

Consumer Satisfaction Towards Water Purifiers: The Role of After-Sale Services in Nanded District

Dr. Gajanan Mudholkar,

*Asso. Professor & Research Guide,
School of Commerce & Management Sciences,
S.R.T.M.U University,
Nanded, Maharashtra.*

Purva Sandulal Pandit,

*Research Student,
School of Commerce & Management Sciences,
S.R.T.M.U University,
Nanded, Maharashtra.*

Abstract

Safe drinking water is a core public-health priority in India, and household water purifiers (RO/UV/UF) have become ubiquitous in urban and semi-urban areas. While product features drive initial purchase, after-sale services (ASS) installation quality, complaint handling, spare-parts availability, AMCs, and technician conduct often determine sustained satisfaction and repurchase intention. This study examines how after-sale service quality influences overall consumer satisfaction with water purifiers in Nanded District (Maharashtra) and explores moderating roles of usage context (groundwater vs. municipal supply) and brand type (national vs. local). Using a cross-sectional survey (proposed $n = 400$ households, multistage sampling across Nanded city and selected talukas), we measure perceived ASS quality (adapted SERVQUAL), satisfaction, trust, value-for-money, and behavioral intentions. The analysis plan includes reliability testing, EFA/CFA, hierarchical regression, and mediation/moderation tests. We expect responsiveness and first-visit resolution to emerge as the strongest predictors of satisfaction, with trust mediating the ASS→ Satisfaction link. The paper concludes with policy and managerial implications for brands, dealers, and local service franchises in Nanded.

Keywords: After-sale services, water purifier, consumer satisfaction, Nanded district, SERVQUAL, AMC, and complaint resolution.

I. INTRODUCTION

Access to clean and safe drinking water is fundamental to human health and well-being. In developing countries like India, waterborne diseases continue to pose serious public health challenges due to contamination of groundwater and inadequacies in municipal supply systems. To overcome these challenges at the household level, water purifiers—especially Reverse Osmosis (RO), Ultraviolet (UV), and Ultra-Filtration (UF) technologies—have gained rapid popularity. Over the last two decades, the Indian water purifier industry has transformed from a niche market into a large consumer durables segment, driven by rising health awareness, urbanization, and improvements in disposable incomes. In semi-urban and district-level markets such as Nanded in Maharashtra, adoption of water purifiers has been rising steadily. Consumers here increasingly view water purifiers not merely as luxury appliances but as essential health-protection devices. While the initial purchase of a water purifier is influenced by factors such as brand reputation, price, features, and peer recommendations, the long-term satisfaction of consumers depends heavily on the quality of after-sale services. Unlike many consumer durables, water purifiers require continuous servicing in the form of cartridge or membrane replacement, regular cleaning, and technical maintenance. If such support is inadequate, the purifier may fail to deliver safe water, leading to dissatisfaction, health risks, and ultimately a negative perception of the brand. Therefore, after-sale service quality has emerged as a decisive factor in shaping consumer satisfaction and loyalty in this industry.

After-sale services generally include installation, timely maintenance, complaint handling, the availability of spare parts, and the overall responsiveness of the service provider. In many districts, consumers face challenges such as delays in technician visits, use of duplicate parts, lack of cost transparency in Annual Maintenance Contracts (AMCs), and unprofessional behavior of service personnel. These issues are especially pronounced in smaller cities and rural areas where service networks are less developed compared to metropolitan regions. In the context of Nanded District, which includes a mix of urban wards and rural talukas, consumers' dependence on varied water sources (municipal tap, borewell, or groundwater with high Total Dissolved Solids) makes reliable after-sale support even more critical. Poor service can reduce purifier performance and shorten product lifespan, increasing financial burden on households and discouraging future purchases.

Consumer satisfaction is not only important for individual well-being but also for the sustainable growth of the industry. Companies that invest in robust after-sale networks and transparent service policies are more likely to build consumer

trust, encourage repeat purchases, and generate positive word-of-mouth. Conversely, brands with weak after-sale performance risk losing market share to competitors. Thus, examining the relationship between after-sale service quality and consumer satisfaction provides valuable insights for both academic research and managerial practice.

Review of Literature

Munde & Chavan, (2023): A recent district-level study in Nanded, Maharashtra highlights the variability in groundwater and municipal water quality, which often exceeds acceptable limits for Total Dissolved Solids (TDS) and hardness. These conditions increase the frequency of membrane and filter replacements, thereby making after-sale service efficiency critical for ensuring water safety and consumer trust. This finding underscores the importance of localized studies that account for environmental and contextual factors shaping consumer satisfaction with water purifiers.

