

Service Quality and Client Demographic Profile: A Correlational Study Among Clients of the Department of Public Works and Highways – Isabela 4th District Engineering Office

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Abstract

The focus of this descriptive-correlational study was the relationship between clients' demographic profiles and perceived service quality at the Department of Public Works and Highways (DPWH) – Isabela 4th District Engineering Office, located in San Isidro, Isabela. The SERVQUAL framework was adopted to assess five dimensions of service quality, namely Tangibles, Reliability, Responsiveness, Assurance, and Empathy. The data-gathering technique consisted of a self-administered questionnaire filled in by a simple random sample of 48 clients, with an equal number of males and females. The analysis was conducted using weighted means, Pearson Product-Moment Correlation, and One-Way ANOVA techniques. The overall perception of the service quality at the DPWH – Isabela 4th District Engineering Office turned out to be very high ($M=4.03$), with the service quality dimension of Assurance being rated the highest (4.34) and the service quality dimension of Responsiveness the lowest (3.80) because of the long waiting time of clients. Interestingly, there were no significant correlations discovered between sex and service quality dimensions ($p>.05$). Age had a significant positive correlation with Reliability only ($r=.303$, $p=.036$). Initially, civil status was proven to have strong differences regarding Reliability ($p=.022$), Assurance ($p=.049$), and overall quality of service ($p=.044$). Education gave the most relevant results for four parts of the research, namely: tangibility, reliability, responsiveness, and empathy; it proved to greatly influence the research ($p=.020$). The results show that service perception is defined by context and can therefore be affected by education and civil status. Firstly, queue management is suggested. Secondly, assurance of service standards should be implemented.

1. Introduction

The significance of service quality has endured in public administration, particularly in departments that interact with citizens daily. Service providers operate as sole providers of public services within government agencies, which means they must ensure that their interactions with citizens are conducted reasonably and correctly (Rhee & Rha, 2009). The Department of Public Works and Highways (DPWH) plays an important role among the Philippine government's infrastructure agencies and maintains ongoing communication with a wide range of clients, including contractors, buyers, local government officials, and ordinary citizens.

The SERVQUAL model, initially developed by Parasuraman, Zeithaml, and Berry, has been widely used in measuring the quality of public services. The SERVQUAL framework defines service quality as the difference between customers' expectations and their perceptions of the service delivered. It has five dimensions used to measure service quality: tangibility, reliability, responsiveness, assurance, and empathy. Although it was originally designed for private-sector marketing research, this model has been employed to evaluate the quality of public services in local governments, municipal counters, and national government offices (Wisniewski, 2001; Fahim, 2019).

Studies on citizen satisfaction in local municipalities have indicated that the dimensions of service quality do not affect client satisfaction in the same way. Moreover, the significance of each dimension is different depending on the service being offered (Mbassi, Mbarga, & Ndeme, 2019). Another study conducted in a Japanese local government indicated that service delivery and human aspects were more important for customer satisfaction than the physical or hardware aspects of service delivery, thus confirming the importance of how services are provided by frontline staff (Moteki, 2021).

Service quality is an area that has attracted much research interest lately. Researchers have increasingly engaged in studies that take into account client demographics such as sex, age, marital status, and educational attainment. Despite this interest, some of the results from the studies do not agree with one another. For instance, men and women differ greatly in their evaluation of some service features (Ojekalu et al., 2019; Grazhdani & Merollari, 2015). Alternatively, some studies report no significant differences between men and women in perceptions of service quality (Al-Jazzazi & Sultan, 2017; Farah et al., 2025). Age influences perceived service quality in some transportation or banking services (Ibrahim et al., 2021; Ganesan-Lim et al., 2008), yet this factor does not seem to be significant in other contexts (Ojekalu et al., 2019). Moreover, factors such as age and income are significant predictors of perceived service quality in health services (Nketiah-Amponsah et al., 2019) and may also influence perceptions of public service quality when gender is taken into account (Cazzuffi & Retamal, 2025).

The inconsistency of the findings between studies indicates that the relationship between clients' demographic profile and perceived quality of service is very context-specific and cannot be generalized from one setting to another. Local government engineering offices in the Philippines, despite serving a diverse range of clients daily, have rarely been studied in this respect, particularly using a locally based descriptive-correlational methodology.

