

Facilities Tangibility and Patients' Satisfaction in Selected Primary Health Centres in Odeda Local Government Area, Ogun State, Nigeria

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Abstract

Background: Primary health care is widely acknowledged as the most economical means of achieving universal health coverage and addressing all types of health needs in close proximity to people's homes and communities. Nigeria's high and growing rate of extreme poverty and illiteracy increases the urgency of the need for a primary healthcare system that is effective and sustainable.

Purpose: This study examines the effect of the facilities tangibility on patients' satisfaction in selected primary health care centres in the Odeda local government area of Ogun State. It investigated the effect of physical facilities on patients' satisfaction; assessed the influence of personnel's appearance on patients' satisfaction; and examined the role of the hospital's equipment quality on patients' satisfaction.

Methodology: The study used a cross-sectional survey research design and a questionnaire as the research instrument. A convenient sampling method was used to select 320 respondents from primary healthcare centres. Three hundred and twenty (320) copies of the questionnaire were administered to respondents, and 300 were received and analysed. The study used both descriptive and inferential statistics.

Findings: The findings reveal a negative correlation between physical facilities and patients' satisfaction ($R = -0.101$, $N = 300$, $p > 0.05$); a negative correlation between personnel's appearance and patients' satisfaction ($R = -0.112$, $N = 300$, $p > 0.05$); a negative correlation between equipment and patients' satisfaction



Southern African Business Review
Volume 28 | 2024 | #14593 | 21 pages

<https://doi.org/10.25159/1998-8125/14593>

ISSN 1998-8125 (Online)

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($R = -0.157$, $N = 300$, $p > 0.05$). The study concluded that facilities tangibility had a negative influence on patients' satisfaction. These findings imply that patients attending primary healthcare centres in the Odeda local government of Ogun State are dissatisfied with the facilities tangibility. It was recommended that hospitals' management ensure that they have up-to-date facilities, an appealing physical environment, and modern-looking equipment to serve patients better and ensure they are satisfied.

Keywords: tangibility; patient satisfaction; primary healthcare centres; Odeda Local Government Area

Introduction

Health is a condition of the complete physical, mental, and social well-being of individuals (World Health Organization 2022). Health is essential for global and the nation's socio-economic growth (Ng 2022). The Nigeria healthcare delivery system is structured along the lines of primary, secondary, and tertiary health facilities. It is necessary to provide health to achieve the Sustainable Development Goals' (SDG's) goal of universal health coverage. This is the objective stated by the World Health Organization for achieving all of the SDGs related to health (WHO 2018).

Many people in Nigeria reside in rural locations, where it is crucial to have access to primary healthcare. Due to their topographical layout, numerous rural villages and communities are challenging to visit. Because of poverty, remoteness, bad roads, and high travel costs, communities in remote villages may be less likely to seek medical care in urban or more developed locations. To reach people in remote locations, a healthcare system must be developed that can handle the needs of a relatively small population while offering critical preventative and curative medical treatments to the communities served at a low and sustainable cost (Adepoju 2019). In this case, primary healthcare delivery is especially important.

Primary healthcare is widely acknowledged as the most economical method for achieving the objective of universal health coverage and addressing most local health requirements (WHO 2019). The need for an effective and long-lasting primary healthcare system is made all the more pressing by the high and rising rates of abject poverty and illiteracy in Nigeria. Records reveal that Nigeria's primary healthcare is woefully ineffective and insufficient to meet the country's increasing population's demand for high-quality medical care. Only 20% of the 30,000 primary healthcare facilities in the country are operational (Alonge 2020). The necessity for a robust, accessible, and comprehensive primary healthcare system is highlighted by demographic factors.

Significant degrees of extreme poverty and illiteracy exist in Nigeria. Nigeria was dubbed the "poverty capital of the year" in 2018 due to the 86.9 million citizens who live in extreme poverty (Quartz 2018). That amounts to over half of its whole

population. If this trajectory is kept up, 110 million Nigerians are predicted to be living in extreme poverty by 2030 (Shodiya, Raji, and Al'Hassan-Ewuoso 2023). Nigerians are more prone to sickness due to their lack of access to nutrient-rich food and high rates of illiteracy. Open defecation and poor sanitation are common in underdeveloped and rural communities, where there is limited access to basic amenities like potable water and electricity. In low- and middle-income nations like Nigeria, establishing a functional and sustainable primary healthcare system is anticipated to save at least 60 million lives and extend the average lifespan by 3.7 years by 2030 (WHO 2019).

