# Analysis of the Effects of Security Challenges on Sustainable Tourism Development in Northern Nigeria

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**Abstract**

The prevalence of security challenges in Northern Nigeria poses a significant threat to sustainable tourism development, impacting tourist destinations and the overall tourism experience. This study analyzed the effect of security challenges on sustainable tourism development, focusing on key stakeholders' perspectives and the efficacy of current security measures. Cochran's formula was used to determine the sample size. Descriptive and inferential statistics were applied to analyze the data. Findings reveal high levels of security incidents, with Yankari Game Reserve reporting the highest rate at 82.40%, primarily theft, assault, and kidnapping. Kajuru Castle followed with 74.60%, dominated by kidnapping, terrorism, and theft. Shere Hills and Jos Wildlife Park reported incident rates of 78.30% and 80.00%, respectively. One-way ANOVA tests identified statistically significant differences in overall security and safety, with Kajuru Castle rated the lowest. The study shows a significant negative impact on tourism, particularly at Kajuru Castle and Yankari Game Reserve. This study highlights the necessity for proactive security strategies, collaborative efforts, and tailored measures to mitigate the specific security issues faced by each destination, ultimately aiming to create a safer environment, promote sustainable tourism development, and enhance the overall tourism experience in Northern Nigeria. Therefore, the study recommends the implementation of increased security measures, enhanced surveillance, and restricted access to address the security challenges effectively.

**Keywords:** Security Challenges; Sustainable Tourism Development; Northern Nigeria

## 1.0    Introduction

Tourism, as a significant driver of economic growth, cultural exchange, and social development, holds immense potential for regions rich in natural beauty and cultural heritage (Madandola & Boussaa, 2023). Northern Nigeria, with its diverse landscapes, historical sites, and unique wildlife, is no exception. Despite its potential, the region's tourism sector faces formidable challenges, primarily stemming from security issues (Mataković & Cunjak, 2019). In recent years, Northern Nigeria has experienced an upsurge in security challenges, which have had a profound impact on the tourism sector (Nwagba et al., 2020). Trends indicate a growing number of incidents involving terrorism, banditry, and kidnappings (Saminu et al., 2023).

These security threats have created a climate of fear and uncertainty, deterring both domestic and international tourists from visiting the region (Manrique-de-Lara-Peñate et al., 2022). As a result, the tourism sector, which once showed promise for substantial growth, is now struggling to survive amidst these challenges (Soliku et al., 2021).

Yankari Game Reserve, located in Bauchi State, is one of the most notable examples where insecurity has severely affected tourism in Northern Nigeria (Ukah & Ejaro, 2019). Known for its diverse wildlife, natural warm springs, and historical sites, Yankari once attracted a significant number of tourists, both local and international (Ngoka, 2014). However, the escalation of Boko Haram activities and banditry in the region has led to a sharp decline in visitor

numbers. In recent years, several incidents of kidnappings and violent attacks in the surrounding areas have been reported, creating an environment of fear and uncertainty (Ojo et al., 2023). For instance, in 2018, there were reports of tourists being abducted on their way to the reserve, which garnered widespread media attention (Mihalic, 2020). This incident, among others, has significantly tarnished the reserve's reputation as a safe destination, leading to a drastic reduction in tourist vsits (Rosselló et al., 2020). Similarly, the famous Kajuru Castle area has experienced incidents of kidnappings and attacks, deterring tourists and impacting local businesses reliant on tourism. Ethnic and religious tensions in Jos have disrupted tourism activities in popular sites like the Shere Hills and Jos Wildlife Park, with occasional violence leading to curfews and road closures (Joseph & Okpa, 2018).

Zuma Rock, a notable landmark, has since reduced visits due to security challenges in its surrounding areas, including banditry and clashes with criminal elements. Gurara Falls, despite being a scenic attraction, has suffered from security concerns along access routes, affecting tourist arrivals and infrastructure development (Emejulu & Nnaegbuna, 2021). The Mambilla Plateau's potential for eco-tourism has been hindered by sporadic violence and conflicts over land, impacting proposed tourism projects (Oruonye et al., 2016). Similarly, security incidents have affected heritage sites like the Kano Ancient City Walls and cultural events like the Durbar Festival in Kano, leading to decreased tourist interest and participation (Nomishan et al., 2023). Waterfalls in Gombe State and archaeological sites in Maiduguri have also experienced difficulties due to reported insecurity, leading to a decline in visitor numbers and negatively affecting tourism-related businesses (Emejulu & Nnaegbuna, 2021). These issues highlight the complex interplay between security, tourism, and local economies in Northern Nigeria's tourism centers (Mataković & Cunjak Mataković, 2019).