This is where the objective of the present research arises. As a member of the staff of the DPWH – Isabela 4th District Engineering Office, the researcher noticed that clients who approach the office for help differ substantially in age, sex, and purpose of visit, and that their preliminary responses regarding the quality of the service have also varied. Thus, the purpose of this research was to identify whether there is any significant correlation between the demographic profile of clients and their quality of service evaluation.

1.1 Theoretical Framework

This study is based on the Service Quality (SERVQUAL) Model, which defines service quality as the difference between customers' expectations of a service and the service they actually receive. The SERVQUAL defines the five aspects based on which service quality can be measured:

- Tangibles – refers to the physical facilities, equipment, and appearance of personnel;
- Reliability – is the ability to realize the promised service accurately and dependably;
- Responsiveness – indicates the readiness to assist customers and provide services quickly;
- Assurance – is the knowledge and courtesy of the staff of the institution along with their ability to create confidence; and
- Empathy – represents care and individual approach towards customers.

The SERVQUAL framework is described to be one of the most complete and widely used tool for measurement of both public and private service quality (Fikri & Nawangsari, 2023; Farah et al., 2025) continuing to be the theoretical basis of various service assessments in the public sector such as in government services and health care (Wisniewski, 2001; Hutchinson, Do, & Agha, 2011).

The research also draws on the body of research on demographic segmentation in service perception, supported by the theory that personal features such as gender, age, and marital status influence how a consumer perceives and assesses a service encounter (Ganesan-Lim et al., 2008; Al-Jazzazi & Sultan, 2017).

1.2 Conceptual Framework

This study's conceptual framework is premised on the idea that the demographic profile of clients (independent variable) may influence the perceived service quality (dependent variable) of the DPWH – Isabela 4th District Engineering Office. The independent variable, the client's profile, comprises sex, age, civil status, and level of education. The dependent variable, perceived service quality, is measured in terms of the five SERVQUAL dimensions: tangibility, reliability, responsiveness, assurance, and empathy.

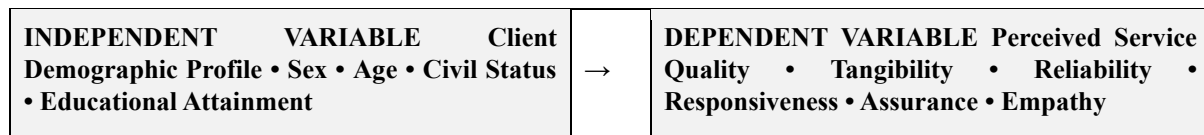


Figure 1. The Research Paradigm of the Study

1.3 Statement of the Problem

This study aimed to determine the relationship between clients' demographic profiles and their perceived service quality at the Department of Public Works and Highways – Isabela 4th District Engineering Office.

Specifically, it sought to answer the following questions:

1. What is the demographic profile of the respondents in terms of: (a) sex; (b) age; (c) civil status; and (d) educational attainment?
2. What is the level of perceived service quality of the DPWH – Isabela 4th District Engineering Office as assessed by the respondents in terms of: (a) tangibility; (b) reliability; (c) responsiveness; (d) assurance; and (e) empathy?
3. Is there a significant relationship between the demographic profile of the respondents and their perceived service quality of the DPWH – Isabela 4th District Engineering Office?
4. Based on the findings of the study, what recommendations may be proposed to enhance the service quality of the DPWH – Isabela 4th District Engineering Office?

2. Review of Literature and Studies

This chapter presents a review of related literature and studies that provided theoretical and empirical grounding for the present study. It is organized into three sections: (1) Service Quality and the SERVQUAL Model, (2) Service Quality in the Public Sector, and (3) Client Demographic Profile and Service Quality Perception.

2.1 Service Quality and the SERVQUAL Model

The concept of service quality has been examined in many publications from a marketing and management environment through the Gaps Model, which was proposed by Parasuraman, Zeithaml, and Berry. According to this model, service quality is defined as the gap between the expected and the perceived level of service, which gave rise to the SERVQUAL model. It is believed to be the most comprehensive and widely used attempt to measure the level of service quality in various industries (Fikri & Nawangsari, 2023). This model measures 5 aspects of service, including tangibles, reliability, responsiveness, assurance, and empathy, which have been verified and used in many different service sectors, including banking and health tourism, audit, and higher education (Farah et al., 2025).

