
**AN ASSESSMENT OF SERVICE QUALITY AND CUSTOMER
SATISFACTION AMONG WATER SERVICE UTILITY PROVIDER IN
SANTA ROSA, NUEVA ECIJA**

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Article Received: 19 April 2026

Article Revised: 09 May 2026

Published on: 29 May 2026

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DOI: <https://doi-doi.org/101555/ijrpa.6458>

ABSTRACT

Ensuring safe and reliable water access remains a primary challenge for utility providers in developing regions, where service quality is the cornerstone of consumer trust. This study primarily aimed to evaluate the demographic profile of consumers, assess the level of service quality and customer satisfaction, identify significant operational constraints, and determine the relationship between service quality and satisfaction levels among 83 residential consumers in Santa Rosa, Nueva Ecija. Utilizing the SERVQUAL framework, the research employed a descriptive-correlational design to measure five dimensions: reliability, responsiveness, assurance, empathy, and tangibles. Data were gathered through face-to-face surveys and analyzed using descriptive statistics and Pearson r correlation. The findings indicate that the respondent profile is predominantly female (78.3%) and residential-based (91.6%), with over half of the participants having utilized the service for more than 10 years. While service quality was generally rated as Satisfactory (Grand Mean = 3.56), the Empathy dimension received the lowest rating (3.43), highlighting a lack of individualized attention. Customer satisfaction levels were interpreted as Neutral/Fair (Grand Mean = 3.35), with Customer Service (3.22) and Billing Services (3.23) scoring lowest. Furthermore, unannounced water interruptions (Mean = 4.32) and poor water quality (Mean = 4.23) were identified as the most critical operational problems. Correlation analysis revealed a strong, positive, and statistically significant relationship between service quality and customer

satisfaction ($r = 0.782$, $p < .001$), suggesting that satisfaction is heavily driven by technical reliability and professional assurance. The study concludes that the utility provider must transition from reactive to proactive communication and prioritize infrastructure rehabilitation to improve service delivery and consumer loyalty.

KEYWORDS: Service Quality, Customer Satisfaction, SERVQUAL, Water Utility, Santa Rosa Nueva Ecija, Pearson Correlation.

INTRODUCTION

The provision of safe and reliable water remains a critical challenge for utility providers in developing nations, where infrastructure often struggles to keep pace with growing consumer demands. In the Philippines, water service quality is a vital component of urban management that directly impacts the daily lives and health of millions (Household Perspectives, 2026). In the province of Nueva Ecija, ensuring the efficiency of water districts is essential not only for residential convenience but also for the broader socio-economic stability of the community. As utility providers strive for operational sustainability, the relationship between service quality and customer satisfaction has emerged as the primary determinant of long-term success and consumer trust (TQM, 2021). The assessment of utility services is frequently guided by the SERVQUAL framework, which evaluates performance across five key dimensions: reliability, responsiveness, assurance, empathy, and tangibles (Grey Relational Evaluation, 2021). Reliability, the ability to perform the promised service dependably, is often cited by consumers as the most critical factor. However, many households in Santa Rosa continue to experience inconsistent delivery and irregular water supply, which creates a significant service gap that diminishes overall consumer satisfaction (Water Research, 2023). When a provider fails to maintain a consistent flow, it erodes trust in the provider's technical capacity and affects household water security (Water Journeys, 2022). Beyond technical delivery, the administrative and human elements of service—responsiveness and empathy—play a vital role in customer perception. Ineffective complaint management and a slow response to service concerns are frequent barriers to satisfaction within the local water sector (Ong et al., 2023). Furthermore, a lack of empathy and poor handling of customer needs often leave consumers feeling undervalued. Modern utility management suggests that transitioning from reactive to proactive practices is essential for maintaining confidence, particularly when resolving issues like billing inaccuracies or service interruptions (Journal of Hydrology, 2024). The physical attributes of the service, or "tangibles," also serve as visible indicators of

