

Exploring satisfaction with military catering services using the service quality model and importance-performance analysis

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Abstract

The importance of military catering in military organizations cannot be overlooked, as it not only impacts the health and physical fitness of service members but also directly affects combat readiness and morale. This study focuses on a northern air force base, using the Parasuraman-Zeithaml-Berry service quality (SERVQUAL) model's Gap 1 and Gap 5 as its framework. The aim is to investigate the perception gaps in catering service quality between food service providers and customer. An importance-performance analysis matrix is employed to further analyze the findings. The analysis reveals that, regarding "catering service quality," food service providers who are actively serving without formal food service certification, and those with high school or college education, tend to place more emphasis on tangibility, reliability, empathy, and responsiveness. For service quality expectations, customers who possess a college education and have obtained a food service certification show higher expectations in tangibility and reliability dimensions. Younger customer, aged 18–25, who are uncertified and less experienced, report greater satisfaction with the catering service's reliability, responsiveness, and assurance dimensions after their experience with the base's services. Regarding the perception difference in Gap 1 of the SERVQUAL model, the study suggests that services should prioritize user experience and ensure transparency by publicizing findings from meal review meetings. Feedback can be gathered through a satisfaction mailbox to address and efficiently amend any service deficiencies. For Gap 5 in terms of experience, customers show particular concern for food safety measures and overall service quality, indicating that these areas should be maintained or enhanced. Regular training is recommended to improve the knowledge and effectiveness of food service providers in these critical aspects.

Keywords: Group Catering, Importance-Performance Analysis Matrix, Service Quality Model, User Satisfaction

1. Introduction

Military catering services not only fulfill basic nutritional needs but also play a critical role in supporting military operations and assurance readiness. Conducting academic research on the service quality of military catering can facilitate management and operational optimization, thus enhancing overall combat effectiveness and the well-being of military personnel. This study is based on the service quality model (SERVQUAL) and its scale proposed by Parasuraman et al. (1988). It targets "food service providers" and "customer" at an Air Force base in northern Taiwan, distributing questionnaires to

investigate perceived differences in service quality during meal times and aiming to minimize latent risks in military catering services.

The objectives of this research are threefold: to examine the perception gap in service quality between "food service providers" and the "customer" (Gap 1); to explore the perception gap between "customer" expectations and their "actual experiences" with service quality in Air Force catering services (Gap 5); and to propose actionable improvement strategies for both gaps. The findings of this study are intended to serve as a strategic reference for military units in enhancing catering service quality in the future.

2. Literature Review

2.1. Group Catering

Morgan (2004) defines group catering as a systematic approach to meal management that enables coordinated food service operations to produce meals that maximize customer satisfaction while ensuring reasonable profitability for the catering organization. Examples include self-service buffet arrangements, which minimize labor requirements and provide large quantities of dishes within a short time to satisfy the dining needs of many people.

2.2. User Satisfaction

Customer satisfaction, also known as “CS,” refers to the alignment of a customer’s expectations with their perception of having those needs met. Cardozo (1965) suggests that customer satisfaction increases the likelihood of repeat purchases and can further influence the willingness to buy other products. Scholars Czepiel et al. (1974) argue that the degree of customer satisfaction can be seen as an overall evaluative response within the service process, representing a composite of subjective reactions to various product attributes (Oliver, 1981). Furthermore, Rosenzweig and Singh (1991) emphasize that “customer satisfaction” should be measured individually across the performance of each attribute of a product, with these individual scores aggregated to produce an overall satisfaction measure. In summary, both customer satisfaction and overall satisfaction vary depending on the industry and the specific research subjects.

2.3. Service Quality Model and Service Quality

The SERVQUAL defines service quality based on the customer’s experience throughout the service process. Wyckoff (1984) suggests that service quality is achieved by meeting the immediate needs of the customer, a perspective closely tied to the existing brand image (Sasser, Olsen, & Wyckoff, 1978). In contrast, Gronroos (1982) posits that service quality is determined by comparing the consumer’s “expectations” with their “actual experiences.” Lehtinen and Lehtinen (1982) further conceptualize service quality across three dimensions, interaction, tangibility, and communality, arguing that service quality should be evaluated from the customer’s perspective. According to their view, the quality valued by customers is derived from both the service process and the outcome.