In spite of the fact that this model is widely-used, it has been criticized with respect to the validity of the idea that difference scores are meaningful (Fikri & Nawangsari, 2023). Nevertheless, continuous improvement of the model by original authors and its application in various industries contribute to its dominance in the field of service quality measurement (Fahim, 2019).

2.2 Service Quality in the Public Sector

The provision of services by public sector entities is quite different from the provision of services by private sector entities, mainly due to the absence of pressures that induce private firms to continue improving service quality in public sector agencies (Rhee & Rha, 2009). As a result of this significant difference, research has emerged that is concerned with the application of the SERVQUAL model to governmental and quasi-governmental service operations.

A study that aimed to measure citizen-client satisfaction across twenty-one municipalities showed that not all aspects of service quality affect overall client satisfaction evenly; namely, interpersonal front-office aspects of trust, testimonials, and assistance played a major role in the formation of satisfaction of citizens engaging in face-to-face communication with municipal authorities (Mbassi et al., 2019). Furthermore, in another study concerning services provided by a Japanese city hall, human and service-related components were found to play a more important role in customer satisfaction formation than hardware components, such as the arrangement of the office, and that being on time is not synonymous with being satisfied (Moteki, 2021).

The initial use of SERVQUAL within Scottish local councils confirmed its usefulness in ensuring the continuous improvement of services and resulted in a broader implementation of this approach in governmental organizations (Wisniewski, 2001). Thus, SERVQUAL started being utilized by public transportation organizations, airlines, service malls, and numerous government establishments available for consumers (Fahim,

2019; Fikri & Nawangsari, 2023).

Moreover, research in the field of public health also confirms the relevance of assessing service quality in governmental institutions. In a research study that compared family planning services in Tanzania, Kenya, and Ghana, structural and process quality measures were identified as the most salient elements that determine customer satisfaction (Hutchinson et al., 2011). Similar conclusions were made in research on national health insurance schemes in Ghana, where significant predictors of the services' quality perceived by clients were identified (Nketiah-Amponsah et al., 2019).

2.3 Client Demographic Profile and Service Quality Perception

A different stream of studies has revealed whether demographic factors of the clients affect their perception of service quality. However, the results in this regard are not consistent across different circumstances.

Research into the perceptions of shopping centers showed that demographic factors like gender and education had a significant impact on how service quality was perceived by them, with women being more favorable towards the service quality than men, although age was found to be an insignificant factor (Ojekalu et al., 2019). A similar outcome was obtained for the Albanian bank clients, where many demographic factors including gender, age, occupation, education, and income influenced the way people perceived the respective service quality dimension (Grazhdani & Merollari, 2015).

Likewise, the large-scale research conducted with clients from banks in Jordan did not find differences in service quality evaluation based on gender and education level, while variable factors such as age, income, occupation, and religion demonstrated significant impact (Al-Jazzazi & Sultan, 2017). Similarly, an analysis of both high-contact and low-contact services in passenger transport revealed age to be an essential factor influencing perceptions regarding quality, while no differences were recorded regarding gender or income basis (Ganesan-Lim et al., 2008). A recent study also showed no influence of demographic data on quality evaluation in a health tourism agency, including gender and age, education level, income, and occupation (Farah et al., 2025).

In specific studies in sectors, additional details are available. In the instance of light rail transport in Kuala Lumpur, it was observed that gender and age were both strong predictors in the understanding of service quality attributes such as comfort, assistance from staff members, and information provision, and based on the findings the authors recommend the use of techniques for segmentation of clients based on demographic data for the purpose of improving the overall service provision (Ibrahim et al., 2021). In the context of the Philippines and Southeast Asia in general, it has also been observed that women form their perceptions in a different manner when compared to men regarding the various aspects evaluated such as quality of services, equality of treatment, corruption, as many female respondents reported perceiving the services to be worse, especially in the sphere of health and enforcement (Cazzuffi & Retamal, 2025).

