FUDMA Journal of Sciences (FJS)
ISSN online: 2616-1370
ISSN print: 2645 - 2944
Vol. 10 No. 4, February, 2026, pp 312 – 325
DOI: https://doi.org/10.33003/fjs-2026-1004-4629

EVALUATION OF TERMINAL FACILITIES AND PASSENGER SATISFACTION AT MURTALA MOHAMMED INTERNATIONAL AIRPORT (MMI AND MMII), NIGERIA

***[1]Imrana Abdurrahman, [2]Usman S. Lawal, [1]Mohammed R. Magaji, [3]Adamu Mohammed, [1]Hamisu Awaisu and [2]Abdulmalik A. Bakari**

[1]Consultancy Services Department, Nigerian Institute of Transport Technology (NITT), Zaria, Kaduna State, Nigeria.
[2]Transport Research and Intelligence Department, Nigerian Institute of Transport Technology (NITT), Zaria, Kaduna State, Nigeria.
[3]Transport School, Nigerian Institute of Transport Technology (NITT), Zaria, Kaduna State, Nigeria.

*Corresponding authors' email: Imrannitt2018@gmail.com Phone No.: +2348037798472

ABSTRACT

Air transport infrastructure plays a vital role in economic growth, international trade, tourism, and regional integration, with airports functioning as complex service systems where passenger interactions with terminal facilities shape overall travel experience. This study evaluates the adequacy of facilities at Murtala Muhammed International Airport Terminals I and II and examines their relationship with passenger satisfaction. Data were collected through structured field observations and questionnaires administered to 400 passengers. Descriptive statistics and cross tabulation were used to assess facility provision and satisfaction levels, while chi square test of association and correlation analysis were applied to examine relationships between variables. Results show that Terminal II provides a more developed and passenger oriented environment, with 86.7% of listed facilities available compared to 60% in Terminal I. Correspondingly, 66.7% of passengers in Terminal II reported being satisfied or highly satisfied, compared to 37.0% in Terminal I. The chi square result ($\chi^2 = 35.607$, $p < 0.05$) indicates a significant association between terminal type and passenger satisfaction, while correlation analysis shows that key service dimensions such as tangibles ($r = 0.62$) and reliability ($r = 0.57$) are strong predictors of satisfaction. Key deficiencies identified include inconsistent power and water supply, inadequate drivers' lounges, and limited seating and recreation facilities. The findings provide empirical evidence to support targeted improvements in airport planning and management to enhance passenger experience.

Keywords: Murtala Muhammed International Airport, Terminal Facilities, Passenger Satisfaction, Airport Service Quality, Infrastructure Adequacy, Airport Management, Nigeria

INTRODUCTION

Air transport infrastructure is central to economic growth, international trade, tourism, and regional integration. Airports operate as complex service systems where passengers interact with facilities such as check in counters, security screening areas, baggage handling systems, waiting lounges, sanitation facilities, signage networks, and commercial amenities. The adequacy and functionality of these terminal facilities directly influence passengers' evaluation of service quality and overall travel experience. Research in airport management identifies infrastructure quality and terminal efficiency as key determinants of service performance and passenger satisfaction (Graham, 2018; Halpern and Graham, 2013; de Neufville and Odoni, 2013). Service quality theory further highlights tangible service elements as foundational components in satisfaction formation (Parasuraman, Zeithaml and Berry, 1988; Zeithaml, Bitner and Gremler, 2018).

Empirical studies confirm the strong link between terminal facilities and passenger satisfaction. Airport environment attributes such as cleanliness, comfort, spatial layout, and queue management significantly shape passenger perceptions and behavioural intentions (Bogicevic et al., 2013; Lubbe, Douglas and Zambellis, 2011; Bezerra and Gomes, 2020). Passenger-centred facility assessment is increasingly recognized as a key measure of airport service competitiveness, establishing terminal infrastructure adequacy as a measurable determinant of satisfaction (Graham, 2018).