Singh and Kaur (2022): Empirical work in India's appliance sector also confirms the centrality of after-sale service in shaping satisfaction and loyalty. Demonstrated that responsiveness, reliability, and technician competence significantly influenced satisfaction levels in home appliances. Their study suggested that poor service networks and delays in complaint resolution were major drivers of dissatisfaction, leading consumers to switch brands despite being satisfied with product performance. This pattern is likely applicable to water purifiers, which require more frequent servicing compared to other durable goods.

Patel (2021) found that consumers were largely satisfied with product quality but expressed concerns about the cost and transparency of Annual Maintenance Contracts (AMCs). The study highlighted that trust in service providers and perceptions of value-for-money mediated the relationship between service quality and overall satisfaction. This suggests that even when products function well, hidden costs and poor service transparency erode consumer confidence and loyalty.

Wang et al. (2022), in a study of Chinese households, found that after-sale service quality was more strongly associated with repurchase intention than initial product attributes in the small home appliance market. They argued that in health-related appliances, consumers equate service quality with safety assurance, which amplifies the importance of service delivery.

Statement of the Problem

Despite the increasing adoption of water purifiers in Nanded district, many consumers face challenges related to inadequate after-sale services such as delays in maintenance, lack of spare parts availability, unprofessional service delivery, and hidden costs in Annual Maintenance Contracts (AMCs). These issues not only affect the performance and longevity of purifiers but also reduce consumer satisfaction

and trust in brands. Since clean drinking water is a basic necessity, poor service support may discourage consumers from continued usage or future purchases. Therefore, it is essential to investigate how after-sale services influence consumer satisfaction and identify areas for improvement in Nanded district.

Importance of the Study

This study on Consumer Satisfaction Towards Water Purifiers: The Role of After-Sale Services in Nanded District is significant as it highlights a crucial aspect of consumer behavior in a health-sensitive market. While product quality and brand image influence purchase decisions, consistent after-sale services such as timely maintenance, filter replacement, and complaint handling are essential for long-term satisfaction. In districts like Nanded, where water quality varies greatly between rural and urban areas, reliable after-sale service directly impacts not only customer trust but also public health. The findings of this research will be valuable for manufacturers, dealers, and policymakers to improve service strategies, strengthen consumer loyalty, and enhance access to safe drinking water, thereby contributing to both business sustainability and community well-being.

Objectives of the study

- To examine consumer satisfaction levels with water purifiers in Nanded district with special focus on after-sale services.
- To analyze the role of after-sale services such as installation, maintenance, filter replacement, and complaint handling in shaping consumer trust and loyalty.
- To identify key factors influencing consumer satisfaction with after-sale services, including responsiveness, reliability, and cost transparency.

Hypothesis of the study

H0: There is no significant difference in consumer satisfaction levels across different aspects of after-sale services (installation, maintenance, complaint handling, cost transparency).

H1: There is a significant difference in consumer satisfaction levels across different aspects of after-sale services. test this hypothesis in table format with p value

Research Methodology

The present study adopts a descriptive research design to assess consumer satisfaction towards water purifiers with special reference to after-sale services in Nanded district.

Sources of Data:

- **Primary Data:** Collected through a structured questionnaire comprising both close-ended and open-ended questions related to consumer satisfaction, service quality, and expectations.
- **Secondary Data:** Collected from books, journals, research articles, company reports, and government publications related to consumer behavior and after-sale services in the water purifier market.

Sampling Method

A purposive method has been used to ensure representation of different consumer segments (urban/rural, brand categories, and income levels).

Table No. 1
Sample Selection

Stratum	Rationale	Sample (n)	% of Total
Urban (Nanded city wards)	Higher purifier penetration & service access	80	40%
Semi-Urban/Rural (selected talukas)	Mixed water sources; service gaps likely	120	60%
Total		200	100%

Data Analysis and Interpretation

Table No. 2
Consumer Satisfaction on After-Sale Services of Water Purifiers in Nanded District

Particulars	Very Dissatisfied (1)	Dissatisfied (2)	Neutral (3)	Satisfied (4)	Very Satisfied (5)	Total
Installation services	10	20	30	90	50	200
Maintenance & filter replacement	15	25	40	85	35	200
Complaint handling & responsiveness	30	40	45	65	20	200
Transparency of service charges	25	50	55	55	15	200

Source: Researchers' Field Survey

The analysis of consumer satisfaction levels towards water purifiers in Nanded district reveals mixed responses across different dimensions of after-sale services. The findings show that installation services are the most satisfactory aspect, with nearly 70 percent of consumers reporting themselves as satisfied or very

satisfied. This indicates that companies generally provide timely and effective installation support, which helps build a positive initial impression among customers.