Overall, the studies suggest that although demographic characteristics tend to correlate with measuring service quality, the individual variables that matter, and their direction of impact, depend heavily on service type, cultural context, and population. The lack of uniformity in the results necessitates the provision of research into this correlation in a specific sectoral context, as is done in this study with respect to the case of a DPWH district engineering office in the Philippines.

2.4 Synthesis

The literature reviewed shows SERVQUAL as an effective and well-tested structure for measuring the quality of services for both government and private sector organizations, including local government and infrastructure-related agencies. It also shows that the demographic characteristics of the consumers — especially sex and age — have been shown to correlate with perception of service quality in certain circumstances but not in others, meaning that this correlation is neither universal nor automatic. None of the studies reviewed analyzed the situation in a DPWH district engineering office in the Philippines, and that is the research gap that the current study aimed to fill.

2.5 Research Design

The descriptive-correlational research methodology was used in this research. The descriptive part referred to the demographic profile of the participants and their perceived service quality of the DPWH – Isabela 4th District Engineering Office. Meanwhile, the correlational part was employed to determine whether there was any relationship between the respondents' demographic profile and their perceived service quality. The use of this method was suitable because it allows for findings of existing conditions and identifies relationships between variables without conducting an experiment (Fikri & Nawangsari, 2023; Farah et al., 2025).

2.6 Locale of the Study

The research was carried out in the Department of Public Works and Highways – Isabela 4th District

Engineering Office in Quezon, San Isidro, Isabela.

2.7 Population and Sampling Procedure

In this research study, the participants were clients who interacted with the Department of Public Works and Highways (DPWH) through its Isabela 4th District Engineering Office. In total, forty-eight clients were sampled by employing a simple random sampling technique. Clients were equally divided into two genders, with twenty-four male clients and twenty-four female clients who submitted completed questionnaires. Simple random sampling was justified for being an effective way of selecting people to take part in the study within the whole population represented by clients of DPWH.

Table 1. Distribution of Respondents by Sex

Sex	Frequency	Percentage
Male	24	50.0%
Female	24	50.0%
Total	48	100%

2.8 Research Instrument

Data were gathered using specifically developed self-administered questionnaires based on the SERVQUAL model by Parasuraman, Zeithaml, and Berry and implemented in similar research concerning the quality of public services (Wisniewski, 2001; Fahim, 2019). Two components constituted the questionnaire: the first part included information about gender, age, civil status, and education, while the second part comprised twenty-five different statements measuring service quality perceptions according to five important SERVQUAL dimensions, that is, tangible aspects, reliability, responsiveness, assurance, and empathy, through the use of five statements for each dimension. The survey results were analyzed by using a five-point Likert scale (5 means that the respondents agree strongly, while 1 means that they disagree, that is, that they are not likely to support the idea proposed in the statements given). The complete version of the questionnaire is presented in Appendix B.

2.9 Validity and Reliability of the Instrument

The questionnaire was validated for content prior to administration by business management and public administration experts. Before it was fully administered, a pilot test was conducted to establish the instrument's internal consistency reliability, with Cronbach's alpha calculated for each of the five SERVQUAL subscales, where a score of 0.70 or more is typically acceptable when a study is conducted.

2.10 Data Gathering Procedure

Once the research was approved, the researcher received written approval from the District Engineer of the DPWH-Isabela 4th District Engineering Office to conduct the study (Appendix A). The researcher personally administered the questionnaire to randomly selected clients who visited the office after getting permission to conduct the research. In addition, respondents were told that they were free to choose whether or not to participate voluntarily.

2.11 Statistical Treatment of Data

The following statistical tools were used to treat the gathered data:

- Frequency and Percentage Distribution – used to describe the demographic profile of the respondents.
- Weighted Mean – used to determine the level of perceived service quality per SERVQUAL dimension, interpreted using the following scale: 4.21–5.00 (Very High); 3.41–4.20 (High); 2.61–3.40 (Moderate); 1.81–2.60 (Low); and 1.00–1.80 (Very Low).
- Pearson Product-Moment Correlation Coefficient (Pearson r) – used to determine the significance of the relationship between perceived service quality and the dichotomous/ordinal demographic variables (sex and age), at the 0.05 level of significance.
- One-Way Analysis of Variance (ANOVA) – used in place of Pearson r for the demographic variables with more than two nominal categories (civil status and educational attainment), since correlating a multi-category nominal variable directly against a continuous scale is not statistically appropriate; ANOVA instead tests whether mean perceived service quality differs significantly across the categories of each variable, at the 0.05 level of significance.