The SERVQUAL utilized in this study is based on the SERVQUAL scale, developed by the scholars in 1988, for measuring service quality. A brief overview is provided below:

- (i) **Tangibility**
In the service process, tangible aspects emphasize the actual service experience, encompassing all physical elements or sensations encountered during dining. This includes the environment, equipment, facilities, staff, decor, scent, hygiene, and even the attitude and demeanor of personnel in delivering service to customers (Kazarian, 1983).
- (ii) **Reliability**
Reliability reflects the customer’s expectation beyond simply satisfying hunger; it includes the desire for dependable food, service, facilities, environment, safety, hygiene, and everything pertinent to the customer’s dining experience.
- (iii) **Assurance**
Assurance complements tangibility, signifying the politeness and respect service staff demonstrate toward customers while providing food or services. It builds trust and confidence in the service staff’s overall performance, thus contributing to customer satisfaction.
- (iv) **Responsiveness**
Unforeseen incidents and even disasters are unpredictable. Through training, service staff can enhance their responsiveness and learn to appropriately assist customers when problems or mishandlings arise. Effective remediation can even encourage customer loyalty and increase the likelihood of repeat visits.
- (v) **Empathy**
According to Maslow’s hierarchy (Maslow, 1943) of needs, the need for esteem is reflected here, where customers seek respectful treatment from service staff. Empathy focuses on delivering personalized attention and the most suitable service, ensuring a satisfying dining experience for customers (Maslow, 1943).

In 1985, Parasuraman et al. at Cambridge University developed the SERVQUAL. This model emphasizes the core idea that “the customer is the determinant of service quality.” Within this service quality framework, there are five gaps, each highlighting critical areas that must be addressed to ensure customer satisfaction with the service. The model suggests that bridging these five service quality gaps is essential to achieving customer satisfaction (Fig. 1).

3. Research Methodology

3.1. Data Collection and Analysis Method

This study adopts the SERVQUAL as its research methodology and utilizes the SERVQUAL scale to develop a service quality satisfaction questionnaire.

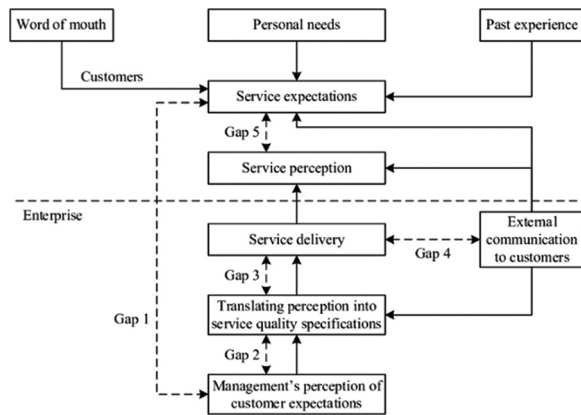


Fig. 1. Service quality model (SERVQUAL)
Source: Blackett (1988); Parasuraman et al. (1985)

The questionnaire targets “food service providers” and “customer” at an Air Force base in northern Taiwan. The study focuses on Gaps 1 and 5 of the SERVQUAL service quality model as the basis for questionnaire items, and the design incorporates the five dimensions from the revised SERVQUAL scale.

“Food service providers” refers to those responsible for menu design, calculating the number of diners, procuring ingredients, and organizing and preparing meals within the base. These personnel may include externally hired chefs or in-house mess staff. “Customer” includes both military and civilian personnel at the base who utilize group catering services. In this study, the term refers specifically to catering service managers and operators, including those with responsibilities for planning, oversight, and execution.

A single structured questionnaire was employed in this study, comprising three sections: the first section collected respondents’ demographic information; the second section assessed the service quality of institutional catering services; and the third section evaluated overall user satisfaction with the group meals. All three sections adopted consistent item designs and utilized a five-point Likert scale for measurement, thereby ensuring comparability across constructs. This design allowed the researchers to derive both Gap 1 and Gap 5 using a single questionnaire instrument.

3.2. Measurement Tools

The research framework is structured as follows:

- Gap 1: The difference between “catering managers’ perception of customer’ expectations” and “customer’ expectations of catering service quality”
- Gap 5: The difference between “customer’ expectations of catering service quality” and “customer’ experience with catering service quality” (Fig. 2).