The decline in tourism has had multiple adverse effects on the local economy. The disadvantages of insecurity on tourism development in Northern Nigeria are numerous and severe (Nwagba & Chukwu, 2020). Firstly, the economic effect is profound; reduced tourist arrivals lead to lower revenues for hotels, restaurants, tour operators, and other related businesses. This downturn affects not only the tourism sector but also the broader economy, as many local communities rely on tourism for their livelihoods (Tohidy Ardahaey, 2011). Secondly, insecurity stifles investment in the tourism sector. Potential investors are deterred by the high risks, leading to a lack of development and modernization of tourism infrastructure (Nguyen, 2021). Thirdly, the social effect cannot be overlooked. The local communities, who are often the custodians of cultural heritage sites and natural attractions, suffer from diminished income and increased poverty levels due to the decline in tourism (Brooks et al., 2023). Finally, the psychological impact on both residents and potential tourists is significant. Fear and anxiety related to security threats reduce the overall quality of life and deter repeat visitation (Sun & Guo, 2022).

The prevalence of violent conflicts, kidnappings, and other security threats has not only hindered the growth of tourism but also posed severe risks to stakeholders involved in the industry, including government agencies, tour operators, local communities, and tourists themselves (Nwagba et al., 2020). The interplay between security challenges and sustainable tourism development is complex and multifaceted. Security issues directly impact the perception of safety among potential tourists, influence the operational dynamics of tourism businesses, and affect the livelihoods of local communities (Baloch et al., 2023). Moreover, the effectiveness of government policies and responses to security threats plays a crucial role in shaping the tourism landscape (Akamavi et al., 2023). Therefore, understanding the perspectives of various stakeholders on these security challenges is essential for devising strategies that can foster a conducive environment for sustainable tourism development in Northern Nigeria (Poudel et al., 2016). This study aims to examine the perspectives of different stakeholders involved in the tourism industry in Northern Nigeria regarding the security challenges and their impact on sustainable tourism development. By

exploring stakeholder perceptions, this research provides a comprehensive understanding of how security issues affect tourism from multiple vantage points.

**2.0      Material and Method**

Figure 1 presents a map of Northern Nigeria, highlighting selected tourism centers across the region. This map serves as a visual tool to illustrate the geographical distribution of key tourist attractions discussed in the study.
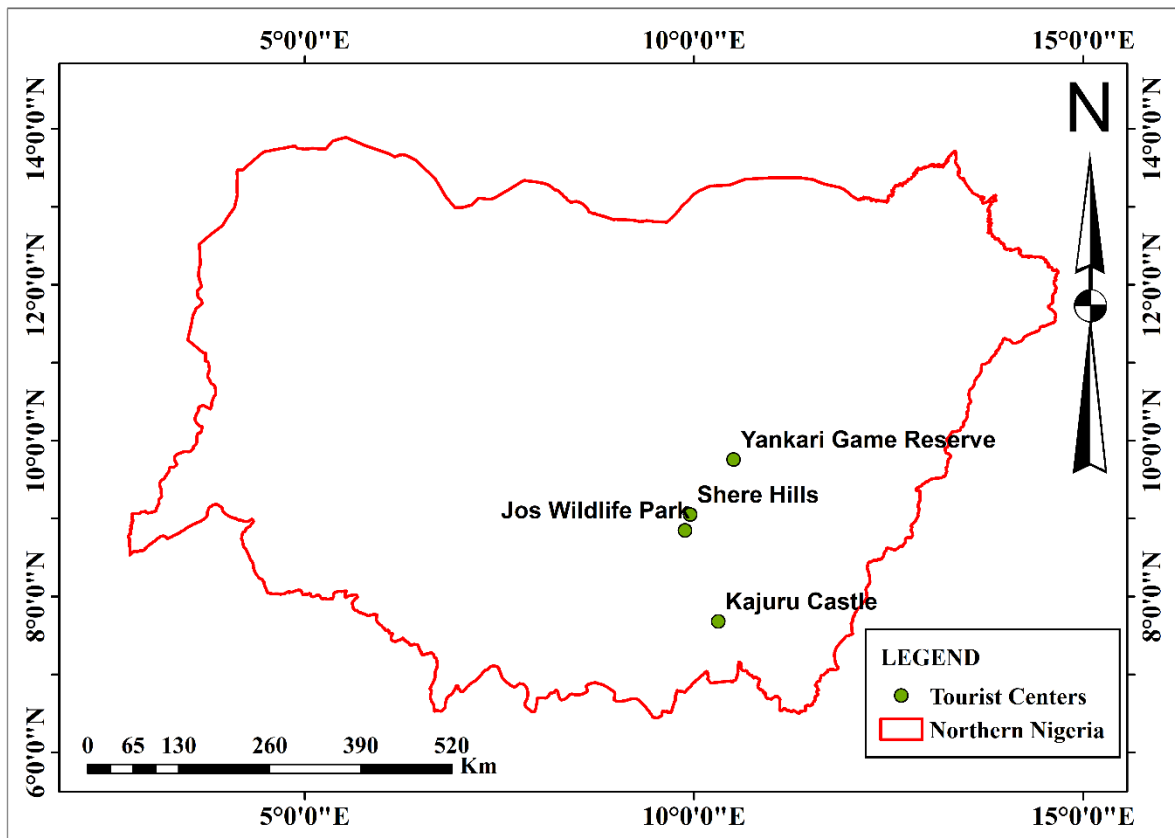