The perceived service quality assesses the discrepancy between what consumers anticipate from the service and what they actually get (Shodiya et al. 2023). Patients evaluate the quality of healthcare services based on the facility's physical presence, the staff's responsiveness, dependability, assurance, and empathy. However, tangibility, which refers to individuals and equipment that may be viewed as tangibles, is the initial point of contact in the delivery of health care. Since patients are visual creatures who respond to what they see, touch, feel, or smell, tangible elements have proven to be highly relevant and helpful in the delivery of health services (Nyabundi, Aliata, and Odondo 2021).

The tangible nature of services is crucial since it determines other factors like responsiveness and dependability. A consistent level of service delivery would enhance responsiveness and reliability of service delivery and increase consumer confidence that the service provider can deliver the services as promised. Examples of tangibles in services include physical evidence of the service such as physical structures, staff appearance, tools or equipment used to provide the service, material representations, and other clients present at the service facility.

Statement of the problem

The majority of the country's public hospitals provide subpar healthcare, according to studies in the medical literature. The deplorable health conditions in Nigeria are not unconnected to the inadequate facilities, non-responsive personnel, and outdated equipment. For instance, research has shown that basic hospitals lack essential tools for treating chronic disease emergencies. In contrast, hospital administrators lament a lack of staff that is exacerbated by weak national grid energy, inadequate government financing, and bureaucratic red tape that hinders hiring and training new employees. The fact that several nations have adopted international best practices for tertiary healthcare completely contrasts with this dire situation (Alkali and Bello 2020). Patients in Nigeria have frequently expressed dissatisfaction with the country's healthcare system (Onyeajam, Xirasagar, Khan, James, Hardin, and Odutolu 2018). According to Onyeajam et al. (2018), these complaints vary from poor service delivery to service delays, discontinuity of care, uncaring staff attitudes, and cumbersome procedures. These unfavourable remarks have reduced public trust in the medical system and made government hospitals less appealing than alternative health facilities.

Healthcare professionals must continually assess the quality of their services to ensure that it meets the requirements and expectations of patients while also being efficient, compassionate, and patient-centred. Due in part to the poor status of basic healthcare services, which are characterised by a lack of coverage (particularly in rural regions), subpar health facilities, and expensive user fees, Nigeria currently has some of the worst health results in the world (Alonge 2020). This fact is evident in most primary healthcare centres across rural and urban regions in the Odeda local government area, as many primary healthcare facilities are dilapidated. When a patient first enters a facility, it is imperative that their physical demands, such as those for cleanliness, supplies, and information, be met (Mohammadi-Sardo and Salehi 2018; Mustaffa 2021; Orze and Horodecka 2021; Qolipour et al. 2018; Tripathi and Siddiqui 2018) in the context of the concept of tangibleness, but this is not the case in most areas of the Odeda local government area. Therefore, this study attempts to research the effect of facility tangibility on patients' satisfaction in primary health care centres in the Odeda local government area of the Ogun State.

Objectives of the Study

The study's main objective is to examine the effect of facility tangibility on patients' satisfaction in primary healthcare centres in the Odeda local government area. However, the following specific objectives are pursued to achieve a broad goal.

- i) Investigate the effect of physical facilities on patients' satisfaction
- ii) Assess the influence of personnel's appearance on patients' satisfaction
- iii) Examine the role of the hospital's equipment quality on patients' satisfaction

Research Question

The effect of facilities tangibility on patients' satisfaction in primary health care centres raised several research questions. The following research questions are used to guide achieving the stated objectives.

- iv) What is the impact of physical facilities on patient satisfaction?
- v) How does staff appearance influence patient satisfaction?
- vi) To what extent does the hospital's equipment quality influence patient satisfaction?

Research Hypotheses

The following hypotheses are developed and tested based on the study's objectives to achieve the specific goals.

H₀₁: Physical facilities do not have a significant positive effect on patients' satisfaction in primary health care centres in the Odeda local government area.

