

Food Service Quality and Inpatient Satisfaction in Rivers State: A Case Study of University of Port Harcourt Teaching Hospital

¹Oghonyon, Ikubie
Sarah & ²Uboegbulam,
Gideon Chukwunwem

^{1&2}Department of Hospitality
Tourism and Management
Faculty of Management Sciences,
University of Port Harcourt

Article DOI:
10.48028/iiprds/ijsreth.v11.i1.19

Keywords:

Food Service
Quality, Inpatient
Satisfaction, Quality
Management,
Perception, Service
Quality

Corresponding Author:
Uboegbulam, Gideon
Chukwunwem

ORCID Number: 0000-0001-6127-5866

Abstract

This research investigates the relationship between inpatients' satisfaction and their perceptions of food service quality within the University of Port-Harcourt Teaching Hospital (UPTH) setting, focusing on dimensions such as menu variety and nutrition, service timeliness, taste, freshness, presentation, and hygiene. The research methodology employed a quasi-experimental design with a focus on quantitative methods, utilizing questionnaires for data collection. The target population comprises inpatients at UPTH during December 2023, with convenience sampling facilitating participant selection. A sample size of 189 was determined and distributed, 177 copies were retrieved and usable. The instrument for data collection is a structured questionnaire. Descriptive and inferential statistics, including Spearman Ranks order correlation, were employed for data analysis, providing a rigorous and comprehensive understanding of the relationships between variables. This study reveals significant correlations between these factors and inpatient satisfaction, particularly in the context of positive word-of-mouth communication. Findings indicate a negative correlation between menu variety and positive word of mouth, emphasizing the need for diverse menu options to cater to diverse preferences. Positive correlations were observed for service timeliness, food taste, presentation, and hygiene, underscoring their pivotal roles in shaping patient satisfaction and communication. However, the weak correlation between food freshness and positive word of mouth suggests the need for further exploration. The study provides valuable insights into the intricate dynamics of inpatient satisfaction in hospital food services. The non-significant moderating role of the hospital environment underscores the independent impact of food service quality on patient satisfaction.

Background to the Study

The intricate relationship between food service quality and inpatient satisfaction is a critical facet of the healthcare landscape. Patient satisfaction is a multifaceted construct that encompasses various elements, including the quality of food services which seems to be emerging as a fundamental factor (Duffy et al., 2013). Research indicates that patient satisfaction is not only linked to the effectiveness of medical treatments but is also significantly influenced by non-clinical aspects of the healthcare experience, including the quality of food services provided (Eom et al., 2017). The healthcare sector has seen progress and transformation in the delivery of healthcare services for more than 20 years. These developments have raised patient expectations for quality of care, led to ever-improving technology, and expanded access to health-related information via digital media and the internet. (Haniel & Anwuri, 2021).

Quality food services contribute to the overall well-being of patients, not only by addressing nutritional needs but also by enhancing the overall hospital experience. The provision of nutritious and palatable meals is integral to the recovery process and positively influences the perception of care quality (Cleary et al., 1992). Patients who are satisfied with the food services are more likely to exhibit improved compliance with dietary recommendations, leading to better health outcomes.

Understanding the nuances of the relationship between food service quality and inpatient satisfaction is particularly crucial in the context of healthcare institutions such as the University of Port-Harcourt Teaching Hospital in Rivers State. The unique cultural and regional preferences in this setting may impact the perceived quality of food services. Researching this relationship in a specific geographical context helps tailor interventions to the local needs and preferences of the patient population, ensuring that the findings are relevant and applicable to the given healthcare environment.

Moreover, enhancing inpatient satisfaction through improved food services can have broader implications for healthcare institutions. Satisfied patients are more likely to communicate positive experiences, contributing to the hospital's reputation and potentially attracting more patients. As healthcare systems worldwide increasingly prioritize patient-centered care, a thorough understanding of the interplay between food service quality and inpatient satisfaction becomes a strategic imperative for healthcare managers and policymakers. The study addresses a critical gap in the existing literature by investigating the relationship between food service quality and inpatient satisfaction in public hospitals within Port-Harcourt, Rivers State. Despite the acknowledged significance of patient satisfaction in healthcare outcomes (Duffy et al., 2013), limited empirical research has been conducted to understand the specific dynamics of food service quality and its impact on inpatient satisfaction within the context of public healthcare institutions in this region (Eom et al., 2017).

Within the healthcare landscape, patient satisfaction has become a crucial measure of service quality, reflecting not only the effectiveness of medical treatments but also the overall patient experience (Cleary et al., 1992). Food service quality, encompassing

dimensions such as menu variety, service timeliness, taste, freshness, presentation of the food, and food hygiene and safety, plays a pivotal role in shaping the non-clinical aspects of inpatient experiences. However, the lack of in-depth exploration of these dimensions within the specific context of public hospitals in Port-Harcourt hinders the development of targeted strategies to enhance patient satisfaction. The public healthcare sector in Rivers State faces unique challenges, and understanding the factors that contribute to or detract from inpatient satisfaction is crucial for improving the overall quality of healthcare services. By focusing on the interplay between food service quality and inpatient satisfaction, this research aims to provide actionable insights for healthcare administrators and policymakers to address specific deficiencies in public hospital settings.