In Nigeria, rapid growth in passenger traffic has intensified pressure on airport facilities. Operational realities such as congestion during peak hours, insufficient seating, processing delays, and aging infrastructure significantly affect passenger satisfaction (Oladipo and Adetunji, 2018; Okafor and Udo, 2019; Adeyemi and Aremu, 2021). While previous studies highlight individual service gaps or evaluate single airport locations, comprehensive analyses linking multidimensional facility adequacy to passenger satisfaction across major terminals are limited.

Murtala Muhammed International Airport, Nigeria's primary international gateway, handles the highest passenger volumes in the country, particularly through Terminals I and II. Despite expansion and rehabilitation initiatives, congestion, facility aging, and service inefficiencies continue to challenge passenger experience. This study addresses these gaps by evaluating terminal facility adequacy and its impact on passenger satisfaction across both terminals, integrating multiple facility dimensions within a unified analytical framework.

A conceptual model guided this study, positioning terminal facility adequacy as the independent variable and passenger satisfaction as the dependent variable. Terminal facility adequacy is assessed across dimensions including check in and security processing efficiency, seating and waiting lounge comfort, sanitation standards, signage and wayfinding effectiveness, and availability of commercial amenities. Passenger satisfaction is evaluated in terms of overall travel experience, perceived service quality, and intention to reuse the airport. The model hypothesizes that higher adequacy in terminal facilities positively influences passenger satisfaction, establishing a direct analytical relationship between tangible service elements and user experience in the context of Murtala Muhammed International Airport Terminals I and II.

The study provides empirical evidence to guide airport management, policymakers, and planners in improving operational efficiency, enhancing passenger experience, and making informed decisions on infrastructure development in high traffic Nigerian airports.

MATERIALS AND METHODS

This study employed a mixed-method approach combining objective facility assessment with passenger perception surveys to ensure a comprehensive evaluation of terminal conditions and their impact on passenger satisfaction at Murtala Muhammed International Airport Terminals I and II.

A purposive stratified sampling technique was used to select passengers across both terminals to ensure representation of different travel categories and peak hour usage. Since the total population of passengers was unknown, equal allocation was assumed between Terminals I and II. The minimum sample size was determined using Yamane's formula (Zikmund, 1999):

$n = \frac{z^2\sigma^2}{e^2}$ (Zikmund, 1999)

Where n is the sample size, z is the standard score at 95 percent confidence level (1.96), σ is the standard deviation (assumed 0.5), and e is the margin of error (0.05). Substituting values:

$n = \frac{z^2\sigma^2}{e^2} = \frac{(1.96)^2(0.5)^2}{(0.05)^2} = \frac{3.84 \times 0.25}{0.0025} = \frac{0.96}{0.0025} = 384$

To ensure adequate coverage, a total of 400 respondents were surveyed, with approximately 200 from each terminal. Data collection was conducted over multiple days during both morning and afternoon peak periods to capture variation in passenger flow and terminal congestion.

Passenger perceptions were captured using a structured questionnaire comprising 25 items covering terminal facilities such as check in counters, security screening, waiting lounge comfort, sanitation, signage, and commercial amenities. Responses were measured on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The questionnaire was validated through expert review by airport management specialists and a pilot test involving 20 passengers to ensure clarity and relevance. Reliability analysis using Cronbach's alpha yielded a value of 0.87, indicating acceptable internal consistency.

Objective evaluation of terminal facilities was conducted using a structured checklist during field observations. Each facility was assessed for adequacy, functionality, and accessibility. Observational data were quantified and coded to allow comparison with passenger perceptions.

All data were coded, cleaned, and analysed using SPSS. Descriptive statistics, including frequencies, means, and standard deviations, were used to summarize facility adequacy and passenger satisfaction. Inferential statistics, including Chi Squared Test and Spearman's Rank Correlation, were applied to examine the relationship between terminal facility adequacy and passenger satisfaction. This approach explicitly linked observed facility conditions with subjective passenger evaluations, allowing assessment of the strength and significance of these relationships.

RESULTS AND DISCUSSION

This section presents the evaluation of the adequacy of facilities at Murtala Muhammed International Airport Terminals I and II and examines passenger satisfaction with these facilities.