H₀₂: Personnel appearance does not have a significant positive effect on patients' satisfaction in primary health care centres in the Odeda local government area.

H₀₃: The hospital's equipment quality does not have a significant positive effect on patients' satisfaction in primary health care centres in the Odeda local government area.

Literature Review

Concept of Service Quality

Over the past few decades, service quality has drawn the attention of academics and managers alike. Service satisfaction is one of the essential concepts of service marketing, according to Aliman and Mohamad (2013). This has led to the emphasis on service quality as one of the most important challenges in service management (Akinyinka, Oluwole, and Odusanya 2019). There are several descriptions of various components of service quality from various authors. However, Parasuraman et al. (1988) defined service quality as an overall evaluation or attitude of how much better a service is than alternatives. Another important consideration is the client's general perception of the company and its offerings (Tapan and Satyabrata 2014).

Gronroos (1984) defined service quality as the outcome of an evaluation process in which the customer compares his expectations with the service he feels he has received. This definition is one of the most important studies on the topic. Regarding the general theory and comprehension of service quality, two schools of thought can be distinguished: the schools of thought in the United States (1988), led by Parasuraman et al., and Europe (1984), led by Gronroos. According to the European school of thought, customers should assess the quality of services from both a functional and a technological standpoint. The European school of thought, however, minimises the significance of the actual environment of the location where the service is provided and traded. By conceptualising service quality as the difference between the overall gap between perception and expectation of service delivery, the American school of thinking bridges this gap (Parasuraman et al. 1988). These characteristics make intangibility a critical issue that must be solved in order to create and sustain the proper perception in the minds of consumers. This necessitates a change from intangibility to tangibility.

Concept of Tangibility

Tangibility in healthcare services connotes individuals and equipment, which can be thought of as tangibles. Modern equipment, appealing facilities, employees that appear professional, and the cleanliness of the hospital were the four metrics that were utilised to operationalise the tangibles dimension (Mohammadi-Sardo and Salehi 2018; Mustaffa 2021; Orze and Horodecka 2021; Qolipour et al. 2018; Tripathi and Siddiqui 2018). Patients' opinions of service quality in the healthcare sector heavily depend on tangible factors (Anabila, 2019; Islam et al. 2016; Kwateng et al. 2017; Mustaffa 2021).

It is crucial to meet patients' physical needs upon their arrival at the hospital, including those related to hygiene, supplies, and information. In the service design process, tangibility is simple to adhere to or adjust because it may be achieved through the outward look of physical facilities, equipment, employees and communication.

Concept of Patients' Satisfaction

The term satisfaction, according to Kotler and Caslione (2009), is "a person's feeling of pleasure or disappointment resulting from comparing a product's performance concerning his or her expectations". In the literature on marketing and management, the importance of customer satisfaction has been highlighted (Anabila 2019; Asnawi, Awang, Afthanorhan, Mohamad, and Karim 2019). In this work, patient satisfaction is measured as a single construct regarding service accessibility, staff competence, service involvement, need fulfilment, and patient loyalty. Service accessibility refers to the ease with which hospital facilities, products, services, functions, or people are available to as many employees as possible (Kang and Lee 2021). Competency refers to the abilities or capabilities of individuals who are recognised as forming the organisation's workforce (Glikson and Woolley 2020). Service involvement in health care service has been credited for improving the information and accessibility of services (Omeni et.al 2014) participation into practice. Need fulfilment refers to a set of innate and universal needs that, when unmet, hinder human functioning and development (Darcia et al. 2018). Loyalty is defined as a firmly held decision to repeatedly purchase the same brand or group of brands (same-brand loyalty), despite the possibility of situational influences and marketing efforts leading to switching behaviour (Zhou et al. 2017).

Conceptual Framework

This study developed the conceptual model from the empirical review and findings from the literature review. Hence, the study showed how facility tangibility affects patient satisfaction, as depicted in Figure 1.