Furthermore, considering the significance of word of mouth in shaping perceptions of healthcare services (Duffy et al., 2013), this study introduces positive word of mouth as a moderating variable. Exploring how positive word of mouth influences the relationship between food service quality and inpatient satisfaction adds a nuanced dimension to the investigation, offering a more comprehensive understanding of the factors that contribute to positive patient experiences within public hospitals. This research seeks to fill a critical gap in the literature by examining the intricate relationship between food service quality and inpatient satisfaction in public hospitals in Port-Harcourt, Rivers State. By addressing this gap, the study aims to contribute valuable insights to both academic discourse and the practical improvement of healthcare services in the region. The primary aim of this research is to analyze the relationship between food service quality and inpatient satisfaction in University of Port-Harcourt Teaching Hospital, Rivers State.

The significance of this study lies in its potential to contribute invaluable insights to both academic scholarship and practical healthcare management. By exploring the intricate relationship between food service quality and inpatient satisfaction in hospitals within Rivers State, this research addresses a critical gap in the existing literature. Patient satisfaction is a key indicator of healthcare service quality (Duffy et al., 2013), and understanding the specific dimensions of food service quality that impact inpatient satisfaction is imperative for improving overall healthcare experiences. This study's significance extends to the public healthcare sector in Rivers State, offering evidence-based findings that can inform targeted interventions and policy decisions. Public hospitals face unique challenges, and enhancing inpatient satisfaction is essential for improving healthcare service delivery. Through a comprehensive examination of proxies such as menu variety and nutrition, service timeliness, taste, freshness, presentation of the food, and food hygiene and safety, the research aims to provide specific recommendations for improving these dimensions in public hospital settings (Eom et al., 2017).

The practical benefits derived from this study include the potential improvement of patient experiences within public hospitals. As the research identifies specific aspects of

food service quality that significantly influence inpatient satisfaction, healthcare administrators can implement targeted strategies to enhance these dimensions. Improved inpatient satisfaction not only contributes to better health outcomes but also positively impacts hospitals' reputations, potentially attracting more patients. From an academic standpoint, the study contributes to the existing body of knowledge on patient satisfaction and food service quality in healthcare settings. The findings were relevant for researchers, policymakers, and healthcare management scholars interested in understanding the nuanced relationship between these variables. The research adds a local perspective to a global discourse, offering insights that can be extrapolated to other healthcare settings facing similar challenges. Moreover, the study's outcomes have the potential to influence healthcare policies in Rivers State, guiding the development of guidelines and standards for food service quality in public hospitals. Policymakers can use the evidence-based recommendations derived from the study to implement changes that align with the unique needs and preferences of the local population.

Literature Review

Conceptual Framework

Food Service Quality

The concept of Food Service Quality holds paramount significance in the realm of healthcare, particularly within the context of inpatient care. As patients increasingly view their hospital stay as an overall experience rather than merely a medical intervention, the quality of food services has emerged as a critical aspect influencing patient satisfaction and well-being. This conceptual review delves into the multidimensional nature of Food Service Quality, exploring its various dimensions, determinants, and its profound impact on the overall patient experience. At its core, Food Service Quality refers to the effectiveness and excellence in providing nourishment to inpatients within healthcare settings. This extends beyond the mere provision of sustenance to encompass a holistic approach that considers diverse elements. One fundamental dimension is the menu variety and nutrition, emphasizing the importance of offering diverse and nutritionally balanced meal options (Cleary et al., 1992). This dimension recognizes that inpatients have varying dietary needs and preferences, necessitating a thoughtful and inclusive approach to menu planning.

Menu Variety and Nutrition

The concept of "Menu Variety and Nutrition" is integral to understanding the broader scope of Food Service Quality within the context of inpatient care in healthcare facilities. This conceptual review delves into the multifaceted dimensions of menu variety and nutritional considerations in hospital food services, exploring their implications for patient satisfaction, health outcomes, and the overall quality of care. At its essence, menu variety and nutrition encapsulate the diversity and nutritional content of the meals provided to inpatients during their hospital stay. This dimension recognizes the individualized dietary needs and preferences of patients and underscores the importance of offering a well-balanced and diverse menu. In the healthcare setting, where patients may have varying medical conditions and nutritional requirements, menu variety

becomes crucial not only for meeting these specific needs but also for enhancing the overall dining experience (Cleary et al., 1992).

Service Timeliness

The concept of "Service Timeliness" is a fundamental dimension within the broader construct of Food Service Quality, especially within the context of inpatient care in healthcare facilities. This conceptual review explores the significance of timely service in hospital food delivery, its impact on patient satisfaction, and its interplay with the overall quality of food services. Service timeliness, in the context of hospital food services, refers to the prompt and efficient delivery of meals to inpatients during their hospital stay. It is a critical aspect of Food Service Quality, acknowledging the importance of timely nourishment in supporting patients' well-being and recovery. The literature suggests that service timeliness is intricately linked to patient satisfaction, as delays in food delivery can negatively influence the overall perception of the quality of care received (Eom et al., 2017).