Evaluation of Facilities Adequacy at MMI and MMII Terminals

This part presents the assessment of the adequacy and provision of facilities at Murtala Muhammed International Airport Terminals I and II. Where '√' indicates availability and 'X' indicates absence.

Table 1: Comparison of Major Terminal Facilities in MMA I and MMA II

Facilities/Services	MMA I	MMA II
Parking access to the public in our secured and covered Multi Storey Car Park, which is fully subsidized for staff within the airport	√	√
Flight announcement at all the parking floors	X	√
Direct access to the terminal through the link bridge	X	√
VIP parking lot	√	√
Air-conditioned drivers' lounge	X	X
Proper marking of parking bays	√	√
Full Automation System	X	√
Automated/modern Cargo Shed	√	√
Warehousing capabilities	√	√
Ultra-modern screening machines & weighing scales	X	√
Professional cargo handlers	√	√
Uninterrupted power and water supply	X	X
Clinic services with a standby ambulance	√	√
Engineering block for airlines (rent highly subsidized)	X	√
Bussing, automated boarding gates and boarding bridges for airlines	√	√
Ground handling companies	√	√
Automated check-in counters	X	√
Escalators and lift services	X	√
Events and Conference Centre	√	√
Free Wi-Fi services	√	√
Free Wi-Fi services	√	√
Retail outlets and a large supermarket for shipping	X	√
Banking halls	√	√
Variety of restaurants (quality brands)	√	√
Lounges for various classes of travelers	√	X

Facilities/Services	MMA I	MMA II
Adequate seating and recreation	X	X
Clean and adequate toilets	X	√
Registered cab services	√	√
Assistance for special passengers	√	√
Ambiance for advertising opportunities, among several others.	√	√

Source: Authors Field Survey (2025)

Plate I: VIP Car Parking Lot at MMA II

Table 1 shows the major airport facilities provided in Terminals I and II of Murtala Muhammed International Airport. Out of the 30 facilities listed, Terminal I offers 18, representing 60%, while Terminal II provides 26, or 86.7%, indicating that Terminal II is more efficient in terms of facility provision. Both terminals share several essential amenities, including VIP parking, professional cargo handling, clinic services with standby ambulances, ground handling companies, event and conference centres, free Wi-Fi, banking halls, restaurants, registered cab services, and assistance for special passengers. However, Terminal II includes seven additional facilities absent in Terminal I, such as flight announcements at all parking floors, direct terminal access via a link bridge, full automation system, ultra-modern screening machines and weighing scales, engineering blocks for airlines, automated check-in counters, escalators and lifts, retail outlets, and clean and adequate toilets.

Conversely, Terminal I offers lounges for various classes of travelers, which are not available in Terminal II. Both terminals, however, lack air-conditioned drivers' lounges, uninterrupted power and water supply, and adequate seating and recreation areas. Thus, the data indicate that Terminal II provides a more technologically advanced and passenger-friendly environment, while Terminal I retains some unique amenities such as multi-class lounges. Shown on Plate I is a VIP car parking lot at Terminal II, exemplifying one of the upgraded facilities.

Table 2: Comparison of Departure Concourse Facilities in MMA I and MMA II

Facilities	MMA I	MMA II
Elevators	√	√
Escalators	X	√
Check-in counters	√	√
Information Desk	√	√
Baggage handling	√	√
Extractor system	X	X
Conveniences (Male, female, disabled rest rooms and baby changing room)	√	√
Ticketing counter	√	√
Customer care	√	√
Cooling system	X	X

Source: Authors Field Survey (2025)

Table 2 presents a comparison of departure concourse facilities in Terminals I and II of Murtala Muhammed International Airport. Of the 10 facilities listed, Terminal I provides 7, representing 70%, while Terminal II offers 8, or 80%, indicating a slight advantage in facility provision. Both terminals share essential amenities, including elevators, check-in counters, information desks, baggage handling systems, conveniences for male, female, and disabled passengers, ticketing counters, and customer care services. Notably, neither terminal has an extractor system or a dedicated cooling system at the concourse level. The key additional facility in Terminal II is the presence of escalators, which enhances passenger circulation and convenience compared to Terminal I. While both terminals provide most basic concourse facilities, Terminal II demonstrates a modest improvement in passenger accessibility and operational efficiency.