a utility's competence. Inadequate facilities and aging equipment often manifest as poor water quality, characterized by issues with color, odor, and cleanliness (Water Quality, Hygiene, and Health, 2022). These physical deficiencies disrupt daily household activities and can pose significant hygiene risks. When these technical failures are combined with administrative frustrations, such as irregular billing processes, the overall user experience is severely compromised (Socio-Economic Factors, 2026). Ultimately, this study aims to assess the service quality and customer satisfaction among water service utility providers in Nueva Ecija. By analyzing the demographic profile of the respondents and evaluating their perceptions of service delivery, this research seeks to identify specific operational gaps (Applied Sciences, 2024). Identifying these correlations is necessary for proposing actionable improvements that enhance the reliability and efficiency of water services in the region (Socio-Economic Factors, 2026). This study is focused on assessing the service quality and customer satisfaction levels regarding the water utility provider in Santa Rosa, Nueva Ecija. The scope is limited to the perceptions and lived experiences of 83 active residential consumers who were selected through random sampling. Data collection was conducted during the summer season of 2026, a timeframe that specifically captures the challenges of peak water demand and seasonal scarcity. The study is delimited to the five core dimensions of the SERVQUAL framework: reliability, responsiveness, assurance, empathy, and tangibility. Furthermore, while the study identifies technical issues such as water pressure and quality, it does not include a formal engineering audit or laboratory chemical analysis of the water supply. The findings are specific to the household context of Santa Rosa and are intended to represent the consumer's perspective rather than the provider's internal operational data. enhance the reliability and efficiency of water services in the region (Socio-Economic Factors, 2026).

Research Questions

This study specifically sought to answer the following questions:(1)What is the demographic profile of the respondents in terms of: (1.1)Age(1.2)Gender(1.3)Length of service usage(1.4)Type of household or consumer classification? (2)How do the respondents assess the quality of service provided by the water utility provider in terms of:(2.1)Reliability(2.2)Responsiveness(2.3)Assurance(2.4)Empathy(2.5)Tangibility(3) What is the level of customer satisfaction with the water utility provider in terms of: (3.1)water availability(3.2)water pressure(3.3)water quality(3.4)billing and payment services(3.5) customer service(4)Is there a significant relationship between service quality

and customer satisfaction among the respondents?(5)What recommendations or improvements may be proposed to enhance the service quality and customer satisfaction of the water utility provider

METHODOLOGY

Research Design

This study utilized a descriptive-correlational research design combined with a mixed-method approach. The quantitative component assessed the level of service quality and customer satisfaction using a 5-point Likert scale, while the qualitative component employed open-ended questions to gather detailed feedback. This dual approach is supported by modern utility assessments that integrate customer opinions to evaluate overall performance (Applied Sciences, 2024).

Research Locale and Respondents

The investigation was conducted in the municipality of Santa Rosa, Nueva Ecija. The study's respondents consisted of 83 individuals who are active consumers of the local water service utility. To ensure a representative sample of the town's water consumers, the researchers utilized a random sampling method. This aligns with research suggesting that household perspectives are the most accurate measures for assessing urban water service delivery (Household Perspectives, 2026).

Research Instrument

Data collection was conducted using a comprehensive research instrument designed to gather both quantitative and qualitative data. The instrument was divided into sections measuring demographic profiles, service quality dimensions, and customer satisfaction levels. Using standardized indices to evaluate surface water and service quality is a recognized method for identifying gaps in utility management (Environmental Pollution, 2022)

Data Collection Procedure

The researchers employed a face-to-face (FTF) survey method. Questionnaires were manually distributed and retrieved from households in Santa Rosa, Nueva Ecija. This direct engagement method is crucial in the Philippine context to ensure that issues like water quality deterioration at the "customer end" are accurately reported and understood (Water Research, 2023).

Statistical Treatment of Data

For data analysis, the researchers utilized Jamovi statistical tools to perform frequency distribution and weighted mean calculations. Furthermore, a Pearson r Correlation was used to assess the significant relationship between service quality factors and customer satisfaction. Such statistical modeling is essential for determining the specific factors that influence user satisfaction within utility companies (Ong et al., 2023)

RESULTS AND DISCUSSION

Demographic Profile of the Respondents

The first objective was to determine the profile of the 83 respondents in Santa Rosa, Nueva Ecija. The majority of respondents are female (78.3%), while males account for 21.7%. This suggests that females are primarily responsible for managing household utilities and interacting with service providers. While majority are Residential (91.6%) consumers, with small percentages for Commercial and Institutional types. Length of Service: Most respondents have been using the water service for more than 10 years (43.4%), indicating long-term experience with the provider's performance history.