Food Taste

The concept of "Food Taste" is a central dimension within the broader construct of Food Service Quality, particularly in the context of inpatient care in healthcare facilities. This conceptual review explores the intricate relationship between the taste of food provided in hospitals and its impact on patient satisfaction, overall well-being, and the quality of food services. Food taste, as a critical component of Food Service Quality, goes beyond the basic fulfillment of nutritional needs; it addresses the sensory experience of inpatients during their hospital stay. The literature suggests that the taste of food significantly influences patient satisfaction and perceptions of the overall quality of care received (Cleary et al., 1992). The subjective nature of taste makes it a nuanced dimension that requires careful consideration in the provision of food services within healthcare settings.

Food Freshness

The concept of "Food Freshness" is a critical dimension within the broader construct of Food Service Quality, particularly in the context of inpatient care in healthcare facilities. This conceptual review explores the multifaceted nature of food freshness and its profound impact on patient satisfaction, health outcomes, and the overall quality of food services in hospitals. Food freshness, as a pivotal component of Food Service Quality, goes beyond the mere provision of sustenance; it encompasses the quality and condition of the ingredients used in hospital meals. The literature suggests that the freshness of food significantly influences patient satisfaction, contributing to the overall perception of the quality of care received (Cleary et al., 1992). In the hospital setting, where patients are undergoing treatment and recovery, the quality of food and its freshness become integral aspects that demand careful consideration in the provision of food services.

Presentation of the Food

The concept of the "Presentation of the Food" is a critical aspect within the broader framework of Food Service Quality, particularly in the context of inpatient care in

healthcare facilities. This conceptual review explores the multifaceted nature of food presentation and its profound impact on patient satisfaction, health outcomes, and the overall quality of food services in hospitals. Food presentation, as a pivotal component of Food Service Quality, extends beyond mere culinary aesthetics; it involves the thoughtful arrangement and visual appeal of meals provided in healthcare settings. The literature suggests that the presentation of food significantly influences patient satisfaction, contributing to the overall perception of the quality of care received (Cleary et al., 1992). In the hospital context, where patients are undergoing treatment and recovery, the visual appeal of meals becomes a crucial aspect that demands careful consideration in the provision of food services.

Food Hygiene and Safety

The concept of "Food Hygiene and Safety" stands as a cornerstone within the broader framework of Food Service Quality, particularly in the context of inpatient care in healthcare facilities. This conceptual review delves into the intricate relationship between the hygiene and safety practices associated with food provided in hospitals and their impact on the overarching construct of Food Service Quality. It explores how food hygiene and safety influence patient satisfaction, health outcomes, and the overall quality of food services in the healthcare setting. Food hygiene and safety, as fundamental elements of Food Service Quality, play a pivotal role in ensuring the well-being and satisfaction of patients in hospitals. The literature emphasizes that maintaining stringent hygiene standards throughout the food service process is crucial, from procurement and storage to preparation and serving (Sandle, 2016). In the hospital context, where patients are often more susceptible to infections and illnesses, ensuring the safety and cleanliness of the food they consume becomes paramount for their overall health and recovery.

Inpatient Satisfaction

The concept of "Inpatient Satisfaction" is a pivotal and multifaceted aspect within the broader framework of healthcare research, particularly in the context of the research topic focusing on "Food Service Quality and Inpatient Satisfaction in Public Hospitals in Port-Harcourt, Rivers State." This conceptual review explores the intricacies of inpatient satisfaction, examining its significance, determinants, measurement, and the broader implications for the quality of healthcare services provided in public hospitals. Inpatient satisfaction, as a central construct, reflects the overall contentment and positive experiences of individuals receiving healthcare services during their hospital stay. It goes beyond mere subjective feelings of happiness and encompasses various dimensions such as the perceived quality of care, communication with healthcare providers, and the overall hospital environment (Andaleeb, 2001). In the context of the research topic, understanding the nuanced factors that contribute to inpatient satisfaction becomes essential, particularly as it relates to the quality of food services provided.

Positive Word of Mouth

The concept of "Positive Word of Mouth" (PWOM) in the context of healthcare services, specifically within the framework of the research topic on "Food Service Quality and

Inpatient Satisfaction in Public Hospitals in Port-Harcourt, Rivers State," unveils a dynamic interplay between patient experiences, communication, and the amplification of positive sentiments. This conceptual review delves into the nuanced dimensions of PWOM, exploring its significance, determinants, impact on healthcare outcomes, and the implications for the enhancement of food service quality and inpatient satisfaction. Positive Word of Mouth, as a phenomenon, encapsulates the sharing of favorable experiences and recommendations from one individual to another within a social network (Arndt, 1967). In the context of healthcare, especially in public hospitals, PWOM is a powerful channel through which patients express satisfaction with their overall hospital experiences, including aspects related to food services. Understanding the intricacies of PWOM is crucial for healthcare providers seeking to foster positive patient perceptions and amplify the impact of their services.

Conceptual Model

The major variables of this study are food service quality (independent variable) and Inpatient Satisfaction (Dependent variable). Food service quality is conceptualized in relation to "Menu Variety and Nutrition", "Service Timeliness", "Food Taste", "Food Freshness", "Presentation of the Food", "Food Hygiene and Safety" and Inpatient Satisfaction is operationalized in terms of Positive Word of Mouth. For the sake of convenience, the researcher limited the study to five (7) variables taking into consideration that both the independent and dependent variables can be measured with more variables.