Table 3: Comparison of Arrivals Facilities in MMA I and MMA II

Facilities	MMA I	MMA II
Meeters and greeters	X	X
Screening machine and walk through machine	√	√
Baggage claiming area	√	√
Cooling system	X	X
Extractor system	X	√
Hydrant system	X	√
Fire hose reel cabinet	√	√
Conveniences	√	√

Source: Authors Field Survey (2025)

Table 3 presents a comparison of arrival facilities in Terminals I and II of Murtala Muhammed International Airport. Of the eight facilities listed, Terminal I provides four, representing 50%, including screening machines, baggage claiming areas, fire hose reel cabinets, and conveniences for passengers. Terminal II offers all these facilities and additionally provides an extractor system and hydrant system, giving it a higher level of infrastructure provision. Neither terminal has meeters and greeters or a dedicated cooling system. Generally, Terminal II demonstrates superior readiness and safety infrastructure for arrivals compared to Terminal I.

Table 4: Comparison of Departures Facilities in MMA I and MMA II

Major Facilities in the Terminals	MMA I	MMA II
Elevators	√	√
Escalators	√	√
Easy guide to locations	X	√
Cooling system	X	X
Hydrant system	X	X
Information Desk	√	√
VIP Lounge	√	√
Protocol Lounge	√	√
Platinum Lounge	√	X
VIP extension	X	X
Screening machines and walk through machine	√	√
Boarding gates	√	√
Avio-bridges	√	√
Muslim prayer room	√	√
Christian prayer room	X	√
Sprinkler system	X	X

Source: Authors Field Survey (2025)

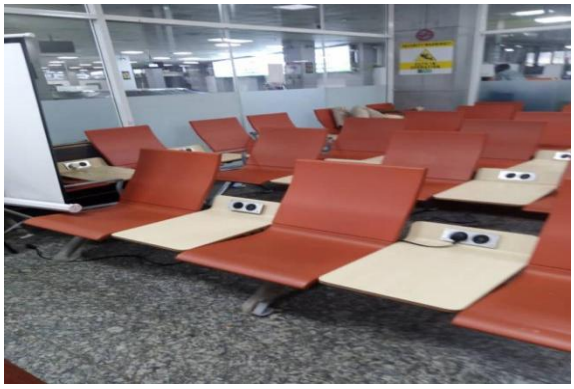

Plate II: VIP Waiting Lounge at MMA II

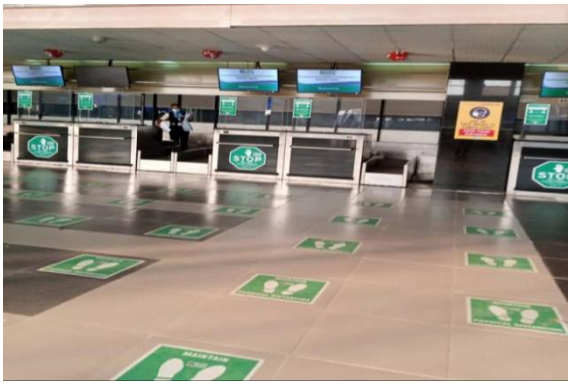

Plate III: Departure checking counter

Table 4 compares the departure facilities provided in Terminals I and II of Murtala Muhammed International Airport. Of the 16 facilities listed, Terminal I provides 10 (62.5%) while Terminal II offers 11 (68.8%), indicating slightly higher facility provision in Terminal II. Both terminals share essential amenities such as elevators, escalators, information desks, VIP and protocol lounges, screening machines, boarding gates, avio-bridges, and a Muslim prayer room. However, neither terminal has a cooling system, hydrant system, VIP extension, sprinkler system, or a Christian prayer room in Terminal I, although Terminal II provides a Christian prayer room and easy guide to locations. Plates II and III show the VIP waiting lounge at Terminal II and a departure checking counter, highlighting the facilities available to passengers. Therefore, Terminal II offers a modest improvement in passenger convenience and accessibility compared to Terminal I.