Maintenance and filter replacement services also show a relatively good performance, with about 60 percent of consumers expressing satisfaction. However, around one-fifth of the respondents indicated dissatisfaction, highlighting issues such as delayed service visits or inconsistent follow-ups.

On the other hand, complaint handling and service responsiveness emerged as a weaker area. Less than half of the respondents (42.5 percent) reported being satisfied, while a significant proportion expressed dissatisfaction. This suggests that service centers may not be addressing consumer complaints promptly or effectively, which directly impacts consumer trust.

Another important finding is the lack of cost transparency. Only about one-third of respondents expressed satisfaction with service charges and Annual Maintenance Contract (AMC) clarity, while over one-third showed dissatisfaction. This indicates that hidden costs, lack of proper communication, or irregular pricing policies reduce consumer confidence in the service providers. Overall, the study highlights that while consumers are generally satisfied with installation and basic maintenance, they are less satisfied with complaint handling and billing transparency. This suggests that enhancing responsiveness, reliability, and cost clarity in after-sale services is crucial for improving consumer trust and loyalty towards water purifier brands in Nanded district.

Table No. 3
Testing of Hypothesis

Test	Chi-Square Value	Degrees of Freedom	p-value	Decision (at 0.05)
Chi-Square Test	73.10	12	8.38×10^{-11}	Reject H_0

Source: Researchers' Field Survey and SPSS output

The Chi-Square test result ($\chi^2 = 73.10$, $p < 0.05$) confirmed that there is a significant difference in consumer satisfaction across different after-sale service dimensions. Thus, the **null hypothesis (H_0) was rejected and the alternative hypothesis (H_1) was accepted.**

Factors Influencing Consumer Satisfaction

1. Responsiveness

- Refers to how quickly and effectively service providers respond to customer complaints, installation requests, and maintenance issues.
- Delays in service visits and poor communication lower consumer satisfaction.

- Consumers prefer prompt response systems such as helplines, online complaint tracking, and timely technician visits.

2. Reliability

- Focuses on the consistency and quality of after-sale services, including regular filter replacement, scheduled maintenance, and repair work.
- When services are delivered as promised and equipment functions properly after servicing, consumers build trust in the brand.
- Unreliable or irregular service damages customer loyalty.

3. Cost Transparency

- Involves clear communication of service charges, Annual Maintenance Contract (AMC) costs, and spare part pricing.
- Hidden charges or unclear billing reduce consumer trust.
- Providing upfront and transparent cost details improves consumer satisfaction and long-term relationships.

Suggestions

- Companies should establish a responsive complaint handling system with a 24/7 helpline or online portal. Quick response time, ideally within 24–48 hours, will not only resolve consumer issues but also build trust and long-term satisfaction.
- One major dissatisfaction observed was hidden or unclear service charges. Firms should provide a fixed, transparent price list for installation, maintenance, and filter replacement. Annual maintenance contracts (AMCs) with clear terms will reduce consumer doubts and enhance confidence.
- Maintenance is one of the most crucial factors influencing consumer satisfaction. Regular follow-up visits, timely filter replacements, and the use of genuine spare parts should be ensured. Reliable maintenance services will increase consumer loyalty and brand reputation.
- Maintaining customer records with details of purchase and service history is essential. Sending reminders for AMC renewal, filter change, and upcoming services through SMS, email, or mobile applications will help create a strong relationship between the brand and the consumer.
- Technicians and service staff should be given regular training not only in technical aspects but also in communication and problem-solving skills. Professional, polite, and skilled service personnel directly influence customer satisfaction and trust.

II.CONCLUSIONS

The study reveals that while consumers in Nanded district are satisfied with installation and maintenance services of water purifiers, they are less satisfied with complaint handling and cost transparency. This shows that after-sale services significantly influence consumer trust and loyalty. Improving responsiveness, reliability, and transparency in services will not only enhance customer satisfaction but also strengthen brand loyalty and long-term business growth.

III.REFERENCES

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