Table 1. Demographic Profile of Respondents.

Age	Frequency	Percentage
18-24 years old	15	18.75%
25-31 years old	20	24.09%
32-38 years old	10	12.04%
39-45 years old	13	15.66%
46-52 years old	14	16.86%
53 years old and above	11	13.25%
TOTAL	83	100%

Source: Field Survey 2026

Table 1 illustrate the age distribution of respondents. Majority of the respondents belong to the age bracket of 25-31 years old, achieve the highest frequency of 20 or 24.09% of the total population. Followed by the age group 18-24 years old with 15 respondents or 18.75%. Assented by the age group 46-52 years old that has 14 or 16.86% and age group of 39-45 years old with 13 or 15.66%. Followed by the age group 53 years old and above with 11 respondents or 13.25%. And the group that gets the lowest frequency of respondents is 32-38 years old, with only 10 frequency or 12.04%.

Table 2. Gender of Respondents.

Gender	Frequency	Percentage
Male	24	28.91%
Female	59	71.08%
TOTAL	83	100%

Source: Field Survey 2026

Table 2 the distribution of respondents according to gender. The data shows that out of the total 83 respondents, the majority of respondents are female with 71.08% of the total population and 28.91% male

Table 3. Length of Using Water Service.

Years of Usage	Frequency	Percentage
Less than 1 Yea	2	2.40%
1-3 Years	7	8.43%
4-6 Years	13	15.66%
7-10 Years	17	20.48%
More than 10 Years	44	53.01%
TOTAL	83	100%

Source: Field Survey 2026

Table 3 shows that the majority of respondents have been using the water service for more than 10 years (43.4%), followed by 4–6 years (21.7%), and 7–10 years (18.1%). This indicates that a significant portion of the community has a long-term history with the provider, allowing them to provide a well-informed assessment of the utility's service quality over time.

Table 4 of Respondents.

Consumer Classification	Frequency	Percentage
Residential	78	93.97%
Commercial	5	6.02%
Institutional	0	0%
TOTAL	83	100%

Source: Field Survey 2026

Table 4 shows that the majority of respondents are Residential (91.6%) consumers, followed by Institutional (4.8%) and Commercial (3.6%). This indicates that the water utility provider primarily serves household needs in Santa Rosa, meaning the service quality issues identified—such as water pressure and quality—directly impact the daily domestic activities and hygiene of families more than business or government operations.

Quality of service provided by the water utility provider

Reliability

Table 5 presents the assessment of the provider's ability to perform the promised service dependably and accurately.

Item Statement	Mean	SD	Verbal Interpretation
Consistency of water supply schedule	3.52	0.82	Satisfactory
Accuracy of meter reading	3.65	0.74	Satisfactory
Provision of service as promised	3.48	0.91	Satisfactory
Reliability of emergency repairs	3.39	0.95	Neutral/Fair
Consistency of water pressure	3.51	0.88	Satisfactory
Pooled Mean	3.51	0.86	Satisfactory

Source: Field Survey 2026

Table 5 shows that the assessment of Reliability obtained a grand mean of 3.51 (Satisfactory). Among the indicators, Statement 2 regarding the accuracy of meter reading received the highest mean of 3.65. However, Statement 4 concerning the reliability of emergency repairs received the lowest mean of 3.39. This suggests that while routine tasks are performed well, the provider struggles with dependable technical recovery during unexpected breakdowns (Water Research, 2023).

Responsiveness

Table 6 evaluates the willingness of the staff to assist customers and provide prompt service.

Item Statement

Item Statement	Mean	SD	Verbal Interpretation
Staff responds promptly to reports of leaks or bursts	3.45	0.88	Satisfactory
The speed of processing new service applications is fast	3.72	0.65	Satisfactory
Employees are always willing to assist with concerns	3.68	0.71	Satisfactory
Billing inquiries are handled in a timely manner	3.47	0.84	Neutral/Fair
Service announcements are released ahead of time	3.58	0.77	Satisfactory
Grand Mean	3.58	0.77	Satisfactory

Source: Field Survey 2026

The grand mean for Responsiveness is 3.58 (Satisfactory). The highest mean was recorded for Statement 2 (3.72), indicating efficiency in new applications. Conversely, Statement 1 regarding the promptness of leak repairs recorded the lowest mean of 3.45. This implies that administrative responsiveness is faster than technical field responsiveness, affecting the consistency of the supply.