Table 5: Comparison of Service Yard Facilities in MMA I and MMA II

Major Facilities in the Terminals	MMA I	MMA II
Conveniences	√	√
Electric power house	√	√
Water treatment room	X	√
Sprinkler/hydrant system control room	X	X
Scavenge (industrial waste collector)	√	X
Bio disk	X	√

Source: Authors Field Survey (2025)

Table 5 presents a comparison of service yard facilities in Terminals I and II of Murtala Muhammed International Airport. Of the six facilities listed, Terminal I provides three (50%), while Terminal II offers four (66.7%), indicating higher provision in Terminal II. Both terminals share conveniences and an electric power house, but neither has a sprinkler or hydrant system control room. Terminal I additionally has a scavenge (industrial waste collector), while Terminal II provides a water treatment room and a bio disk. It is observed that, Terminal II demonstrates a more comprehensive range of service yard facilities compared to Terminal I, reflecting better infrastructure support for terminal operations.

Plate IV: Front View of MM I

Table 6: Comparison of Other Facilities in MMA I and MMA II

Major Facilities in the Terminals	MMA I	MMA II
Commercial car park	√	√
VIP car park	√	√
Car hire service car park	√	√
Protocol car park	√	√
Staff and concessionaire car park	X	√
Motorcycle and tricycle park	X	X
Screening machines and walk through machines	√	√
Baggage sorting area	√	√
Apron control room	√	√
CCTV	√	√

Source: Authors Field Survey (2025)

Table 6 presents a comparison of other facilities in Terminals I and II of Murtala Muhammed International Airport. Of the 10 facilities listed, Terminal I provides eight (80%), lacking only a staff and concessionaire car park and a motorcycle and tricycle park. Terminal II also offers most facilities but includes a staff and concessionaire car park, which is not available in Terminal I. Both terminals share commercial, VIP, car hire, and protocol car parks, screening machines, baggage sorting areas, apron control rooms, and CCTV coverage. Overall, the terminals provide similar facility coverage, with Terminal II showing a slight advantage in staff parking provision.

Evaluation of Passenger Satisfaction with Facilities at MMI and MMII Terminals

This part examines passengers' satisfaction levels with the facilities provided at Murtala Muhammed International Airport Terminals I and II.

Table 7: Demographic and Travel Profile of Respondents at Murtala Muhammed International Airport (MMI and MMII)

Respondents Profile	Frequency	Percentage
Gender Distribution		
Male	263	68.5
Female	112	29.2
No Response	9	2.3
Age Distribution		
18—30	101	26.3
31—40	113	29.4
41—50	92	24.0
51—60	54	14.1
61 and above	24	6.3
Purpose of Travel		
Personal	103	26.8
Official	112	29.2
Business	155	40.4
Others	14	3.6
Frequency of Travel		
Once	16	4.2
2—5 times	73	19.0
6—10 times	59	15.4
11—20 times	127	33.1
Above 20 times	109	28.4
Total	**384**	**100**

Source: Authors Field Survey (2025)

Table 1 presents the demographic and travel profile of 384 respondents at Murtala Muhammed International Airport. The majority were male (263, 68.5%), while females accounted for 112 (29.2%), with 9 (2.3%) not indicating their gender. Age distribution shows that most respondents were between 31 and 40 years (113, 29.4%), followed by 18–30 years (101, 26.3%) and 41–50 years (92, 24.0%), with smaller proportions in the 51–60 (54, 14.1%) and 61 and above (24, 6.3%) categories. Regarding travel purpose, business travelers were the largest group (155, 40.4%), followed by official travel (112, 29.2%) and personal travel (103, 26.8%), with others comprising 14 (3.6%). Frequency of travel indicates that most respondents traveled 11–20 times (127, 33.1%) or more than 20 times (109, 28.4%), while fewer traveled 2–5 times (73, 19.0%), 6–10 times (59, 15.4%), or once (16, 4.2%). The sample is dominated by middle-aged male respondents who travel primarily for business or official purposes, frequently using the airport terminals.