2.12 Ethical Considerations

The research adhered to ethical principles related to conducting research involving people. Informed consent was received from all respondents before data collection took place, and they were informed regarding the research purpose. Lastly, the identity of respondents remained anonymous, and the information was used strictly for academic research purposes.

3. Results and Discussion

The chapter discusses the contents of data pertaining to the replies given by the forty-eight (48) respondents who have filled out the questionnaire. The structure of the chapter includes questions discussed in Chapter 1, which include: (1) ‘Who are the respondents?’ (2) ‘What do they think of the quality of the service?’ (3) ‘How do the respondents’ definition (age, sex, marital status, education) of a human being influence their evaluation of the service?’ Tables of the chapter are followed by brief interpretations of the figures used therein in relation to the cases described in Chapter 2.

3.1 Problem 1: Demographic Profile of Respondents

Table 2. Demographic Profile of the Respondents

Demographic Variable	Category	Frequency (f)	Percentage (%)
Sex	Male	24	50.0
	Female	24	50.0
Age	18-27	10	20.8
	28-37	10	20.8
	38-47	10	20.8
	48-57	10	20.8
	58 and above	8	16.7
Civil Status	Married	24	50.0
	Single	16	33.3
	Widowed	4	8.3
	Separated	4	8.3
Educational Attainment	Elementary	2	4.2
	High School	8	16.7
	College	32	66.7
	Postgraduate	6	12.5
Total		48	100.0

To briefly summarize the information in Table 2, both sexes were represented evenly, with men and women both numbering 24, which accounts for exactly half of the participants. This is a good proportion for this research since the results will not be biased in relation to the sex issue addressed in Problem 3.

Age-wise, the participants were also evenly spread out. Approximately 20% of respondents fall into each age group from 18 to 57 (10 respondents in each group), while a bit fewer participants—8 people, or 16.7%—are aged 58 and older.

Around 50% of respondents are married, about a third are single, while very few participants are widowed or separated. Most participants (66.7%) graduated from college, while few had finished their education at the secondary school level (16.7%), were postgraduate students (12.5%), or had only graduated from an elementary school (4.2%).

3.2 Problem 2: Level of Perceived Service Quality

Table 3. Level of Perceived Service Quality by Dimension

SERVQUAL Dimension	Weighted Mean	Verbal Interpretation	Rank
Assurance	4.34	Very High	1
Empathy	4.09	High	2

Tangibility	4.05	High	3
Reliability	3.88	High	4
Responsiveness	3.80	High	5
Overall Weighted Mean	4.03	High	

Interpreting Table 3 is easy: the ‘weighted mean’ just indicates the mean rating given by clients on a scale of 1 (Strongly Disagree) to 5 (Strongly Agree). High scores imply that clients agree with the office’s high performance in the area, whereas low scores imply the reverse situation. All scores received in the present study earned High or Very High ratings, which is a good overall outcome – none of the dimensions had a rating of Moderate, Low, or Very Low.

The quality of overall service provided by the office was evaluated as High by clients, with the mean value equal to 4.03 out of 5. Assurance was rated as the best one (4.34, Very High). This means that clients believe that the employees are knowledgeable, polite, and trustworthy. Empathy (4.09) and Tangibility (4.05) follow with High ratings as well, which means that clients believe that employees provide them with personal attention and that they are satisfied with the office’s physical aspect (cleanliness, appearance of employees, signs, etc.).