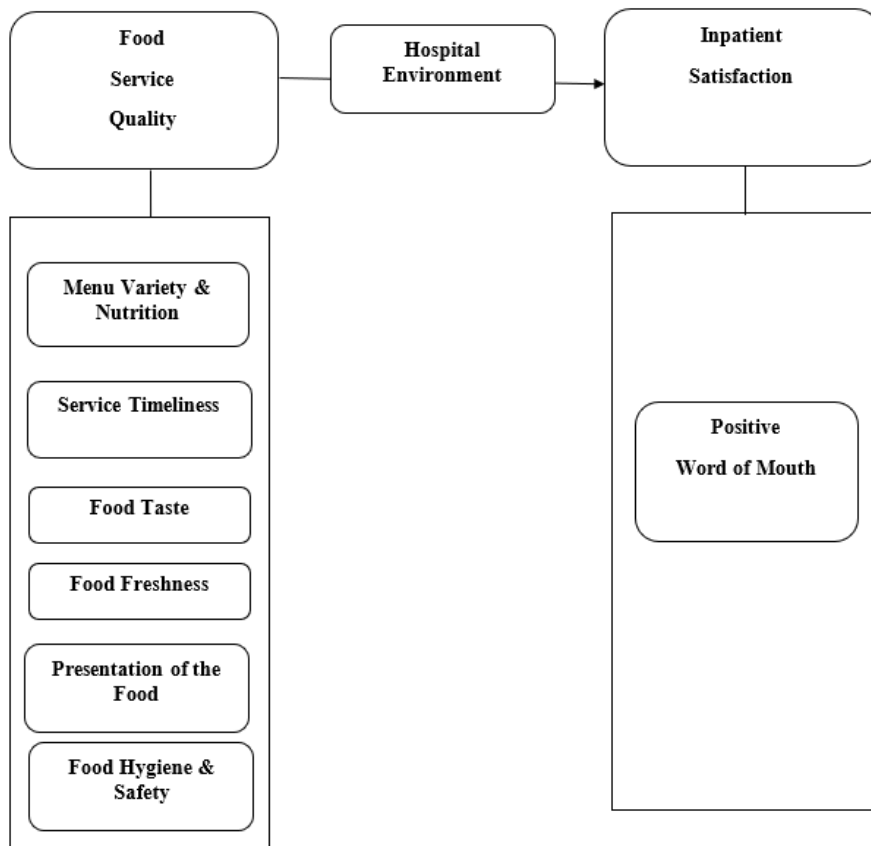


Fig 1: Conceptual Model

Source: Researcher's Conceptualization, 2023

Theoretical Framework

The SERVQUAL Model

The SERVQUAL model, developed by Parasuraman, Zeithaml, and Berry in 1985, is a widely recognized theoretical framework for evaluating and measuring service quality in various industries, including healthcare and hospitality. This model posits that service quality is a multidimensional construct encompassing five key dimensions: reliability, responsiveness, assurance, empathy, and tangibles (Parasuraman, Zeithaml, & Berry, 1985). The roots of the SERVQUAL model can be traced back to Parasuraman's doctoral dissertation at Purdue University, where he, along with Zeithaml and Berry, sought to develop a comprehensive framework for assessing service quality. The researchers recognized the need for a tool that could bridge the gap between customer expectations and perceptions of service quality, leading to the development of SERVQUAL. The major proponents and contributors to the SERVQUAL model are A. Parasuraman, Valarie Zeithaml, and Leonard Berry. Their collaborative effort resulted in the seminal paper "A Conceptual Model of Service Quality and Its Implications for Future Research," which introduced and detailed the SERVQUAL model (Parasuraman, Zeithaml, & Berry, 1985).

Patient Satisfaction Theory

The Patient Satisfaction Theory is a framework that centers on patients' subjective evaluations and contentment with healthcare services. It encompasses a broad spectrum of factors, including the quality of care, interpersonal interactions, and the overall healthcare experience. While patient satisfaction is inherently complex, this theory focuses on understanding and measuring the subjective assessments patients make regarding their healthcare encounters. The roots of the Patient Satisfaction Theory can be traced to the work of Avedis Donabedian, a pioneering figure in healthcare quality assessment. Donabedian's seminal contributions, particularly his work in the 1960s and 1970s, laid the foundation for understanding and assessing the quality of healthcare services, including the critical component of patient satisfaction (Donabedian, 1980). Over time, various researchers have further developed and refined the theory to incorporate evolving healthcare practices and patient expectations (Ware & Snyder, 1975). The Patient Satisfaction Theory is highly utilitarian in healthcare research and management. It serves as a valuable guide for understanding the complex interplay of factors influencing patient satisfaction, including the quality of medical care, communication with healthcare providers, accessibility of services, and the overall healthcare environment. Its utility extends to policy development, quality improvement initiatives, and the enhancement of patient-centered care (Donabedian, 1980).

Empirical Review

According to the research conducted by Xi (2023), valuable insights have been obtained regarding the specific factors that contribute to the overall quality of food delivery services and subsequently impact customer satisfaction. These factors encompass various aspects such as maintaining impeccable kitchen hygiene, ensuring sanitary cooking practices, delivering safe and clean food, promptly and effectively handling customer complaints, as well as facilitating easy order cancellation and refund processing. The research findings shed light on the crucial importance of continuously striving for service quality improvement within the fast-food restaurant industry. Furthermore, they emphasize the necessity of tailoring service quality models to suit specific circumstances and incorporate technological advancements in order to ensure optimal outcomes.