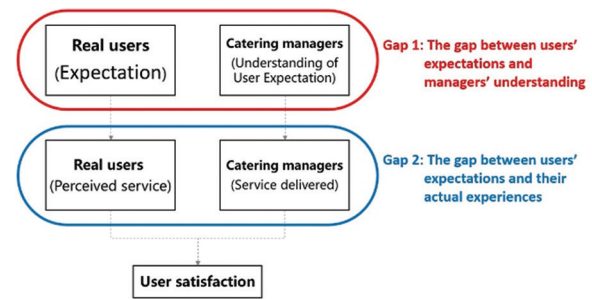


Fig. 2. Research framework diagram

4. Data Analysis and Results

A total of 460 valid questionnaires were collected in this study, distributed among “food service providers” and “customer.” The detailed analysis is as follows:

For the food service provider’s dimension, 170 valid questionnaires were collected. Among the respondents, 52% were male and 48% female. Most respondents were non-military staff (39%), followed by volunteer service members (30%), with active duty and reserve duty each accounting for 11%, and conscripts at 9%. In addition, 61% were military personnel, while 39% were in-house contracted staff.

In the customer dimension, 290 valid questionnaires were obtained. Demographic analysis showed a majority of male respondents (65%) compared to female respondents (35%). The majority were reserve duty members (68%), followed by conscripts (16%), volunteer service members (10%), active duty (4%), and non-military staff (2%).

4.1. Reliability and Validity Analysis

For the formal questionnaire, the Cronbach’s alpha values were as follows: 0.94 for “food service providers,” 0.95 for “customer’ expectations,” and 0.96 for “customer’ actual experiences,” indicating a high level of reliability. Regarding validity, the Kaiser-Meyer-Olkin (KMO) and Bartlett’s test of sphericity for the six dimensions—tangibility, reliability, assurance, responsiveness, empathy, and overall satisfaction—were 0.83, 0.81, 0.74, 0.80, 0.64, and 0.84, respectively. Although the KMO for the empathy dimension was 0.64 (slightly below the 0.7 threshold), it was within the acceptable range and therefore retained. All other dimensions had KMO values above 0.7, indicating good validity of the questionnaire. All Bartlett’s tests of sphericity were statistically significant at $p < 0.001$, confirming the suitability of the data for factor analysis.

4.2. Reliability and Validity Analysis

4.2.1. Reliability Analysis

After pilot testing and item screening, the internal consistency of each questionnaire was examined.

The overall Cronbach's alpha coefficients were as follows: 0.94 for the "institutional catering staff" scale, 0.95 for the "customer' expectations" scale, and 0.96 for the "customer' perceived experience" scale.

- (i) Reliability of the institutional catering staff scale:
Tangibles (6 items): Cronbach's $\alpha = 0.82$
Reliability (6 items): Cronbach's $\alpha = 0.82$
Assurance (4 items): Cronbach's $\alpha = 0.77$
Responsiveness (5 items): Cronbach's $\alpha = 0.85$
Empathy (3 items): Cronbach's $\alpha = 0.65$
Overall satisfaction (5 items): Cronbach's $\alpha = 0.85$.

Although the alpha coefficient for the "Empathy" dimension was slightly below the commonly accepted threshold of 0.70, it was retained as it remains within the marginally acceptable range. All other dimensions showed acceptable reliability, indicating that the questionnaire demonstrates strong internal consistency.

- (ii) Reliability of the customer' expectations scale:
Tangibles (6 items): Cronbach's $\alpha = 0.89$
Reliability (6 items): Cronbach's $\alpha = 0.93$
Assurance (4 items): Cronbach's $\alpha = 0.90$
Responsiveness (5 items): Cronbach's $\alpha = 0.86$
Empathy (3 items): Cronbach's $\alpha = 0.86$
Overall satisfaction (5 items): Cronbach's $\alpha = 0.89$

All dimensions achieved alpha values exceeding 0.70, indicating a high degree of internal reliability.