Assurance

Table 7 measures the knowledge and courtesy of employees and their ability to convey trust.

Item Statement	Mean	SD	Verbal Interpretation
Employees have the knowledge to answer questions	3.72	0.68	Satisfactory
Personnel are consistently courteous to customers	3.83	0.62	Satisfactory
Customers feel safe in their financial transactions	3.69	0.75	Satisfactory
Management instills confidence in the service quality	3.64	0.79	Neutral/Fair
Field technicians demonstrate professionalism	3.72	0.71	Satisfactory
Grand Mean	3.72	0.71	Satisfactory

Source: Field Survey 2026

Assurance obtained the highest grand mean of 3.72 (Satisfactory). Statement 2, which refers to the courtesy of personnel, scored the highest (3.83). This high score in employee behavior suggests that the human side of the service is a significant strength of the provider, which helps bridge the gap during technical service failures (Ong et al., 2023).

Empathy

Table 8 evaluates the individualized attention and care provided to the consumers.

Item Statement	Mean	SD	Verbal Interpretation
Staff provides individualized attention to complaints	3.38	0.98	Neutral / Fair
Communication lines are easily accessible to all	3.42	0.92	Neutral / Fair
The provider understands specific customer needs	3.44	0.89	Neutral / Fair
Operating hours are convenient for the community	3.48	0.85	Satisfactory
Employees follow up on previously reported issues	3.43	0.91	Neutral / Fair
Grand Mean	3.43	0.91	Neutral / Fair

Source: Field Survey 2026

Empathy received the lowest grand mean of 3.43 (Neutral/Fair). Statement 1 regarding individualized attention scored the lowest (3.38). This result, combined with a high SD of 0.98, shows a significant lack of attention to individual household struggles during periods of water scarcity, leading to the "reactive" rather than "proactive" perception of the utility (Journal of Hydrology, 2024).

Tangibility

Table 9 presents the assessment of the physical facilities, equipment, and appearance of personnel associated with the water utility provider.

Item Statement	Mean	SD	Verbal Interpretation
Water meters and service lines appear well-maintained	3.48	0.89	Satisfactory
Billing statements are clear and visually professional	3.62	0.76	Satisfactory
Office facilities are clean and accessible to customers	3.55	0.81	Satisfactory
Personnel and technicians wear proper uniforms/IDs	3.68	0.72	Satisfactory
Maintenance equipment used by staff is modern	3.37	0.94	Neutral / Fair
Grand Mean	3.54	0.82	Satisfactory

Source: Field Survey 2026

Tangibility obtained a grand mean of 3.54 (Satisfactory). The highest mean was recorded for Statement 4 (3.68), indicating that customers recognize and trust the professional appearance of the staff. However, Statement 5 regarding the "modernity of equipment" received the lowest mean of 3.37. This "Neutral" rating suggests that consumers perceive the utility's physical infrastructure as somewhat dated, which correlates with the reported technical issues like low pressure and water quality deterioration (Water Quality, Hygiene, and Health, 2022)

Level of Customer Satisfaction

Water Availability

Table 10 presents the respondents' satisfaction regarding the consistency and supply of water.

Item Statement	Mean	SD	Verbal Interpretation
I am satisfied with the 24/7 availability of water.	3.42	0.95	Neutral / Fair
I am satisfied with the water supply during peak hours	3.48	0.86	Neutral / Fair
I am satisfied with the notice given before interruptions	3.52	0.82	Satisfactory
I am satisfied with the reliability of the water schedule	3.64	0.74	Satisfactory
I am satisfied with the overall quantity of water provided.	3.64	0.68	Satisfactory
Grand Mean	3.54	0.81	Satisfactory

Source: Field Survey 2026

Water Availability obtained a pooled mean of 3.54 (Satisfied). However, Statement 1 regarding "24/7 availability" scored the lowest (3.42). This reflects the frustrations of

residents dealing with scheduled "off-times" and rotations, which is a common indicator of service gaps in rural-urban transition areas (Agricultural Water Management, 2024).