In their study, Udayalakshmi and Sridevi (2023) significantly emphasize the significance of customer satisfaction in the food service industry. They stress the importance for catering services to prioritize and diligently focus on delivering the highest possible standard of service in order to meet and surpass customer expectations. This highlights the need for continuous efforts in enhancing service quality within the food service industry, considering the substantial impact customer satisfaction has on overall business success and growth.

The research conducted by Min and Na (2023) elucidates the importance of incorporating quality into the overall business performance of food industries. It emphasizes the necessity for these industries to establish appropriate organizational structures, implement effective policies, develop robust quality programs, and consistently strive for

continuous improvement in order to effectively manage the quality of their food services. This highlights the significance of a comprehensive approach to quality management, which encompasses all aspects of the food service industry and ensures the delivery of high-quality services to customers.

The research conducted by HongSeok et al. (2023) is of great practical relevance for food delivery service providers. It offers valuable insights into the importance of service quality in establishing and maintaining customer loyalty, as well as retaining customers over time. The findings particularly emphasize the significance of factors such as delivery time suitability, which greatly contribute to enhancing customer loyalty and satisfaction. The practical implications of this research underscore the importance for food delivery service providers to prioritize and continuously strive for service quality improvement to effectively build and sustain customer loyalty. These insights can guide service providers in implementing strategies and practices that will ultimately lead to long-term customer satisfaction and business success.

Overall, the collective research findings mentioned above provide valuable insights into the specific factors that contribute to the quality of food delivery services and customer satisfaction. They emphasize the importance of continuously improving service quality in the fast-food restaurant industry, adapting service quality models to specific circumstances and technological advancements, focusing on customer satisfaction in the food service industry, incorporating quality into the business performance of food industries, and prioritizing service quality in building customer loyalty and retaining customers. These insights have significant implications for both practitioners and researchers in the field, offering guidance and direction for enhancing service quality and ultimately improving customer experiences in the food service industry. Researchers over time have emphasized on the importance of patient feedback in assessing and improving food service quality. However, there is a specific gap in understanding how hospitals can systematically incorporate patient feedback into continuous quality improvement processes. Developing effective mechanisms for capturing and acting upon patient input is crucial for enhancing food service quality and, consequently, inpatient satisfaction.

While some studies touch on the hospital environment, there's a specific gap in comprehensively exploring how various aspects of the hospital environment, beyond food services, contribute to overall patient satisfaction. Investigating the impact of the physical environment, staff interactions, and amenities on patient experiences can provide a more holistic understanding of inpatient satisfaction. Also, some studies have identified dissatisfaction among certain patients related to cultural considerations in menu choices, meal serving times, and the availability of healthy food options. This highlights a specific gap in understanding and addressing the cultural nuances influencing inpatient satisfaction with food services in hospital settings. Finally, the empirical review reveals a noticeable scarcity of literature specifically addressing the food service quality and inpatient satisfaction in Rivers State, specifically, at the University of

Port-Harcourt Teaching Hospital (UPTH). Despite the growing importance of these aspects in healthcare, there is a distinct lack of research focused on UPTH, which is a significant gap that warrants attention. Exploring the unique dynamics within the context of UPTH will provide insights tailored to the local healthcare landscape, offering practical implications for improving inpatient experiences and service quality within this specific geographical setting.

Methodology

This study employed a quasi-experimental research design that emphasizes the use of quantitative methods, aiming to meticulously gather and evaluate numerical data. The target population comprises inpatients receiving healthcare services at UPTH during the specified timeframe of December 2023. This selection ensures relevance to the contemporary state of food service quality and inpatient satisfaction. The researcher acquired data from the statistics department at the University of Port-Harcourt Teaching Hospital where it was determined that the total number of inpatients in the month of December 2023 were a total of 897, with 426 male and 471 female inpatients. However, since the inpatients in the paediatrics unit do not receive meals and are also not mature enough to participate in the survey, they were excluded from the study. The total number of paediatric inpatients was determined to be 117 paediatric inpatients with 69 male and 48 females. Subtracting the paediatric inpatients from the total inpatients, we have an eligible population size of 780 inpatients. The sample consists of a subset of inpatients, selected based on convenience, recognizing practical considerations and accessibility. Convenience sampling was employed to select participants for this study. Given the challenges associated with accessing certain inpatients based on the nature of healthcare settings, this technique offers practical advantages for recruitment. The researcher identified and approached inpatients who are readily accessible within the hospital premises. This may involve collaboration with healthcare staff to identify individuals willing to participate.

Sample Size Determination

In determining the sample size for this study, Taro Yamen's model was used, and this resulted in 198 as sample size.