Hospital's Tangible Aspects

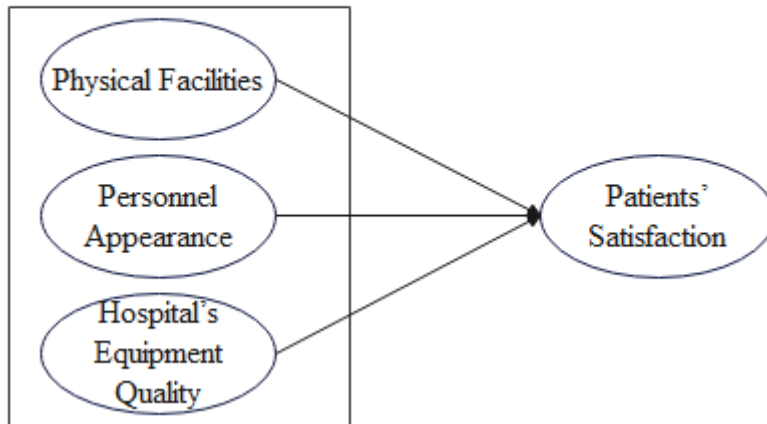


Figure 1: Conceptual Model of Hospital's Tangible Aspects and Patient Satisfaction

Source: Author's model (2023)

Theoretical Review

Negativity Theory

The foundation of negativity theory is the disconfirmation process. This theory, which Carlsmith and Aronson developed in 1963, states that any performance that falls short of expectations will cause a person to become unstable and produce "negative energy." The negative hypothesis was built on the disconfirmation technique. It was based on the notion that unfavourable outcomes have a greater psychological impact than happy outcomes. The negative theory states that when clients have high expectations, they respond poorly to disconfirmation. As a result, if actual performance falls short of expectations there will be dissatisfaction. Your opinion of a good or bad service will be inversely correlated with the extent of the gap.

The disconfirmation procedure is the basis for this notion. Any performance that falls short of expectations, under this theory, will destabilise the person and result in "negative energy." Consumers will respond unfavourably to any information when expectations are routinely not satisfied, according to Anderson (1973) and, Peyton et al. (2003) satisfaction will emerge from perceived performance that either meets or surpasses expectations. Research suggests that persons with high levels of pessimism are more likely to suffer from degenerative brain disorders, cardiovascular problems, and digestive problems, and recover from illness far slower than those with a positive perspective, which is why David (1984) and Susan (1980) reject the hypothesis. Since it is more crucial to avoid a harmful stimulus than to follow a possibly helpful one for survival, the hypothesis is supported by Cornelia and Stewart (1989); Guido and Czapinski (1990).

Empirical Review

Suhadi, Adrian, and Hasmirah (2022) used a survey and a cross-sectional study approach to assess the link between patient satisfaction and the tangible aspects of health care at the Lepo-Lepo Public Health Center in Kendari City in 2021. There were 448 participants in the study, 211 of whom were patients. A questionnaire was used to gather the information. The statistical methods used to analyse the data were univariate and bivariate. With $p = 0.75$ ($p > 0.05$), the findings indicated that there was no relationship between tangibles and patient satisfaction with healthcare services at the Lepo-Lepo Health Center in Kendari City in 2021. The study made recommendations for public healthcare facilities to keep enhancing patient satisfaction, service infrastructure availability, and health service professionalism.

Ngaliman, et al. (2019) analysed the impact of responsiveness, reliability, and latent tangible characteristics on customer satisfaction. The binomial proportion formula is used in the sampling process to get a sample of 70 respondents. Testing for the validity and reliability of an instrument is a need. Lilies' normality, homogeneity, linearity, and regression significance are used in the examination of test requirements employing SEM (Structural Equation Modeling) to analyse the data. According to the study's findings, responsiveness has a direct negative impact on customer satisfaction. Customer pleasure directly benefits from reliability. Customer satisfaction is positively impacted by staff responsiveness.

Nguyen, Nguyen, and Mai (2014) investigate the connection between patient satisfaction and service quality in the context of Vietnam's public hospitals, a developing nation in Asia. The findings offered empirical support for the relationship between patient satisfaction and three aspects of service quality namely (tangibles, accessibility to healthcare services, attitude, and medical ethics). Customer satisfaction serves as a mediating factor in the indirect relationship between employee satisfaction and financial performance. Customer satisfaction should be viewed as the concept of total assessment, influenced by service quality, while considering the creation of long-term relationships. Technical service quality is crucial in assessing customer satisfaction. Store managers have a practical framework to assess the quality of their client connections thanks to the knowledge they already have about organisational behaviour and customer satisfaction processes. Customer loyalty is directly boosted by trust, customer happiness, and switching costs. Customer satisfaction is moderated by age, gender, and usage duration.