**Figure 1: Map of Northern Nigeria**
**Source: Modified map of Nigeria from DIVA-GIS (2021)**

Northern Nigeria is a region situated in the tropical zone of West Africa, within Nigeria. It lies between latitudes 6° and 14°N of the equator and longitudes 3°E and 15°E of the Greenwich Meridian, with the highest elevation reaching 2,419 meters above sea level. It shares borders with the Republic of Benin to the west, Cameroon to the east, Niger to the north, Chad to the northeast, and the southern part of Nigeria to the south (see Figure 1). The region covers a land area of 718,645.200 square kilometers, encompassing the savanna zone, which constitutes about 79% of Nigeria's total landmass.

The climate is marked by a rainy season from June to September and a dry season throughout the remainder of the year. Daytime temperatures remain high year-round, reaching up to 47°C between March and May. Relative humidity is low during the dry season and increases during the rainy season (Isa et al., 2023). Northern Nigeria predominantly falls within the Basement Complex and is characterized by savanna vegetation, including the Guinean, Sudan, and Sahel savanna types. The West Sudanian Savanna, known for its hot and arid conditions, features scattered trees and diverse grass species

(Babati et al., 2021). Granite outcrops are common in the plains, with relief ranging from 300 to 750 meters in the northwest and up to 1,600 meters in the Jos and Adamawa highlands, having an average slope of about 2°. This region is home to over 50% of Nigeria's population, sparsely distributed across 79% of the country's total landmass (Pate & Dauda, 2013). It has a population of approximately 104,458,581, including around 53,273,875 males and 51,184,703 females (NPC, 2009) making it one of the most populated zones in the country, with the largest land mass. Despite Nigeria's abundant physical and human resources, Abubakar et al. (2022) observed a worsening welfare and poverty situation, with over 40% of Nigerians living in extreme poverty, surviving on less than three hundred and twenty naira per capita per month, insufficient to meet a quarter of the nutritional requirements for healthy living.

## 2.1    Data Used and Purpose
The study employed questionnaire as a primary data collection tool during fieldwork. The questionnaire was designed by the researcher to gather specific information relevant to the research objectives directly from individuals within the study area. The use of questionnaire facilitated the systematic collection of data on various variables of interest, allowing for a structured and organized approach to data collection. Questionnaire were administered in Yankari Game Reserve, Kajuru Castle, Shere Hills, and Jos Wildlife Park. These sites were chosen purposively due to reported cases of insecurity, making them ideal for analyzing the impact of security challenges on tourism.

## 2.2    Sample and Sampling Technique
A clear sample and sampling technique was developed due to the lack of available population data. The focus was on tourists, tour guides, and business owners in Yankari Game Reserve, Kajuru Castle, Shere Hills, and Jos Wildlife Park. Focusing on tourists, tour guides, and business owners ensures a comprehensive understanding of security challenges' impact on tourism,

capturing perspectives on travel decisions, operational challenges, and economic effects. This approach provides a well-rounded analysis from key stakeholders in Northern Nigeria's tourism sector.