Reliability and Responsiveness received High ratings. However, these dimensions were the two lowest of five ratings, which means that customers are less pleased with transaction speed and consistency regarding waiting. Low ratings of individual phrases can clarify that the lowest rated phrase is “Waiting time before being attended to is reasonable”, which is the phrase with the lowest mean score of 3.38. It is followed by phrases: “Transactions are processed within the promised time frame (mean = 3.54)” and “Staff members are never too busy to respond to requests of the clients (mean = 3.56)”. Interestingly enough, means with higher scores are: “The office maintains professionalism in every interaction with clients (mean = 4.44)”, “Staff members know what they offer (mean = 4.42)”, and “As for the appearance of the employees, it is perceived as formal (mean = 4.38)”. Thus, it is possible to say that clients like staff attitudes and overall knowledge of the team, but still want to deal with their issues faster.

This trend corresponds with previous findings by other researchers who did similar studies in government offices. A study conducted in Japan has shown that speed and efficiency do not lead to greater satisfaction than the human side of service (Moteki, 2021). Similar conclusions have been reached in a study of citizen satisfaction with municipalities. It has also been shown that although promptness is significant when providing services, people still prefer the personal, human touch in the process (Mbassi et al., 2019). The changes in the situation at the DPWH – Isabela 4th District Engineering Office should focus on reducing waiting time and making processes proceed according to plan, but not on changing the staff attitude, which is already positive.

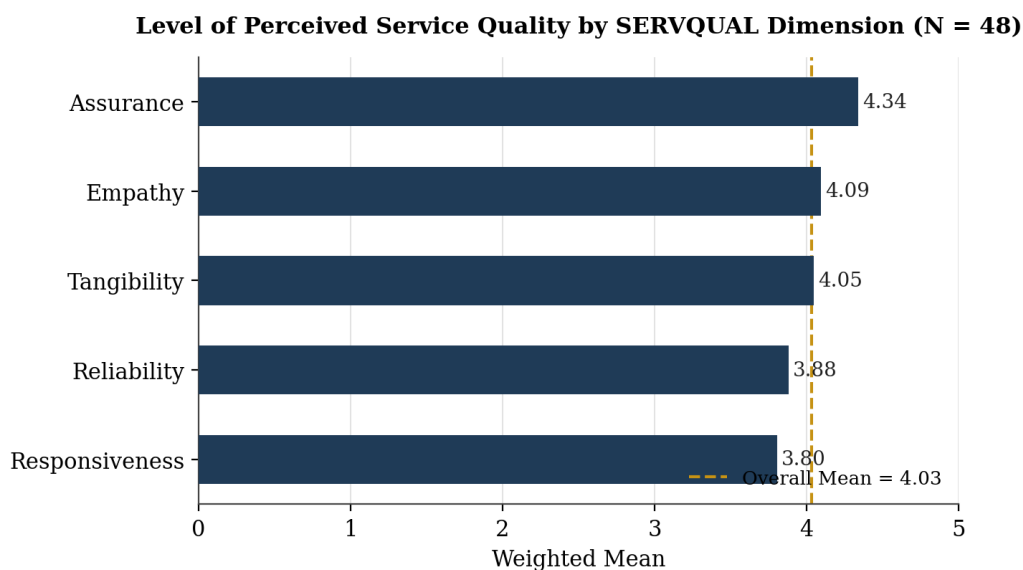


Figure 2. Level of Perceived Service Quality by SERVQUAL Dimension

3.3 Problem 3: Relationship Between Demographic Profile and Perceived Service Quality

This subsection addresses the main question of the research — does sex, age, marital status, or the level of education of a client influence their assessment of quality of service provided by the office? Two basic methods of statistical analysis were applied:

- Pearson r was used for sex and age analysis ranging from -1 to $+1$. The closer it is to 0 , the weaker the correlation is. Following a common rule of thumb: values below $.20$ indicate very weak correlation, from $.20$ to $.39$ indicating weak correlation, from $.40$ to $.59$ indicating moderate correlation, from $.60$ to $.79$ indicating strong correlation, and above $.80$ indicating very strong correlation.
- One-Way ANOVA (F-value) was employed in the civil status and education analysis, which comprises more than two categories (for instance, married, single, widowed, separated). It tests whether there is a significant difference between the average scores.
- p-value is the number used in both methods that allows determining if a result is significant. When p is lower than $.05$, the correlation is regarded as real.