Among Kenyan customers of microfinance banks, Nyabundi, Aliata, and Odondo (2021) investigated how tangibility influences consumer happiness. This study was built on the market-based, survival-based, and expectancy disconfirmation theories. The study used a correlation research methodology. The study's focus was on Kisumu City's 10,300 Micro-Finance Bank customers. 370 microfinance bank customers were chosen as the sample size from the target population using a simple random selection procedure. Results revealed that 63.1% of the variation in customer satisfaction is accounted for by

tangibility. There is a substantial association between tangibility and customer happiness, according to the correlation analysis ($r = 0.631$, $p 0.05$). This demonstrates that tangibles account for 63.1% of the variances in customer satisfaction. It was advised that the staff members embrace tangibility and other elements to improve client satisfaction.

Olubiyi and Akintobi (2021) examine the factors that influence the demand for primary healthcare services in Ogun state's Abeokuta South local government area (LGA). To determine the factors that influence the demand for primary healthcare services, multivariate regression models, correlation charts, and frequency distribution tables are used. According to the study's findings, the demand for healthcare services in Ogun state's Abeokuta South LGA is significantly influenced by economic and demographic factors. Nevertheless, there is a strong correlation between income and having access to basic healthcare. The demand for primary healthcare services is also favourably and strongly influenced by the patient's income, education, and quality of care.

Methodology

Research Design

A cross-sectional survey research design was adopted in this study, which systematically collects data from a sample of individuals. The cross-sectional survey method was employed to rapidly describe the opinions of a large population of individuals on specific issues (Helvaci 2015) cost-efficiently (Goel, Obeng, and Rothschild 2016).

Population of the Study

The target population was out-patients from the selected primary healthcare centres, namely, (Obantoko Healthcare Centre, Osiele Healthcare Centres, Olodo Healthcare Centres, Orile Ilugun Healthcare Centres, Odeda Healthcare Centres, and Bakatari Healthcare Centre) in the Odeda Local Government area. The study area was chosen because the Odeda local government borders the Ogun State and Oyo State. Patients who were attending the primary health care centres for the first time and those patronising it more than once were able to read, write, and speak English, and were willing to complete copies of the questionnaires, were included in the study.

Sample Size and Sampling Technique

A convenient sampling method was used in this study to select respondents from the six (6) selected primary healthcare centres. Convenience sampling refers to obtaining a sample from conveniently and readily available individuals to give the required information (Fiakpa, Nguyen, and Armstrong 2022; Wijayanti, Asri, and Suroyo 2022; Agbonjinmi et al. 2022). The choice of the sampling technique is informed by the fact that the respondents were outpatients attending the selected primary health centres. Population frames are unnecessary when this sampling technique is used, which makes

it more preferred to the probability sampling techniques (Salkind 2009). The sample size consists of 320 respondents who are patients treated at the six (6) selected primary healthcare centres.

Research Instruments

The research instrument is a questionnaire which consists of three sections. The first section is about demographic characteristics, such as gender, age, marital status, and educational qualifications. The second section comprises nine modified survey scale items for tangibility dimensions (physical facilities, personnel appearance, equipment) adapted from Parasuraman et al. (1988). The third section contains satisfaction measures in five items.

Reliability and Validity of Research Instrument

A number of measures were taken to ensure the reliability and validity of the research instrument. The Cronbach's alpha coefficient was calculated for both the tangibility dimensions and satisfaction measures sections of the questionnaire. Internal consistency was demonstrated by the calculated values being within acceptable ranges. To ensure content validity, the survey scale items for tangibility dimensions were adapted from Parasuraman et al. (1988).

Validity of Research Instrument

Table 1 shows that the Average Variance Extracted (AVE) for all constructs was greater than 0.50; while composite reliability was greater than 0.7. In addition, the underlying structure of the instrument was found to be adequate for all the constructs measured. The Bartlett's test of sphericity result for all the constructs was less than 5% ($P < 0.001$) which indicates that the measured construct was robust enough for measuring the constructs used in the study.