The Taro Yamen's formula is expressed thus:

$$n = \frac{N}{1+N(e)^2}$$

Where N= population of study

n = desired sample size

e = tolerable error (0.05)

l = theoretical constant

$$\begin{aligned} n &= \frac{N}{1+N(e)^2} \\ &= \frac{780}{1+780(0.05)^2} = 197.46 = 198 \end{aligned}$$

Primary data was gathered through the administration of questionnaires to the inpatients, thereby affording the researchers the opportunity to directly collect data from the individuals who are the focus of this study. This methodological approach holds immense value as it ensures that the data collected is first-hand and directly relevant to the specific research objectives that have been delineated for this study. The primary instrument for data collection in this study is a structured questionnaire designed to assess inpatient perceptions of food service quality and satisfaction within the University of Port-Harcourt Teaching Hospital (UPTH). The questionnaire comprises items related to various dimensions of food service, including taste, freshness, presentation, hygiene, and overall satisfaction. The meticulously organized and well-structured questionnaire was employed in order to facilitate the acquisition of valuable information pertaining to the perceptions of inpatients regarding the quality of food service and their overall satisfaction during their stay at the University of Port Harcourt Teaching Hospital (UPTH).

To ensure the validity of the instrument, a rigorous process of content validity and expert review was undertaken. The questionnaire was carefully crafted based on a thorough review of relevant literature on food service quality and patient satisfaction in healthcare settings. Additionally, input from subject matter experts, including professionals in healthcare management and nutrition, was sought to enhance the relevance and appropriateness of the questionnaire items. The feedback received from experts was incorporated to refine the instrument, ensuring that it effectively captures the intended constructs. The questionnaire demonstrates internal consistency, as evidenced by a pilot test that was conducted with a subset of the inpatient population at UPTH. The pilot test involved administering the questionnaire to a small sample of inpatients and subsequently analyzing the responses for internal reliability using techniques such as Cronbach's alpha. The results of the pilot test indicate satisfactory internal consistency, affirming the reliability of the instrument. Some questions in the questionnaire were independently reviewed by two or more researchers.

Inferential statistics was employed in the form of the Spearman Ranks order correlation. This statistical technique allows for the analysis of the relationships between variables, and in doing so, provides a deeper and more nuanced understanding of the intricate interplay between food service quality and inpatient satisfaction. By utilizing inferential statistics, the researcher is able to make informed and evidence-based inferences and generalizations about the larger population from which the data was collected. This technique is particularly useful when seeking to draw conclusions and make predictions about a population based on a sample, as it allows for a more accurate and reliable estimation of the true population parameters.

Results and Discussion

The analysis shifts the research focus towards exploring the interplay between distinct variables. This particular phase of analysis engages in an in-depth exploration of the complex interdependencies and connections that exist between the various dimensions of

food service quality and the overall satisfaction of inpatients. The objective is to uncover the intricate and nuanced patterns that lie hidden beneath the surface, shedding light on the underlying factors that contribute to the overall experience of inpatients. This process involves a meticulous and rigorous examination of the data, employing the well-established statistical technique of Spearman rank order correlation analysis. By utilizing this method, we strive to reveal the underlying relationships and connections that form the intricate tapestry of inpatient experiences, unravelling the intricate web of factors that shape their overall satisfaction.

Table 1: Menu Variety

			Correlations	
			Menu Variety	PWOM
Spearman's rho	Menu Variety	Correlation Coefficient	1.000	-.409**
		Sig. (2-tailed)	.	.000
		N	177	177
	PWOM	Correlation Coefficient	-.409**	1.000
		Sig. (2-tailed)	.000	.
		N	177	177

** . Correlation is significant at the 0.01 level (2-tailed).

Source: Author's Field Survey (2023) – SPSS version 27.0 output extracts

In the bivariate analysis, specifically focusing on the relationship between Menu Variety and Positive Word of Mouth (PWOM), Spearman's rho correlation coefficient was utilized. The analysis reveals a statistically significant negative correlation of -.409 at the 0.01 significance level (2-tailed). This indicates a strong and inverse relationship between perceptions of menu variety and the likelihood of inpatients engaging in positive word-of-mouth communication. The negative correlation suggests that a higher evaluation of menu variety is associated with an increased likelihood of patients sharing positive experiences about the hospital. This finding provides a nuanced understanding of how the diversity of menu options significantly influences inpatient satisfaction and their subsequent communication of positive experiences.

Table 2: Service Timeliness

			Correlations	
			Service Timeliness	PWOM
Spearman's rho	Service Timeliness	Correlation Coefficient	1.000	.211**
		Sig. (2-tailed)	.	.005
		N	177	177
	PWOM	Correlation Coefficient	.211**	1.000
		Sig. (2-tailed)	.005	.
		N	177	177

** . Correlation is significant at the 0.01 level (2-tailed).

Source: Author's Field Survey (2023) – SPSS version 27.0 output extracts

In the bivariate analysis, focusing on the relationship between Service Timeliness and Positive Word of Mouth (PWOM), Spearman's rho correlation coefficient was employed. The analysis reveals a statistically significant positive correlation of .211 at the 0.01 significance level (2-tailed). This indicates a direct relationship between perceptions of service timeliness and the likelihood of inpatients engaging in positive word-of-mouth communication. The positive correlation suggests that a higher evaluation of service timeliness is associated with an increased likelihood of patients sharing positive experiences about the hospital. This finding contributes valuable insights into how the promptness of service delivery influences inpatient satisfaction and their subsequent communication of positive experiences.