3.4 Sex and Perceived Service Quality (Pearson r)

Table 4. Correlation Between Sex and Perceived Service Quality

SERVQUAL Dimension	r	p-value	Decision
Tangibility	0.121	0.411	Not Significant
Reliability	0.194	0.185	Not Significant
Responsiveness	0.166	0.261	Not Significant
Assurance	0.009	0.951	Not Significant
Empathy	0.101	0.496	Not Significant
Overall Service Quality	0.127	0.390	Not Significant

To put it another way: gender did not matter at all. The r -values in Table 4 are low (equal to $.20$ or less), while the p -values are high (equal to $.05$ or more). Both male and female customers rated the level of service in the office in the same way in all six criteria. This is in accordance with research conducted among Jordanian bank clients (Al-Jazzazi & Sultan, 2017) and clients related to medical tourism (Farah et al., 2025), which did not find a gender influence. However, it is contrary to some other studies conducted in relation to clients of one mall and those of Albanian banks, which have proven that gender does affect results (Ojekalu et al., 2019; Grazhdani & Merollari, 2015). In other words, Chapter 2 has pointed out that the gender influence on service evaluation depends on the situation, while in this instance it does not.

3.5 Age and Perceived Service Quality (Pearson r)

Table 5. Correlation Between Age and Perceived Service Quality

SERVQUAL Dimension	r	p-value	Decision
Tangibility	0.105	0.478	Not Significant
Reliability	0.303	0.036	Significant
Responsiveness	0.206	0.160	Not Significant
Assurance	0.265	0.069	Not Significant
Empathy	0.230	0.116	Not Significant
Overall Service Quality	0.231	0.113	Not Significant

Of all six dimensions, only one dimension was found to be associated with the client's age, and that was the dimension of Reliability ($r = .303$, $p = .036$). This weak-to-moderate positive correlation implies that older clients rated the office's reliability somewhat higher than younger individuals would. However, this correlation is not strong, and age does not seem to matter for the other four dimensions of service quality, as well as for the overall. This mixed result is consistent with the results of the previous research — some studies show that age affects the quality of service (Ibrahim et al., 2021; Ganesan-Lim et al., 2008), while others show that it does not (Ojekalu et al., 2019; Farah et al., 2025). The simplest explanation of this finding is that age is not a major determinant of how clients evaluate this office; it only slightly influences reliability evaluation.

3.6 Civil Status and Perceived Service Quality (One-Way ANOVA)

Table 6. Analysis of Variance Between Civil Status and Perceived Service Quality

SERVQUAL Dimension	F	p-value	Decision
Tangibility	2.306	0.090	Not Significant
Reliability	3.538	0.022	Significant
Responsiveness	2.436	0.077	Not Significant
Assurance	2.833	0.049	Significant
Empathy	2.589	0.065	Not Significant
Overall Service Quality	2.925	0.044	Significant

The civil status of clients had an actual effect on how they evaluated the quality of the office, with an across-the-board mean score of significance ($p = 0.044$) and individually for Reliability ($p = 0.022$) and Assurance ($p = 0.049$) as well. In contrast, no significance was found for Tangibility, Responsiveness, and Empathy. In other words, a client's marital status affects how reliable and trustworthy the client finds a given office, but it does not affect how the office facilities, staff's time, or personal treatment by the staff are perceived. One possible explanation for these findings is that a client's life status sets expectations during the process of creating trust in the transaction, as shown earlier in the works of Grazhdani & Merollari (2015).

3.7 Educational Attainment and Perceived Service Quality (One-Way ANOVA)

Table 7. Analysis of Variance Between Educational Attainment and Perceived Service Quality

SERVQUAL Dimension	F	p-value	Decision
Tangibility	3.854	0.016	Significant
Reliability	4.946	0.005	Significant
Responsiveness	3.798	0.017	Significant
Assurance	1.905	0.143	Not Significant
Empathy	2.912	0.045	Significant
Overall Service Quality	3.642	0.020	Significant

Education level showed the strongest connection compared to the other four demographic elements used in the study. The relation was significant for the general service level ($p = .020$) and most scales. The only exception was the Factor of Assurance ($p = .143$). In other words, people with different educational experiences tend to distinguish and evaluate the concrete things about the service which are more apparent to them. They usually differ regarding all scales, but tend to arrive at a common conclusion regarding the scale of Assurance — in most cases, regardless of their education, people will see the staff as knowledgeable and competent. This correlation has been found in previous studies as well, which indicate education level to be one of the demographic indicators impacting service quality perception the most.