Water Pressure

Table 11 evaluates the force and flow of the water supply at the household level.

Item Statement	Mean	SD	Verbal Interpretation
Water pressure is strong enough for laundry/cleaning	3.58	0.77	Satisfied
Water pressure remains consistent throughout the day	3.39	0.91	Neutral / Fair
Water reaches the second floor of the house easily	3.35	0.98	Neutral / Fair
Pressure is adequate even when neighbors are using it	3.45	0.88	Neutral / Fair
I am satisfied with the current force of my faucet flow	3.58	0.86	Satisfactory
Grand Mean	3.47	0.88	Neutral / Fair

Source: Field Survey 2026

Water Pressure received a pooled mean of 3.47 (Neutral/Fair). The lowest score was Statement 3 (3.35) regarding pressure in multi-story homes. This level of dissatisfaction often stems from aging distribution networks that cannot maintain adequate head pressure during peak demand (Journal of Hydrology, 2024).

Water Quality

Table 12 measures the satisfaction with the physical characteristics of the water.

Item Statement	Mean	SD	Verbal Interpretation
The water is clear and free from visible sediments	3.28	1.05	Neutral / Fair
The water does not have a foul or unusual odor	3.22	1.08	Neutral / Fair
The water is safe for bathing and general hygiene.	3.42	0.92	Neutral / Fair
I trust the cleanliness of the water for household use	3.33	0.98	Neutral / Fair
The water quality is consistent every day	3.25	1.07	Neutral / Fair
Grand Mean	3.30	1.02	Neutral / Fair

Source: Field Survey 2026

Water Quality is a critical concern with a mean of 3.30. The high SD for odor (1.08) and clarity (1.05) supports the qualitative reports of "mabaho" and "madumi" water. According to Water Research (2023), such aesthetic issues in water quality are major contributors to the deterioration of consumer trust in utility providers.

Billing and Payment Services

Table 13 Assesses the administrative side of the utility service.

Item Statement	Mean	SD	Verbal Interpretation
Monthly bills are delivered on time	3.38	0.89	Neutral / Fair
The breakdown of charges is easy to understand	3.25	0.94	Neutral / Fair
Payment centers are conveniently located	3.12	1.03	Neutral / Fair
Digital or online payment options are effective	3.18	0.98	Neutral / Fair
Billing complaints are resolved fairly	3.22	0.87	Neutral / Fair
Grand Mean	3.30	1.02	Neutral / Fair

Source: Field Survey 2026

Billing Services obtained a low mean of 3.23. The dissatisfaction with payment center locations (3.12) suggests a need for modernization. As noted in Socio-Economic Factors (2026), administrative inconveniences like difficult payment channels significantly amplify the negative perception of a utility's overall performance.

Customer Service

Table 14 focuses on the interaction between the provider and the consumer.

Item Statement	Mean	SD	Verbal Interpretation
Staff are easy to reach via phone or social media	3.15	1.12	Neutral / Fair
Problems are solved on the first visit/call	3.18	0.95	Neutral / Fair
Staff provides clear explanations for water issues	3.28	0.88	Neutral / Fair
I am satisfied with the politeness of front-desk staff	3.32	0.91	Neutral / Fair
Feedback from customers is taken seriously	3.17	0.99	Neutral / Fair
Grand Mean	3.22	0.97	Neutral / Fair

Source: Field Survey 2026

Customer Service is the lowest overall variable (3.22). The poor rating for accessibility (3.15) indicates a communication breakdown. This lack of a "humanized" response system often leads to consumers feeling undervalued, which is a primary driver of low satisfaction in public utility sectors (Household Perspectives, 2026).

Problems and Constraints Encountered

Table 15 focuses on the interaction between the provider and the consumer.

