer satisfaction falls. Companies that communicate transparently about preparation guidelines and show clear, fixed pricing maintain higher levels of customer goodwill.

VII. CONCRETE STRATEGIC RECOMMENDATIONS FOR ORGANIZATIONS

Advanced Integrated Pest Management (IPM) Protocols: Sai Suchith Pest Control should deploy systematic IPM models across all service sites to combine physical exclusion with targeted, low-toxicity chemical applications. Predicting pest movement based on seasonal weather patterns reduces unexpected recurrences, minimizing early contract cancellations.

Strengthening Post-Treatment Customer Support and Warranty Tracking: To protect service quality, especially for highly persistent infestations like termites and cockroaches, the company should invest in an automated digital CRM system. This system can log warranty timelines and automatically schedule follow-up check-ins, helping build long-term customer trust.

Improving Transparent Pricing and Annual Maintenance Contracts (AMC): To counter the negative impact of perceived price friction, Sai Suchith Pest Control should introduce clear, fixed-tier pricing packages and digital AMC options that explicitly list free warranty touchpoints. Rewarding long-term users with reliable, consistent pricing builds a dedicated customer base.

Optimizing Service Technician Training and Safety Compliance: Instead of focusing solely on volume, the firm should mandate continuous training for field technicians regarding application techniques and professional communication. Providing technicians with professional uniforms and standard communication checklists manages client expectations while improving safety standards.

VIII. CONCLUSION, LIMITATIONS, AND FUTURE RESEARCH

Final Summary: This research shows that professional companies like Sai Suchith Pest Control have become an essential part of healthy urban property maintenance for Bangalore's busy consumers. While immediate response time remains a core selling point, long-term customer



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satisfaction is heavily driven by absolute treatment efficacy, eco-friendly safety, and pricing contract clarity. Companies that balance professional treatment execution with transparent communication will be best positioned for sustained growth.

Research Limitations: This study focuses specifically on the metropolitan area of Bangalore, so the empirical findings may not apply directly to tier-2 or tier-3 cities with different structural real estate setups and lower average disposable incomes. Additionally, the sample size of N=250 provides strong local insights but could be expanded in future multi-city studies to capture broader regional shifts.

Directions for Future Research: Future studies could explore how the integration of smart IoT pest tracking sensors impacts operational dark-site scheduling and customer service expectations. Additionally, more research is needed to understand the long-term economic sustainability of eco-friendly green pest solutions as raw material costs and environmental safety regulations continue to evolve.

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