Table 8: Passengers' Opinions on Facilities Provision in the Airport Terminals

Facilities Provision	MMA I		MMA II		Total	%
	Frequency	%	Frequency	%		
Very Adequate	51	26.6	92	47.9	143	37.2
Adequate	98	51.0	84	43.8	182	47.4
Inadequate	36	18.8	12	6.3	48	12.5
Very Inadequate	7	3.6	4	2.1	11	2.9
Total	192	100.0	192	100.0	384	100.0

Source: Authors Field Survey / Data Analysis (2025)

Table 8 presents passengers' assessments of facility provision in Terminals I and II at Murtala Muhammed International Airport, showing that 84.6% of passengers rated facilities as adequate or very adequate, with 77.6% in Terminal I and 91.7% in Terminal II reporting positive facility perceptions. The higher proportion of positive ratings in Terminal II suggests more effective provision of physical and operational services, which aligns with service quality theory emphasizing the importance of tangibles in shaping overall satisfaction (Parasuraman, Zeithaml and Berry, 1988; Zeithaml, Bitner and Gremler, 2018). This finding is consistent with global studies demonstrating that well maintained terminals and comfortable environments significantly enhance passenger satisfaction and perceptions of service quality (Bogicevic et al., 2013; Bezerra and Gomes, 2020; Alaydaa, Li and Jinkins, 2023) and with African research showing that airport facilities and environment are key determinants of passenger satisfaction in regional airports (Mapunda and Mwageni, 2025). It also resonates with Nigerian studies that highlight how operational constraints and infrastructure differences influence user experience across airport terminals (Adeniran and Adekunle, 2009), thereby supporting the need for targeted facility improvements in Terminal I to promote more equitable service quality and enhanced satisfaction.

Table 9: Level of Satisfaction of the Passengers on the Terminal Facilities

Satisfaction Level	MMA I		MMA II		Total	%
	Frequency	%	Frequency	%		
Highly Satisfied	41	21.4	61	31.8	102	26.6
Satisfied	30	15.6	67	34.9	97	25.3
Dissatisfied	69	35.9	37	19.3	106	27.6
Highly Dissatisfied	52	27.1	27	14.1	79	20.6
Total	192	100.0	192	100.0	384	100.0

Source: Authors Field Survey / Data Analysis (2025)

Table 9 presents passengers' levels of satisfaction with terminal facilities at Murtala Muhammed International Airport. Overall, 51.9% of passengers reported being satisfied or highly satisfied, while 48.1% expressed some level of dissatisfaction. A clear disparity is observed between the terminals, as only 37.0% of passengers in Terminal I reported satisfaction compared to 66.7% in Terminal II, indicating markedly higher satisfaction in Terminal II.

This variation suggests that differences in terminal facility conditions and service delivery influence passenger experience, consistent with service quality theory which emphasizes the role of tangible and operational service elements in shaping satisfaction (Parasuraman, Zeithaml and Berry, 1988; Zeithaml, Bitner and Gremler, 2018). The finding also aligns with empirical studies which identify cleanliness, comfort, spatial layout, and queue management as key determinants of passenger satisfaction in airport environments (Bogicevic et al., 2013; Lubbe, Douglas and Zambellis, 2011; Bezerra and Gomes, 2020). In the Nigerian context, similar challenges related to congestion, processing delays, and inadequate facilities have been shown to negatively affect passenger satisfaction (Oladipo and Adetunji, 2018; Okafor and Udo, 2019; Adeyemi and Aremu, 2021).

However, descriptive results alone are insufficient to establish whether the observed differences are statistically significant. Therefore, a chi square test of association is employed to examine the relationship between terminal facility adequacy and passenger satisfaction. This provides a more robust basis for determining whether variations in facility conditions are significantly associated with differences in passenger satisfaction, thereby supporting evidence based improvements in terminal management and service delivery.

H_0: There is no significant difference in passenger satisfaction with terminal facilities between Terminal I and Terminal II at Murtala Muhammed International Airport.

H_1: There is a significant difference in passenger satisfaction with terminal facilities between Terminal I and Terminal II at Murtala Muhammed International Airport, with Terminal II showing higher satisfaction levels.