Table 1: Construct Validity for Pilot Test Result

Variables	No. of items	Average Variance Extracted (AVE)	KMO	Bartlett Test of Sphericity	Sig.	Composite Reliability
Patients' Satisfaction	5	0.572	0.664	8.766	0.001	0.762
Facility Tangibility						
Physical facilities	3	0.752	0.813	6.823	0.001	0.742
Personnel appearance	3	0.512	0.700	7.699	0.001	0.738
Equipment	3	0.712	0.800	6.331	0.001	0.885

Source: Author's computation (2023)

Reliability of Research Instrument

Table 2 depicts the Cronbach's Alpha score that was greater than 0.7 which implies that the questionnaire items had good internal consistency. The computed Cronbach's Alpha value for the instrument is as follows: $\alpha = 0.764$ for the patients' satisfaction construct, and $\alpha = 0.793$ for the tangibility construct.

Table 2: Cronbach's Alpha Reliability Test Result

Variables	Number of Survey Items	Cronbach's Alpha
Patients' Satisfaction	5	0.764
Facility Tangibility		
Physical facilities	3	0.747
Personnel s' appearance	3	0.743
Equipment	3	0.721
Overall Cronbach's Alpha	9	0.793

Source: Author's computation (2023)

Method of Data Analysis

Descriptive statistics, which involved frequency counts and percentages, were used to explain the respondents' demographic characteristics. In addition, inferential statistics (regression analysis) was used to test the three hypotheses. This analysis was chosen because it measures the relationship between two or more variables. Results and

Discussion of Findings

Three hundred and twenty (320) questionnaires were administered to respondents, and three hundred (300) responses were received for analysis. However, twenty copies were found to have been partially filled and thus insatiable for data analysis during the data cleaning process. This gave a total of 300 questionnaires for analysis, resulting in a 94% response rate.

Table 3: Demographic Characteristics of the Respondents ($n = 140$)

Demographic Characteristics	Frequency (n)	Percentage (%)
Gender		
Male	110	36.7
Female	190	63.3
Age (years)		
Less than 30	56	18.7
31 – 40	110	36.7
41 – 50	64	21.4
Above 50	70	23.2
Marital status		
Single	96	32.0
Married	190	63.4
Divorced	14	4.6
Education		
Secondary	20	6.6
NCE/OND	194	64.7
B.Sc./HND	86	28.7

Source: Author's computation (2023)

The demographic characteristics of respondents listed in Table 3 revealed that most respondents were females (63.3%). The finding implied that female respondents dominated the study. Also, the majority (63.4%) were married and between the ages of 31 and 40 (36.7%).

Table 4: Distribution of Responses according to Tangibles Survey Items

Tangibility	Strongly agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly disagree (1)	Mean	Std. Dev
Physical facilities							
The hospital has up-to-date facilities	0	0 (0.00)	75 (25.0)	150 (50.0)	75 (25.0)	2.11	.690
The physical environment of the hospital is appealing	0 (0.00)	0 (0.00)	0 (0.00)	200 (66.7)	100 (33.3)	1.62	.487
The building structures are hospital-like	0 (0.00)	0 (0.00)	24 (17.1)	83 (59.3)	33 (23.6)	1.94	.637
Personnel s' appearance							
The appearance of the hospital personnel is appealing	0 (0.00)	0 (0.00)	56 (18.7)	124 (41.3)	120 (40.0)	1.74	.703
The approach of the personnel is welcoming	0 (0.00)	0 (0.00)	56 (18.7)	100 (33.3)	144 (48.0)	1.61	.705
The personnel gave me prompt service	0 (0.00)	0 (0.00)	0 (0.00)	60 (14.0)	240 (86.0)	1.98	.704
Equipment							
The hospital has modern-looking equipment	0 (0.00)	0 (0.00)	64 (21.3)	136 (45.3)	100 (33.3)	1.96	.743
The hospital's equipment is functional	0 (0.00)	0 (0.00)	56 (18.7)	100 (33.3)	144 (48.0)	1.61	.705
The hospital's equipment is adequately maintained	0 (0.00)	0 (0.00)	62 (15.0)	100 (33.3)	138 (49.3)	1.66	.727