- (iii) Reliability of the customer' perceived experience scale:
Tangibles (6 items): Cronbach's $\alpha = 0.92$
Reliability (6 items): Cronbach's $\alpha = 0.94$
Assurance (4 items): Cronbach's $\alpha = 0.90$
Responsiveness (5 items): Cronbach's $\alpha = 0.92$
Empathy (3 items): Cronbach's $\alpha = 0.85$
Overall satisfaction (5 items): Cronbach's $\alpha = 0.92$

All dimensions yielded Cronbach's alpha values above the 0.70 threshold, confirming the questionnaire's reliability.

4.2.2. Factor Analysis

This section presents the KMO values and Bartlett's test of sphericity results for each dimension.

- (i) Factor analysis of the institutional catering staff scale:
Tangibles (6 items): KMO = 0.83
Reliability (6 items): KMO = 0.81
Assurance (4 items): KMO = 0.74
Responsiveness (5 items): KMO = 0.80
Empathy (3 items): KMO = 0.64
Overall satisfaction (5 items): KMO = 0.84

Although the KMO value for the "Empathy" dimension was slightly below the 0.70 threshold, it was considered marginally acceptable and thus retained. All other dimensions reported KMO values above

0.70, indicating sampling adequacy and supporting the suitability of the data for factor analysis.

4.3. Correlation Analysis

In this study, the p -value between customer' expectations and actual experiences was 0.000 for all dimensions, with Pearson correlation coefficients all below 0.01, indicating a moderate positive correlation across the dimensions. This result confirms a correlation between the expectations and experiences of customer. It substantiates the hypothesis that a service gap exists between food service, users' service quality, and customer' expectations, as well as a gap between customer' expectations of catering service quality and their satisfaction after the experience.

4.4. Importance-Performance Analysis (IPA) Matrix

To further understand the differences between the two gaps, this study employs the IPA matrix as an analytical tool (Martilla & James, 1977).

Gap 1: The gap between "catering staff's perception of customer' expectations" and "customer' expectations of catering service quality" (Fig. 3).

- (i) Quadrant I: Keep up the good work (high expectation and high satisfaction).

- Tangibility:

Item 2: Food service provider's attire is clean and orderly.

Item 3: Dining environment and hygiene quality are good.

Item 4: Provided meals adhere to refrigeration at 7°C and freezing at -18°C, with measures to prevent cross-contamination risks.

Item 5: Hot dishes meet the standard core temperature of above 60°C.

Item 8: Meals are provided on time.



Fig. 3. Analysis matrix for "Gap 1"

Abbreviations: ASS: Assurance; EMP: Empathy; REL: Reliability; RES: Responsiveness; SAT: Overall satisfaction; TAN: Tangibility. Source: Compiled by this study

- Reliability:
Item 2: food service providers have obtained relevant food service certifications.
Item 3: Adequate preventive measures are in place under pandemic conditions, such as weekly disinfection and environmental sanitation per meal during outbreaks.
Item 4: Catering following the nutritional balance in accordance with the base mission requirements.
Item 5: The food is fresh.
Item 6: Cleanliness of food containers and ingredients is well-maintained.
 - Assurance:
Item 2: Reliable services are provided.
Item 4: Food is used within its expiration date.
 - Empathy:
Item 6: Clear and accessible complaint channels for catering services.
- (ii) Quadrant II: Overly effortful (low expectation and high satisfaction).
- Overall Satisfaction:
Item 3: Overall food portion is adequate.
Item 4: Satisfaction with the overall taste of food.
Item 5: Good variety in food selection.
- (iii) Quadrant III: Low-priority improvement (low expectation and low satisfaction).
- Responsiveness:
Item 1: Food service providers do not ignore issues due to busyness.
Item 2: Questions raised by users are answered accurately.
Item 5: Food delivery personnel are quick, quiet, and precise.
Item 6: Quality service is provided on the first attempt.
 - Overall satisfaction:
Item 1: Overall food quality is good.
Item 2: Overall dining environment hygiene is satisfactory.
- (iv) Quadrant IV: Concentrate here (high expectation and low satisfaction).
- Tangibility:
Item 6: Food containers are structurally sound without cracks or damage.
 - Reliability:
Item 7: Effective oversight of daily potential food safety incidents.
 - Assurance:
Item 1: Actual dishes served are consistent with the menu.
Item 5: Food service providers prioritize users' rights in food service.