Table 3: Food Taste

			Correlations	
			Food Taste	PWOM
Spearman's rho	Food Taste	Correlation Coefficient	1.000	-.216**
		Sig. (2-tailed)	.	.004
		N	177	177
	PWOM	Correlation Coefficient	-.216**	1.000
		Sig. (2-tailed)	.004	.
		N	177	177

** . Correlation is significant at the 0.01 level (2-tailed).

Source: Author's Field Survey (2023) – SPSS version 27.0 output extracts

In examining the bivariate relationship between Food Taste and Positive Word of Mouth (PWOM), Spearman's rho correlation coefficient was utilized. The analysis indicates a statistically significant negative correlation of -.216 at the 0.01 significance level (2-tailed). This implies an inverse relationship between perceptions of food taste and the likelihood of inpatients engaging in positive word-of-mouth communication. The negative correlation suggests that a less favourable evaluation of food taste is associated with an increased likelihood of patients expressing negative sentiments in their word-of-mouth communication. This finding provides valuable insights into the impact of food taste perceptions on inpatient satisfaction and their subsequent communication of experiences, highlighting the pivotal role of taste in shaping overall satisfaction.

Table 4: Food Freshness

			Correlations	
			Food Freshness	PWOM
Spearman's rho	Food Freshness	Correlation Coefficient	1.000	.072
		Sig. (2-tailed)	.	.342
		N	177	177
	PWOM	Correlation Coefficient	.072	1.000
		Sig. (2-tailed)	.342	.
		N	177	177

Source: Author's Field Survey (2023) – SPSS version 27.0 output extracts

The bivariate analysis explores the correlation between food freshness and positive word of mouth (PWOM) among the participants. The Spearman's rho correlation coefficient for this relationship is 0.072, with a two-tailed significance level of 0.342. Interpreting this correlation coefficient, the positive value suggests a weak positive association between food freshness and PWOM. However, the low magnitude of the correlation coefficient (0.072) indicates that the strength of this relationship is minimal. The p-value of 0.342 is above the commonly used significance threshold of 0.05, signifying that this correlation is not statistically significant.

Table 5: Presentation of Food

			Correlations	
			Food Presentation	PWOM
Spearman's rho	Food Presentation	Correlation Coefficient	1.000	.275**
		Sig. (2-tailed)	.	.000
		N	177	177
	PWOM	Correlation Coefficient	.275**	1.000
		Sig. (2-tailed)	.000	.
		N	177	177

** . Correlation is significant at the 0.01 level (2-tailed).

Source: Author's Field Survey (2023) – SPSS version 27.0 output extracts

In exploring the bivariate relationship between Food Presentation and Positive Word of Mouth (PWOM), Spearman's rho correlation coefficient was applied. The analysis reveals a statistically significant positive correlation of .275 at the 0.01 significance level (2-tailed). This indicates a direct association between positive perceptions of food presentation and the likelihood of inpatients engaging in positive word-of-mouth communication. The positive correlation suggests that a more favorable evaluation of food presentation is linked to an increased likelihood of patients expressing positive sentiments in their word-of-mouth communication. This finding underscores the importance of the visual aspect of food in influencing inpatient satisfaction and subsequent positive communication about their hospital experiences.

Table 6: Food Hygiene and Safety

			Food Hygiene	PWOM
Spearman's rho	Food Hygiene	Correlation Coefficient	1.000	.331**
		Sig. (2-tailed)	.	.000
		N	177	177
	PWOM	Correlation Coefficient	.331**	1.000
		Sig. (2-tailed)	.000	.
		N	177	177

** . Correlation is significant at the 0.01 level (2-tailed).

Source: Author's Field Survey (2023) – SPSS version 27.0 output extracts

In examining the bivariate relationship between Food Hygiene and Positive Word of Mouth (PWOM), Spearman's rho correlation coefficient was applied. The analysis demonstrates a statistically significant positive correlation of .331 at the 0.01 significance level (2-tailed). This suggests a direct association between positive evaluations of food hygiene and the likelihood of inpatients engaging in positive word-of-mouth communication. The substantial correlation implies that a more favourable perception of food hygiene is linked to an increased probability of patients expressing positive sentiments in their word-of-mouth communication. This finding underscores the critical role of food hygiene in shaping inpatient satisfaction and subsequent positive communication regarding their hospital experiences.

Multivariate Analysis

Embarking on the avenue of multivariate analysis, the study undertakes a comprehensive examination of the intricate interplay among variables, encompassing food service quality, inpatient satisfaction, and the moderating influence of the hospital environment. This analytical pursuit seeks to unveil subtle relationships, fostering a more profound comprehension of how the hospital environment may act as a moderating factor, influencing the impact of food service quality on inpatient satisfaction. As we navigate this analytical landscape, the emphasis lies in discerning the collective influence of these multifaceted elements and scrutinizing potential interactions that contribute to the holistic patient experience within the healthcare milieu. The multivariate analysis aspires to illuminate nuanced dynamics extending beyond individual variables, providing valuable insights into the intricate network of influences shaping inpatient satisfaction in the context of food service quality.