Source: Author's computation (2023)

Table 5: Distribution of Responses according to satisfaction Survey Items

Patients' satisfaction	Strongly agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly disagree (1)	Mean	Std. Dev
The hospital's services are easily accessible	30 (10.0)	40 (13.3)	80 (26.6)	100 (33.3)	50 (16.7)	3.46	1.121
The hospital's staff are knowledgeable and competent	0 (0.00)	0 (0.00)	60 (21.4)	176 (55.7)	64 (22.9)	1.99	.668
The hospital's staff often seek my suggestions when attending to my complaints	0 (0.00)	0 (0.00)	0 (0.00)	60 (14.0)	240 (86.0)	1.98	.704
The hospital's staff provides lots of services to meet my needs	0 (0.00)	0 (0.00)	70 (17.9)	104 (37.1)	126 (45.0)	1.73	.748
I will encourage friends and relatives to patronise the hospital	0 (0.00)	0 (0.00)	80 (26.7)	128 (42.7)	92 (30.6)	1.94	.737

Source: Author's computation (2023)

Measurement of Model and Test of Hypotheses

Hypothesis One

Physical facilities do not affect patients' satisfaction in primary healthcare centres in the Odeda local government.

$$PSat = f(\text{Physical Facilities})$$

$$PSat = \beta_0 + \beta_1 PF_{it} + \mu$$

Table 6: Regression Result on the Influence of Physical Facilities on Patients' Satisfaction

Variables	B	T	Sig.	R ²	Adjusted R ²	F(Df)	ANOVA (Sig.)
(Constant)	0.898	4.223	0.001	0.869	0.723	14.669	0.001
Physical Facilities	0.329	6.873	0.621			(1)	

Dependent Variable: Patients' Satisfaction

Source: Author's computation (2023)

The results of the regression analysis examining the effect of physical facilities on patients' satisfaction in primary healthcare centres in the Odeda local government area in Ogun State are presented in Table 6. The findings reveal a negative correlation between physical facilities and patients' satisfaction ($\beta = 0.329$, $t = 6.873$, $p > 0.05$). This finding indicates that the physical facilities of the primary healthcare centres are not appealing to the patients, resulting in their dissatisfaction. These findings lead to the non-rejection of the null hypothesis which proposed that physical facilities do not affect patients' satisfaction in primary health care centres in the Odeda local government area

Hypothesis Two

Personnel appearance does not affect patients' satisfaction in primary healthcare centres in the Odeda local government area in Ogun State.

$$PSat = f(\text{Personnel Appearance})$$

$$PSat = \beta_0 + \beta_1 PA_{it} + \mu$$

Table 7: Regression Result on the Impact of Personnel Appearance on Patients' Satisfaction

Variables	B	T	Sig.	R ²	Adjusted R ²	F(Df)	ANOVA (Sig.)
(Constant)	0.429	6.726	0.001	0.891	0.756	18.686	0.001
Personnel Appearance	0.812	8.407	0.701			(1)	

Dependent Variable: Patients' Satisfaction

Source: Author's computation (2023)

The regression analysis results examining the effect of personnel appearance on patients' satisfaction in primary healthcare centres in the Odeda LGA are presented in Table 7. The findings reveal a negative correlation between personnel appearance and patients' satisfaction ($\beta = 0.812$, $t = 8.407$, $p > 0.05$). This finding indicates that the personnel appearance at the primary healthcare centres is also not appealing to the patients, leading to dissatisfaction. These findings also show the non-rejection of the null hypothesis, which proposed that personnel appearance, does not affect patients' satisfaction in primary healthcare centres in the Odeda LGA.