Table 10: Passenger Satisfaction with Terminal Facilities at Murtala Muhammed International Airport Terminals I and II and Chi-Square Test of Association

Satisfaction Level	MM I	MM II
Highly Satisfied	41 (51.00)	21.4 (51.00)
Satisfied	30 (48.50)	15.6 (48.50)
Dissatisfied	69 (53.00)	35.9 (53.00)
Highly Dissatisfied	52 (39.50)	27.1 (39.50)
All	192	192
Cell Contents: Count (Expected count)		
Pearson Chi-Square = 35.607, DF = 3, P-Value = 0.000		
Likelihood Ratio Chi-Square = 36.286, DF = 3, P-Value = 0.000		

Source: Authors Field Survey / Data Analysis (2025)

The results presented in Table 10 show a Pearson Chi Square value of 35.607 with 3 degrees of freedom and a p value of 0.000. Since the p value is less than the 0.05 level of significance, the null hypothesis that there is no significant difference in passenger satisfaction between Terminal I and Terminal II is rejected. The likelihood ratio Chi Square test reported in Table 10 confirms this result, indicating a statistically significant association between terminal type and passenger satisfaction.

This finding demonstrates that passenger satisfaction varies significantly across the two terminals, with Terminal II recording higher satisfaction levels than Terminal I. The result provides empirical support for the proposition that variations in terminal facility adequacy influence passenger satisfaction, consistent with service quality theory which emphasizes the role of tangible and operational service elements in shaping user perceptions (Parasuraman, Zeithaml and Berry, 1988). It also aligns with previous empirical studies which identify cleanliness, comfort, and processing efficiency as key determinants of passenger satisfaction in airport environments (Bogicevic et al., 2013; Bezerra and Gomes, 2020).

To further explain the observed differences, the SERVQUAL framework is applied to disaggregate service quality into tangibles, reliability, responsiveness, assurance, and empathy. This enables a more detailed assessment of how specific facility and service dimensions contribute to passenger satisfaction, moving beyond general comparisons to identify the key drivers of satisfaction and areas requiring targeted improvement, particularly in Terminal I.

Table 11: SERVQUAL Dimension Scores and Correlation with Passenger Satisfaction at Murtala Muhammed International Airport Terminals I and II

SERVQUAL Dimension	Terminal I Mean	Terminal II Mean	Pearson Correlation with Satisfaction (r)	Interpretation
Tangibles (Seating, Lounges, Signage, Sanitation)	3.1 (0.8)	4.0 (0.6)	0.62**	Strong positive relationship; cleanliness and seating are key drivers
Reliability (Check-in accuracy, Baggage handling, Processing time)	2.9 (0.7)	3.8 (0.5)	0.57**	Strong positive relationship; operational efficiency critical
Responsiveness (Staff help, Queue management)	3.0 (0.7)	3.7 (0.6)	0.51**	Moderate positive relationship; staff assistance matters
Assurance (Staff professionalism, Safety guidance)	3.2 (0.6)	3.6 (0.5)	0.44*	Moderate positive relationship; confidence in staff influences satisfaction
Empathy (Special attention, Passenger care)	3.0 (0.8)	3.5 (0.6)	0.38*	Low to moderate positive relationship; personalized attention is secondary
Overall Passenger Satisfaction	3.0 (0.7)	3.9 (0.5)	–	–

*p < 0.05, **p < 0.01
Source: Authors Field Survey / Data Analysis (2025)

Table 11 presents the SERVQUAL dimension scores and their relationship with passenger satisfaction across Terminals I and II at Murtala Muhammed International Airport. The results show clear differences in service quality, with Terminal II consistently recording higher mean scores across all dimensions, which aligns with its higher overall satisfaction levels. Among the dimensions, tangibles exhibit the strongest relationship with satisfaction ($r = 0.62$, $p < 0.01$), with Terminal II outperforming Terminal I. This finding supports earlier studies which identify cleanliness, comfort, and spatial quality as critical determinants of passenger satisfaction (Bogicevic et al., 2013; Lubbe, Douglas and Zambellis, 2011), and is consistent with the tangibles dimension of the SERVQUAL model which emphasizes the importance of physical facilities in shaping user perceptions.