- Responsiveness:
Item 4: Issues raised are actively addressed by the catering unit.
 - Empathy:
Item 3: Routine review of catering errors.
Item 5: The catering unit shows proactive concern for users.
- Gap 5: The difference between “customer’ expectations of catering service quality” and “customer’ experience with catering service quality” (Fig. 4).
- (i) Quadrant I: Keep up the good work (high expectation and high satisfaction).
- Tangibility:
Item 2: food service provider’s attire is clean and orderly.
Item 4: Meals provided adhere to refrigeration standards of 7°C and freezing standards of -18°C, with measures to prevent cross-contamination.
Item 5: Hot dishes maintain a core temperature standard of above 60°C.
 - Reliability:
Item 2: food service providers have obtained relevant food service certifications.
Item 3: Adequate preventive measures, such as weekly disinfection of the dining area and daily sanitation during outbreaks.
Item 4: Meals are nutritionally balanced according to base mission requirements.
Item 5: The meal is fresh.
Item 4: Cleanliness of food containers and ingredients is well-maintained.
 - Assurance:
Item 4: Food is used within its expiration date.
 - Empathy:
Item 3: Routine review of catering errors.

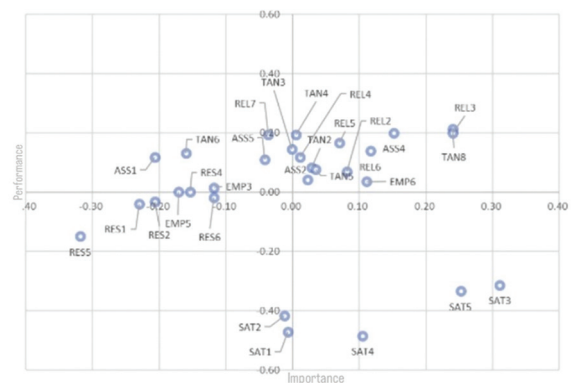


Fig. 4. Gap 5 analysis matrix
Abbreviations: ASS: Assurance; EMP: Empathy;
REL: Reliability; RES: Responsiveness; SAT: Overall
satisfaction; TAN: Tangibility. Data Source: Compiled
by this study

Item 5: The catering unit shows proactive concern for users.

(ii) Quadrant II: Overly effortful (low expectation and high satisfaction).

- Tangibility:

Item 3: Dining environment and hygiene quality are good.

Item 6: Food containers are structurally sound without cracks or damage.

- Reliability:

Item 7: Daily food safety incidents are managed accurately.

- Assurance:

Item 1: Dishes served are consistent with the menu.

Item 2: The service provided is reliable.

Item 5: Food service providers prioritize users' rights in service.

- Responsiveness:

Item 4: Issues raised by users are promptly addressed.

- Empathy:

Item 6: Clear and accessible complaint channels for catering services.

(iii) Quadrant III: Low-priority improvement (low expectation and low satisfaction).

- Responsiveness:

Item 1: Food service providers do not ignore issues due to busyness.

Item 2: Questions raised by users are accurately answered.

Item 5: Food delivery personnel are quick, quiet, and precise.

Item 6: Quality service is provided on the first attempt.

- Overall satisfaction:

Item 1: Overall food quality is good.

Item 2: Overall dining environment hygiene is satisfactory.

Item 4: Satisfaction with the overall taste of food.

(iv) Quadrant IV: Concentrate here (high expectation and low satisfaction).

- Overall satisfaction:

Item 3: Adequate portion sizes for meals.

Item 5: Good variety in food selection.

These areas in Quadrant IV should be prioritized for review and improvement to better align with user expectations.

In addition, it is recommended that future improvements incorporate intelligent menu design systems that leverage big data analytics to identify the preferences of customer. Such systems can provide

personalized, seasonal, and nutritionally balanced meal options. Furthermore, the application of modern cooking techniques, such as sous vide, and the adoption of energy-efficient smart kitchen equipment may enhance both meal quality and operational efficiency.

From a management perspective, it is advisable to implement a participatory service improvement mechanism, such as regularly organizing user forums or conducting anonymous feedback surveys, to enhance user engagement. Menu planning should incorporate local culinary characteristics and seasonal ingredients to promote dietary diversity and health orientation. Moreover, offering customized options for special dietary needs—such as low-carbohydrate, plant-based, or gluten-free meals—may further improve overall dining satisfaction and user loyalty.