Hypothesis Three

The hospital's equipment quality does not affect patients' satisfaction in primary healthcare centres in the Odeda LGA.

$$PSat = f(\text{Hospital's Equipment Quality})$$

$$PSat = \beta_0 + \beta_1 HEQ_{it} + \mu$$

Table 8: Regression Result on the Effect of Hospital's Equipment Quality on Patients' Satisfaction

Variables	B	T	Sig.	R ²	Adjusted R ²	F(Df)	ANOVA (Sig.)
(Constant)	0.839	1.508	0.132	0.887	0.793	44.615	0.001
Hospital's Equipment Quality	-0.342	-5.975	0.567			(1)	

Dependent Variable: Patients' Satisfaction

Source: Author's computation (2023)

The results of the regression analysis examining the effect of equipment used in service delivery on patients' satisfaction in primary healthcare centres in Odeda LGA are presented in Table 8. The findings reveal a negative correlation between equipment and patients' satisfaction ($\beta = -0.342$, $t = -5.975$, $p > 0.05$). This finding indicates that the equipment used in primary healthcare centres' service delivery is perceived as obsolete. These findings also lead to the non-rejection of the null hypothesis, which proposed that equipment used in service delivery does not affect patients' satisfaction in primary health care centres in the Odeda local government area

Discussion of Findings

The analysis of the empirical data from a sample of 300 respondents produced the finding that the empirical results do not support the study's three stated hypotheses. Furthermore, the overall explanatory power of the study models is very high, given R² of

87%, 76%, and 79%, respectively, for patients' satisfaction, which implied that the three dimensions of tangibility (physical facilities, personnel appearance, and equipment) employed in the study explained a 16% variance in patients' satisfaction.

Firstly, the finding revealed that the physical facilities of the hospitals had a negative effect on patients' satisfaction. This finding indicated that the hospitals do not have up-to-date facilities and appealing physical environments, making patients fail to access good health services.

Secondly, the finding revealed that the appearance of personnel in the hospitals also had a negative effect on patients' satisfaction. This finding indicated that the hospital personnel's appearance is not appealing or welcoming and they do not give prompt service which, leads to patients' inability to access good health services.

Lastly, the finding revealed that the equipment used for hospital service delivery also had a negative effect on patients' satisfaction. This finding indicated that the hospital equipment used in service delivery is not up to date, is non-functional, and poorly maintained which leads to patients' inability to access good health services.

This outcome is in line with earlier research from Umoke et al. (2020); Nyabundi, Aliata, and Odonodo (2021); Mohammadi-Sardo and Salehi (2018); Mustaffa (2021); Orze and Horodecka (2021); Qolipour et al. (2018); Tripathi and Siddiqui (2018). They discovered that tangibility had a negative impact on patients' happiness.

This proved that inadequate or complete lack of facilities and equipment hampers service delivery of health care to the patients and consequently seriously affects patients' satisfaction with services. Rahmani et al. (2022) deduced that overall patient satisfaction is directly linked to staff qualities in their relationship with the patient. Sathyanarayana and Gargesa (2019) also found significant negative gap scores in Tangibility indicating that the perceptions of respondents (patients) regarding the quality of the service delivered by the PHC are lower than expectations. The results, however, contradicted those of Okeke, Ezech, and Ugochukwu (2015); Sathish, Indradevi, and Gangineni (2018); and Dabiri et al. (2017). They found that patients' happiness was significantly impacted by tangibility.

Conclusion and Recommendations

The purpose of this study was to determine how patients' satisfaction with basic healthcare facilities in Ogun State's Odeda local government was impacted by facility tangibility. On patient happiness, service accessibility, staff competency, service involvement, need fulfilment, and loyalty, tangible factors such as physical facilities, personnel appearance, and tools or equipment were measured. After analysing the data collected by administering the questionnaire to 300 patients, the study provided insightful results. Findings revealed that all three measures of tangibility are

insignificant in explaining patient satisfaction in primary healthcare centres. The study's discovery shows that tangibility has a significant negative influence on patients' satisfaction. This means patients attending primary healthcare centres in Odeda local government of Ogun State are dissatisfied with the facility's tangibility. It was recommended that hospitals' management ensure they have up-to-date facilities, an appealing physical environment, and modern-looking equipment to serve patients better and ensure they are satisfied.

Limitations of the Study and Suggestions for Future Research

While the study has made significant contributions to knowledge, there were some limitations as the study only included patients attending the primary health care centres who could read, write, and speak English and were willing to complete copies of the questionnaires. Besides, the findings of this research apply only to characteristics and features of primary healthcare centres in the Odeda local government area. There is a need to extend the study to other local government areas.

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