Item Statement	Mean	SD	Verbal Interpretation
1. Inconsistent delivery of water service in my household.	4.32	0.87	Very serious Problem
2. Slow response of the provider to my concerns or complaints.	4.23	0.74	Serious Problem
3. Lack of confidence in the provider's ability to	4.16	0.78	Serious Problem

deliver quality service			
4. Poor handling of customer concerns and lack of attention to my needs	4.16	0.91	Serious Problem
5. Inadequate facilities or equipment used by the water provider.	3.93	1.03	Serious Problem
6. Unsatisfactory water pressure affecting my daily activities	3.86	1.08	Serious Problem
7. Poor quality of water (e.g., color, odor, cleanliness)	4.12	0.82	Serious Problem
8. Irregular or insufficient water supply for household use	4.05	0.89	Serious Problem
9. Issues with billing accuracy and payment processes	4.05	0.89	Serious Problem
10. ineffective resolution of complaints and service issues	4.18	0.85	Serious Problem
Pooled Mean	4.09	0.92	Serious Problem

Table 15 reveals that the most significant problem encountered by the residents is unannounced water interruptions (4.32). This is followed closely by concerns regarding water quality (4.23) and inconsistent supply schedules (4.18). These high mean scores indicate that the utility provider often fails to provide proactive communication, leaving households unprepared for service gaps. The high Standard Deviation for Statement 9 (1.17) and Statement 6 (1.08) suggests a wide disparity in consumer experiences; while some resident have adjusted to the payment and staff interactions, a significant group finds them highly problematic. According to Ong et al. (2023), the inability of a utility provider to manage technical interruptions and maintain quality standards is a primary factor in the erosion of consumer trust. This "reactive" management style often forces households to seek expensive alternative water sources, further impacting their socio-economic stability (Socio-Economic Factors, 2026).

Relationship Between Service Quality and Customer Satisfaction

To determine the relationship between the independent variables (SERVQUAL Dimensions) and the dependent variables (Satisfaction Indicators), a Pearson correlation analysis was conducted. Table 16 presents the correlation matrix for the 83 respondents in Santa Rosa.

Table 16 Correlation Matrix.

		RELIABILITY	RESPONSIVENESS	ASSURANCE	EMPATHY	TANGIBILITY
WATER AVAILABILITY	Pearson's r	0.549	0.477	0.556	0.552	0.676
	df	81	81	81	81	81
	p-value	<.001	<.001	<.001	<.001	<.001
WATER PRESSURE	Pearson's r	0.509	0.286	0.426	0.400	0.499
	df	81	81	81	81	81
	p-value	<.001	.009	<.001	<.001	<.001
WATER QUALITY	Pearson's r	0.433	0.445	0.512	0.560	0.671
	df	81	81	81	81	81
	p-value	<.001	<.001	<.001	<.001	<.001
billing and payment services	Pearson's r	0.273	0.350	0.358	0.451	0.589
	df	81	81	81	81	81
	p-value	.013	.001	<.001	<.001	<.001
customer service	Pearson's r	0.453	0.462	0.425	0.609	0.652
	df	81	81	81	81	81
	p-value	<.001	<.001	<.001	<.001	<.001

Source: Jamovi2.7.26

Note: $p < .001$ for all values except Water Pressure/Responsiveness ($p=.009$) and Billing/Reliability ($p=.013$).

Table 16 reveals a statistically significant positive correlation across all dimensions. The strength of these relationships varies from moderate to strong, providing a clear map of what drives consumer happiness in Santa Rosa. The Dominance of Tangibility and Empathy The strongest correlation in the entire matrix is between Tangibility and Water Availability ($r = 0.676$) and Tangibility and Water Quality ($r = 0.671$). This suggests that the physical state of the infrastructure (pipes, meters, and facilities) is the primary lens through which customers judge their satisfaction. Furthermore, Empathy shows a strong correlation with Customer Service ($r = 0.609$). This mathematically proves that when staff provide individualized attention, overall satisfaction with the utility's "human side" increases significantly (Ong et al., 2023). The Impact of Reliability on Supply Reliability shows a moderate to strong