Table 7: The Moderating role of Hospital Environment between Food Service Quality and Inpatient Satisfaction

			Correlations		
Control Variables			Food Service Quality	Inpatient Satisfaction	
Food Service Quality	Correlation Coefficient		1.000	.036	
		Sig. (2-tailed)	.	.637	
		N	177	177	
	Inpatient Satisfaction	Correlation Coefficient		.036	1.000
			Sig. (2-tailed)	.637	.
			N	177	177
Hospital Environment	Food Service Quality	Correlation	1.000	-.076	
		Significance (2-tailed)	.	.316	
		df	0	174	
	Inpatient Satisfaction	Correlation		-.076	1.000
			Significance (2-tailed)	.316	.
			df	174	0

Source: Author's Field Survey (2023) – SPSS version 27.0 output extracts

The coefficient of correlation between food service quality and inpatient satisfaction is found to be 0.036, with a p-value of 0.637, thereby suggesting that there exists a minimal and statistically insignificant association between these two variables. This implies that the fluctuations in inpatient satisfaction cannot be distinctly attributed to variations in food service quality. When shifting our focus towards the moderating variable, it is observed that the correlation between the hospital environment and food service quality yields a coefficient of -0.076, accompanied by a p-value of 0.316. This indicates a slight negative correlation that is statistically non-significant, thereby suggesting that the hospital environment does not play a significant moderating role in the relationship between food service quality and inpatient satisfaction.

Conclusions And Recommendations

The research delved into patients' perceptions of food service quality in University of Port-Harcourt Teaching Hospital setting, exploring dimensions such as menu variety and nutrition, service timeliness, taste, freshness, presentation, and hygiene. The study uncovered notable patterns in patients' satisfaction and likelihood to engage in positive word-of-mouth communication about the hospital. The research illuminates critical factors influencing inpatient satisfaction in the context of food service quality. Notably, the interplay between menu variety, service timeliness, taste, freshness, presentation, and

hygiene shapes patients' likelihood of positive word-of-mouth communication. The non-significant moderating role of the hospital environment suggests that food service quality impacts patient satisfaction independently.

The study recommends that organizations like UPTH must enhance menu variety to cater to diverse preferences and positively impact patient satisfaction. They must also improve efficiency in meal delivery processes to elevate patient satisfaction and encourage positive word-of-mouth communication and address taste preferences and enhance food presentation to positively influence inpatient experiences. They should also ensure consistent adherence to food hygiene and safety protocols to bolster patient satisfaction and positive word of mouth.

References

- Andaleeb, S. S. (2001). Service quality perceptions and patient satisfaction: A study of hospitals in a developing country, *Social Science & Medicine*, 52(9), 1359–1370.
- Arndt, J. (1967). Role of product-related conversations in the diffusion of a new product, *Journal of Marketing Research*, 4(3), 291–295.
- Udayalakshmi, C., & Sridevi, J. (2023). *Service quality models: A review with respect to fast food Restaurants*, doi: 10.54646/bijsshr.2023.30
- Centers for Medicare & Medicaid Services. (n.d.). *Hospital consumer assessment of healthcare providers and systems (HCAHPS)*. Retrieved from Statistics-Data-and-Systems/Research/CAHPS/hcahps1.
- Cleary, P. D., Edgman-Levitan, S., McMullen, W., Delbanco, T. L. (1992). The relationship between reported problems and patient summary evaluations of hospital care, *Quality of Life Research*, 1(4), 265–76.
- Dall'Oglio, I., Nicolò, R., Di Ciommo, V., Bianchi, N., Ciliento, G., Gawronski, O., Pomponi, M., Roberti, M., Tiozzo, E., Raponi, M. (2015). A systematic review of hospital foodservice patient satisfaction studies, *Journal of the Academy of Nutrition and Dietetics*, 115(4), 567-584.
- Donabedian, A. (1980). *Explorations in quality assessment and monitoring: The definition of quality and approaches to its assessment*, Health Administration Press.
- Duffy, J. R., Hoskins, L. M., & Dudley-Brown, S. (2013). Google scholar versus pubmed in nursing research: Disparity in recall and precision, *Western Journal of Nursing Research*, 35(7), 899–909.
- Eom, K., Byon, K. K., & Kim, W. G. (2017). The impact of hotel room prices on guest satisfaction: A hybrid model approach, *International Journal of Hospitality Management*, 66, 42–49

- HongSeok, Kim., Seong-Jung, Kim., & HyunKyoony, Lim. (2023). *The effects of management consulting service quality on consulting utilization and management performance in small food service businesses*, *Oe'sig gyeong'yeong yeon'gu*, doi: 10.47584/jfm.2023.26.2.261
- Liu, D., & Park, J. (2015). What makes a useful online review? Implication for travel product Websites, *Tourism Management*, 47, 140–151.
- Min, Jae, Chung., Na-Young, Yi. (2023). Importance-performance analysis of delivery food service quality to improve customer satisfaction, *Journal of the East Asian Society of Dietary Life*, doi: 10.17495/easdl.2023.2.33.1.81
- Ng, I. C. L. (2013). Big data” and business analytics. A research agenda for the is discipline, *Journal of Organizational and End User Computing*, 25(3–4), 3–14.
- Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1985). A conceptual model of service quality and its implications for future research, *Journal of Marketing*, 49(4), 41–50.
- Sandle, T. (2016). Food safety management systems in hospitals: A review, *Food Control*, 59, 861–874.
- Ware, J. E., & Snyder, M. K. (1975). Dimensions of patient attitudes regarding doctors and medical care services, *Medical Care*, 13(8), 669–682.
- Xi, Luo. (2023). *The service quality affecting customer loyalty toward food delivery service in Thailand*, doi: 10.58837/chula.is.2020.99