5. Conclusion and Recommendations

This chapter presents the findings in Section 1, followed by practical recommendations for military units in Section 2.

5.1. Research Findings

For the differences in service quality perception by hierarchical level, the study found significant differences in the perceived quality of catering services, specifically in the SERVQUAL dimension of tangibility, based on the hierarchical level of food service providers. Higher-ranking personnel demonstrated a stronger focus on tangible aspects, including food, service, facilities, safety, and hygiene. This suggests that military personnel are more attuned to and value tangible service quality compared to in-house contracted staff within the northern air force base. Specifically, “military personnel > in-house contracted staff” highlights that military personnel are more aware and concerned about the tangible aspects of catering service quality than their civilian counterparts.

In terms of the impact of certification on the perception of service quality reliability, significant differences were observed in the SERVQUAL reliability dimension based on whether the food service providers held food service certifications. Personnel without certification showed a greater concern for reliable, trustworthy services, implying a perception gap between certified and uncertified staff regarding service reliability. Specifically, “uncertified > certified” highlights that uncertified food service providers place more importance on reliability compared to certified personnel at the base.

Regarding the educational background, perceived responsiveness, and empathy, education level also led to significant differences in perceptions

of the SERVQUAL dimensions of responsiveness and empathy. For empathy, “high school > university (and above)” indicates that high school-level personnel are more attentive to empathetic service, while for responsiveness, “university (and above) > high school” and “high school > junior high (and below)” suggest that personnel with high school or higher education levels prioritize responsive and empathetic services.

In summary, significant differences were observed across hierarchical level, certification status, and education level. In addition, other demographic factors such as gender, age, years of service, and military duty type were found to be non-significant in this analysis.

In the analysis of differences in expectations for catering quality in SERVQUAL dimensions among customer based on demographic variables, the analysis revealed significant differences based on food service certification status. Independent sample *t*-tests indicated that users with certifications placed higher importance on tangible aspects of catering service quality—such as food, service, equipment, safety, and hygiene—than those without certifications.

In addition, educational background also significantly affected expectations in the SERVQUAL tangibility dimension. Users with a university-level education or higher placed greater emphasis on tangible aspects of catering quality than those with a high school education or below, indicating a perceptual gap based on educational level. In summary, certification status and education level were significant factors, while gender, age, hierarchical level, military duty, and years of service were not.

For the differences in actual experiences of catering quality in SERVQUAL dimensions among customer, the analysis of demographic factors reported significant differences in the SERVQUAL responsiveness dimension based on food service certification status. Users without certifications reported higher responsiveness satisfaction compared to those with certifications, indicating that certification status influences perceptions of responsiveness in actual service experiences.

Years of service also showed significant differences in the assurance and responsiveness dimensions. Users with 1–5 years of service or 6–10 years reported higher levels of assurance and responsiveness than those with over 16 years of service, suggesting that newer employees place a higher emphasis on trust and responsive service quality than longer-serving staff.

In addition, age significantly influenced perceptions of reliability, with younger users (aged 18–25) reporting a stronger expectation for reliable service compared to older users (aged 46–65). This indicates that younger customer are more likely to

expect dependable service post-experience compared to their older counterparts.

In summary, age, years of service, and certification status showed significant effects on the perception of actual experiences in catering quality, while gender, hierarchical level, education level, and military duty did not.

5.1.1. Analysis of Differences in Catering Service Quality Perception Between Food Service Providers and Customer (Gap 1)

Customer generally held lower expectations regarding the overall portion sizes and variety of meals, but reported high satisfaction after experiencing the catering service (Chang, 2024). Customer expected food service providers to maintain professional attire, ensure dining hygiene, conduct routine disinfection, maintain appropriate food temperatures (cold/hot), and serve meals on time. In addition, customer anticipated that personnel would have relevant certifications, provide balanced nutrition, use fresh ingredients within their effective dates, ensure container cleanliness, deliver trustworthy service, and offer accessible complaint channels. These expectations were generally met by the food service providers.