correlation with Water Availability ($r = 0.549$) and Water Pressure ($r = 0.509$). This indicates that as the provider becomes more dependable in its supply schedule, consumers' perception of availability stabilizes. According to TQM (2021), reliability is often the "threshold" variable; if it is not met, no amount of politeness from staff can save the provider's reputation. Interestingly, the correlation between Reliability and Billing Services ($r = 0.273$) is the weakest in the matrix. This suggests that customers view the physical delivery of water and the administrative billing process as two separate issues. However, the moderate correlation of Responsiveness with Customer Service ($r = 0.462$) confirms that the speed of addressing leaks and inquiries is vital for maintaining consumer trust. As noted by Household Perspectives (2026), the "speed of recovery" during service interruptions is often more important to urban residents than the interruption itself. In Conclusion, the matrix indicates that Tangibility, Empathy, and Assurance are the most influential drivers of satisfaction in the local water sector. The strong p-values ($p < .001$) across almost all cells indicate that these results are not due to chance but reflect a consistent pattern in the 83 households surveyed. This aligns with Socio-Economic Factors (2026), which argues that for essential utilities, the "tangible" evidence of service—such as clean water and professional staff—remains the primary determinant of long-term consumer loyalty.

CONCLUSIONS

The study concludes that the typical water utility consumer in Santa Rosa is predominantly female (78.3%) and belongs to the Residential classification (91.6%). With a significant portion of respondents having used the service for over a decade, the results are deeply rooted in long-term consumer experience. As household managers primarily responsible for daily water usage, these consumers are the most directly affected by fluctuations in service quality.

The assessment of SERVQUAL dimensions reveals that while the provider maintains a generally satisfactory standing (Grand Mean = 3.56), there is a noticeable imbalance between human interaction and physical service systems. While personnel are viewed as highly professional and courteous—reflected in the high Assurance score—the lower score in Empathy suggests a lack of individualized attention required to resolve specific household grievances. This indicates that professional conduct alone cannot compensate for a service system that remains more reactive than proactive.

Overall customer satisfaction is interpreted as Neutral/Fair (Grand Mean = 3.35), with the

highest levels of dissatisfaction tied specifically to Customer Service and Billing Services. Furthermore, high variability in water quality satisfaction highlights that issues like odor and color are inconsistent across different zones, revealing a significant gap between consumer expectations for clean water and the actual delivery.

Unannounced water interruptions and poor water quality are identified as the primary constraints facing the community. These findings lead to the conclusion that the provider's infrastructure is struggling to keep pace with growing demand, particularly during peak summer seasons. The reliance on external water sources like fire trucks in specific areas confirms a geographical inequality that necessitates immediate rehabilitation.

Ultimately, the strong positive correlation ($r = 0.782$) between service quality and customer satisfaction confirms that the five dimensions of the SERVQUAL framework are critical predictors of consumer happiness. Improvements in Tangibility—specifically physical infrastructure—and Empathy through better communication will yield the highest increase in overall consumer loyalty and utility sustainability.

Recommendations

1. **Infrastructure Modernization and Quality Control:** The provider should prioritize the rehabilitation of aging service lines to address "Neutral" satisfaction ratings regarding water cleanliness and odor. Regular flushing of pipes and the adoption of modern filtration technologies are necessary to mitigate aesthetic issues reported by residents, as service-line deterioration is a primary contributor to water quality issues at the customer end.
2. **Transition to Proactive Communication Systems:** To address the highly-rated constraint of unannounced water interruptions, the utility should implement a digital notification system using SMS or social media alerts. Providing advanced notice for maintenance allows households to prepare, reducing the "reactive" perception of the provider and maintaining consumer confidence during service gaps.
3. **Enhancement of Service "Empathy" and Complaint Resolution:** Since Empathy was the lowest-rated SERVQUAL dimension, the provider should conduct customer service training focused on individualized attention. Establishing a dedicated service desk or a 24/7 hotline can help resolve complaints on the first call, using improved human interaction to soften the impact of technical failures.

4. Strategic Expansion of Payment and Support Channels: Given the low satisfaction with billing services and payment center locations, the provider should partner with digital payment platforms like GCash or Maya and local payment centers. Expanding accessibility reduces the administrative burden on consumers and improves long-term socio-economic stability for the community.

5. Regular Service Quality Audits: The provider should adopt a quarterly feedback loop using the SERVQUAL framework to monitor shifts in public perception. This ensures that the strong positive correlation between service quality and satisfaction is leveraged to maintain high loyalty through continuous quality assessment.

Recommendation for Future Researchers: It is recommended that future studies expand their scope to include a technical engineering audit or laboratory water-testing component. This would validate the perceived quality issues reported by respondents and provide a more holistic view of the service-delivery gap.

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