Reliability also shows a strong positive association with satisfaction ($r = 0.57$, $p < 0.01$), highlighting the importance of efficient check in processes, baggage handling, and reduced waiting time. This aligns with findings by Bezerra and Gomes (2020), who reported that operational efficiency significantly influences passenger satisfaction and behavioural intentions. Within the SERVQUAL framework, this reflects the reliability dimension, indicating that consistent and timely service delivery remains a major determinant of passenger experience, particularly in high traffic airport environments.

Responsiveness demonstrates a moderate positive relationship with satisfaction ($r = 0.51$, $p < 0.01$), suggesting that staff assistance and queue management contribute meaningfully to passenger perceptions. This supports airport performance perspectives that emphasize passenger-centred service delivery as a key indicator of competitiveness (Graham, 2018). In contrast, assurance and empathy show weaker but significant relationships, indicating that while staff professionalism and individualized attention are relevant, they are less influential than physical and operational service attributes. In essence, these findings confirm that tangible facilities and operational efficiency are the dominant drivers of satisfaction, reinforcing existing empirical evidence in airport service quality literature.

CONCLUSION

This study shows that differences in terminal facility adequacy are associated with passenger satisfaction at Murtala Muhammed International Airport. Terminal II, with 86.7% facility provision compared to 60% in Terminal I, recorded higher satisfaction (66.7% vs 37.0%), while the chi square result ($\chi^2 = 35.607$, $p < 0.05$) confirms a significant association, and correlation results highlight tangibles ($r = 0.62$) and reliability ($r = 0.57$) as key drivers. These findings support service quality theory, emphasizing the role of infrastructure and operational efficiency in shaping passenger experience. However, the study is limited by purposive sampling, focus on a single airport, and self-reported data. From a transport systems perspective, the results show the need to upgrade older terminals such as Terminal I to improve passenger satisfaction, operational efficiency, and overall airport performance.

REFERENCES

Adeyemi, K., & Aremu, S. (2021). Terminal amenities and passenger satisfaction in Nigerian international airports. *Journal of Air Transport Studies*, *12*(1), 45–62.

Bezerra, G. C. L., & Gomes, C. F. (2020). Antecedents and consequences of passenger satisfaction with the airport. *Journal of Air Transport Management*, *83*, Article 101766. https://doi.org/10.1016/j.jairtraman.2020.101766

Bogicevic, V., Yang, W., Kim, Y. J., & Lee, S. K. (2013). Airport service quality dimensions: Passenger satisfaction and behavioral intentions. *Journal of Air Transport Management*, *33*, 19–28. https://doi.org/10.1016/j.jairtraman.2013.05.002

De Neufville, R., & Odoni, A. (2013). *Airport systems: Planning, design, and management* (2nd Ed.). McGraw Hill Education.

Graham, A. (2018). *Managing airports: An international perspective* (5th Ed.). Routledge.

Halpern, N., & Graham, A. (2013). *The global airline industry* (2nd Ed.). Wiley.

Lubbe, B., Douglas, A., & Zambellis, J. (2011). Airport service quality drivers of passenger satisfaction. *Journal of Air Transport Management*, *17*(4), 224–227. https://doi.org/10.1016/j.jairtraman.2011.03.005

Oladipo, O., & Adetunji, M. (2018). Service quality and passenger satisfaction at selected Nigerian airports. *International Journal of Hospitality and Tourism Systems, 11*(2), 14–22.

Okafor, J., & Udo, U. (2019). Passenger perceptions of airport service quality in Nigeria. *Journal of Transport and Supply Chain Management, 13*(1), 1–12. https://doi.org/10.4102/jtscm.v13i1.389

Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1988). SERVQUAL: A multiple item scale for measuring consumer perceptions of service quality. *Journal of Retailing, 64*(1), 12–40.

Zeithaml, V. A., Bitner, M. J., & Gremler, D. D. (2018). *Services marketing: Integrating customer focus across the firm* (7th Ed.). McGraw Hill Education.

Yamane, T. (1967). *Statistics: An introductory analysis* (2nd Ed.). Harper & Row.