For the unmet expectations in food safety, user-centered service, and proactive oversight, customer expected food service providers to ensure the structural integrity of food containers, rigorously control food safety, reliably manage meal provision, prioritize user rights, show proactive concern, make timely adjustments, and conduct routine service reviews. However, food service providers placed less emphasis on these aspects, leading to unmet expectations in these areas.

In terms of the unmet expectations in empathy, responsiveness, and overall cleanliness, customer also expected attentive, considerate service, prompt and accurate responses, and quiet, efficient service that delivers satisfaction in a single attempt. In addition, they held low expectations for overall food quality and cleanliness of the dining environment, and the performance of food service providers in these areas did not lead to high satisfaction among customer.

5.1.2. Analysis of Differences Between Customer' Expectations and Actual Experiences of Catering Service Quality (Gap 5)

Customer generally had low expectations regarding portion size and meal variety, yet reported high satisfaction after experiencing these aspects of the catering service (Chang, 2024). They expected food service providers to maintain clean attire, ensure container and ingredient cleanliness, hold relevant

certifications, control food temperature (both hot and cold), conduct routine disinfection, provide fresh, balanced meals, monitor expiration dates, and review any service errors. They also expected personnel to show proactive concern for customer's needs and these expectations were met with high satisfaction in their experience.

For the unmet expectations in hygiene, reliability, and accessible feedback channels, customer had high expectations for a hygienic dining environment, reliable service, a focus on user rights, responsive problem resolution, and accessible complaint channels. However, actual satisfaction post-experience was lower than expected, indicating a service perception gap in these areas.

In terms of low expectations and low satisfaction in responsiveness and overall quality, customer held low expectations for responsiveness in understanding user needs, accurately addressing issues, meal delivery efficiency, overall food quality, dining environment hygiene, and food flavor satisfaction. These aspects were also rated poorly in actual experience, reflecting low satisfaction and confirming that these areas did not meet user expectations.

5.2. Research Recommendations

Based on the research conclusions, the following three recommendations are proposed, covering cognitive service, expected service, and actual experience, to help military units improve group catering user satisfaction in the future.

5.2.1. Focus Areas for Immediate Improvement

From the perspective of customer's experience, users emphasized the need for strict quality control over food containers, oversight of potential food safety incidents, consistency between served dishes and the menu, and prioritizing user rights in food service. In addition, they expect prompt responses to feedback, routine reviews of service errors, and proactive attention from catering units. The portions and variety of meals were also highlighted as areas with lower satisfaction post-experience, suggesting these should be prioritized for improvement. These elements are critical and should be the focus of immediate action, with food service providers responsiveness considered for secondary improvement.

5.2.2. Maintaining High Standards in Expected Service Quality

Customer reported high satisfaction with aspects, such as personnel appearance, professionalism, environmental hygiene, appropriate food temperature

and expiration control, timely meal provision, trustworthy service, and accessible complaint channels. It is recommended that military units maintain these standards consistently.

5.2.3. Training and Development for Enhanced Service Quality

The study indicates that customers prioritize not only food safety and reliability but also quality service and responsiveness during the dining process. To address these needs, it is suggested that service quality and management-related courses be incorporated into training programs for food service providers to improve their service quality.

These recommendations aim to provide a reference for military units as they work to enhance the internal quality of group catering services.

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Conflict of Interest

The authors declare that they have no competing interests.

Author Contributions

Conceptualization: Ya-Wen Chan
Methodology: Ya-Wen Chan
Data curation: All authors
Formal analysis: Ya-Wen Chan
Visualization: All authors
Writing – original draft: All authors
Writing – review & editing: Ya-Wen Chan

Availability of Data

Data are not publicly available due to confidentiality restrictions.

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Zu-Rong Zhang is a graduate of the Master's Program at the College of Lifelong Learning, Fo Guang University, Taiwan. His research interests focus on service quality management, group catering services, and user satisfaction analysis, with particular attention to the application of the SERVQUAL model and Importance–Performance Analysis (IPA) in institutional settings. During his graduate studies, he developed expertise in empirical research design, quantitative analysis, and survey methodology, contributing to academic projects on food safety and catering service quality. In addition to his academic training, he has practical experience in military logistics and catering management, serving as a First Lieutenant and Logistics Staff Officer in the Air Force Meteorological Squadron. His academic background, combined with professional practice, allows him to bridge theory and real-world application in the improvement of catering services.