Relationship Between Demographic Profile and Perceived Service Quality
(Navy = statistically significant at $p < .05$; * marks significant cells)

Sex (Pearson r)	r=.121 p=0.411	r=.194 p=0.185	r=.166 p=0.261	r=.009 p=0.951	r=.101 p=0.496	r=.127 p=0.390
Age (Pearson r)	r=.105 p=0.478	r=.303 p=0.036*	r=.206 p=0.160	r=.265 p=0.069	r=.230 p=0.116	r=.231 p=0.113
Civil Status (ANOVA)	F=2.31 p=0.090	F=3.54 p=0.022*	F=2.44 p=0.077	F=2.83 p=0.049*	F=2.59 p=0.065	F=2.93 p=0.044*
Education (ANOVA)	F=3.85 p=0.016*	F=4.95 p=0.005*	F=3.80 p=0.017*	F=1.91 p=0.143	F=2.91 p=0.045*	F=3.64 p=0.020*
	Tangibility	Reliability	Responsiveness	Assurance	Empathy	Overall

Figure 3. Summary Map of Statistical Significance: Demographic Profile vs. Perceived Service Quality

3.8 Summary of Findings on Problem 3

Aggregating the four demographic variables creates a clear picture. Sex had no importance. Age was relevant for only one element out of five (Reliability). Civil status was important for two elements (Reliability and Assurance) as well as the total score. Educational attainment played the most important role since it was relevant for four out of five elements and the total score. In other words, not all backgrounds of clients affect service perception equally — education and civil status do so, while sex does not play a role and age influences only a small part of the picture.

According to the obtained results, the null hypothesis of the research — that there is no relationship between client demographics and perceived service quality — is rejected in the case of civil status and educational attainment (there is a relationship), but not rejected in the case of sex (no relationship) and partially rejected in the case of age (a relationship was found only for Reliability).

4. Conclusions

From the analysis, the following findings can be concluded:

- 1) Overall perceptions of the quality of services rendered by DPWH – Isabela 4th District Engineering Office are mostly positive in terms of service attributes such as professionalism, comfort, and efficiency of the office employees (Assurance), as well as speed and consistency of service delivery, though these parameters are not as robust as others (Responsiveness and Reliability).
- 2) The null hypothesis remains unchallenged in regard to gender as the research did not find any correlations between clients' sex and their perceived service quality.
- 3) The null hypothesis is found to be refuted pertaining to the age factor, but only in terms of Reliability dimension.
- 4) The null hypothesis regarding marital status and education is rejected; both of these variables have a significant influence on the client's assessment of the service quality.
- 5) From the above discussion, it can be seen that the profile of a client has a varying effect on the quality of service.

5. Recommendations

- 1) The clients of DPWH-Isabela 4th District Engineering Office gave the lowest ratings for responsiveness. To increase responsiveness and service quality, this office should adopt strategies for improving customer service, including queue management or providing more precise service time commitments.
- 2) Since reliability was also rated lower than average and highly correlated to age and civil status, the office needs to create uniform procedures. Moreover, it should keep its clients updated on the status of their requests, given that efficiency and reliability are crucial for all client groups.
- 3) Since the level of education is closely connected with almost all service dimensions, the office may

consider changing its communication methods. It may need to simplify its communication modes to explain the procedures and requirements to clients with different educational backgrounds.

- 4) The office must preserve its strong results and build on its achievements in the field of Assurance and Empathy, including by conducting more customer service training for its frontline staff.
- 5) Future researchers may want to replicate this research in other offices of the DPWH district engineering division (or maybe also consider other demographic factors, e.g., income, frequency of visits, purpose of visit, etc.) so that they will have a more complete understanding of the kind of quality of service the clients from the DPWH field office have.
- 6) A follow-up study is suggested based on the larger sample size and mixed-method approach that will include the open-ended feedback from clients to better explain the nature of civil status and educational attainment issues found in the current research.

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