The population was determined using official data obtained from the authorities at each tourism center. Yankari Game Reserve recorded 200 tourists, 50 tour guides, and 30 business owners. Similarly, Kajuru Castle had 100 tourists, 30 tour guides, and 20 business owners; Shere Hills had 150 tourists, 40 tour guides, and 25 business owners; and Jos Wildlife Park had 180 tourists, 45 tour guides, and 35 business owners. This resulted in a total population of 905 respondents. To ensure the sample size was statistically significant, Cochran's formula was used. Assuming a 95% confidence level and a 5% margin of error, the sample size was calculated using the formula:

$n0=(1.96)2 \cdot 0.5 \cdot (0.5)(0.05)2 \approx 384 n0=(0.05)2(1.96)2 \cdot 0.5 \cdot (0.5)=384$

Given this estimated sample size of 384, a stratified sampling technique was employed to ensure each subgroup was adequately represented. This involved dividing the population into distinct subgroups or strata based on both the type of respondent (tourists, tour guides, business owners) and the location (Yankari Game Reserve, Kajuru Castle, Shere Hills, Jos Wildlife Park). The total sample size of 384 was then distributed proportionally based on the estimated population in each stratum. The sample sizes for each stratum were calculated proportionally.

Table 1 presents the sample size used in this study, outlining the number of respondents selected from each tourism center. The table provides a breakdown of the sample size for tourists, tour guides, and business owners at each location, offering a clear understanding of the representation across the different groups and tourism centers involved in the research.

**Table 1: Sample Size**

| Yankari Game Reserve | Sample sizes |
|---|---|
| Tourists | 85 |
| Tour Guides | 21 |
| Business Owners | 13 |
| Total | 119 |
| Kajuru Castle | Sample sizes |
| Tourists | 42 |
| Tour Guides | 13 |
| Business Owners | 8 |
| Total | 63 |
| Shere Hills | Sample sizes |
| Tourists | 64 |
| Tour Guides | 17 |
| Business Owners | 11 |
| Total | 92 |
| Jos Wildlife Park | Sample sizes |
| Tourists | 76 |
| Tour Guides | 19 |
| Business Owners | 15 |
| Total | 110 |

## 2.3  Method of Data Analysis

This study employed a mixed-methods approach, combining both quantitative and qualitative data collection, to examine security challenges and their impact on sustainable tourism development at four key tourist destinations in Northern Nigeria: Yankari Game Reserve, Kajuru Castle, Shere Hills, and Jos Wildlife Park. Data were collected through structured questionnaires administered to three main stakeholder groups: tourists, tour guides, and business owners. The sample size at each destination was determined using official records provided by the relevant tourism authorities, and stratified random sampling was employed to ensure proportional representation across the stakeholder categories.

The questionnaire was divided into sections covering security challenges, the impact on tourism, and recommendations for improving security measures. It included both closed-ended questions (using Likert scales) to quantify respondents' views and open-ended questions to capture qualitative insights into the most significant security challenges faced and possible solutions. The quantitative data from the questionnaire were analyzed using IBM SPSS Statistics software. Descriptive statistics, including frequencies, percentages, means, and standard deviations, were calculated to summarize key variables such as prevalence and types of security incidents, mean ratings on the importance of security (measured on a Likert scale of 1–5), effectiveness of current security measures, and confidence in security improvements at each location.

To compare the responses across the four destinations, inferential statistics were applied using one-way ANOVA in SPSS. This test assessed significant differences in perceptions of security effectiveness, confidence in security improvement, and economic impact between the destinations. F-values and p-values were reported to indicate statistical significance, with post-hoc tests used to pinpoint where specific differences occurred between groups.

The open-ended responses from the questionnaire were also analyzed. The qualitative data were manually coded and categorized into themes, such as the most pressing security challenges and the specific actions needed to improve safety. The qualitative findings provided additional context and insight into the quantitative results, highlighting stakeholder perspectives on issues such as inadequate surveillance, poor coordination with law enforcement, and the need for better infrastructure. To ensure the reliability and validity of the survey instrument, the questionnaire was pre-tested on a small sample. Cronbach's alpha was calculated using SPSS to measure the internal consistency of Likert-scale items, ensuring that the questions reliably captured the intended constructs. Ethical considerations, including informed consent and data confidentiality, were adhered to throughout the study.

### 3.0     Result and Discussion
This section presents the findings from the data collected and provides an in-depth analysis and interpretation of the results.

Table 2 provides an overview of the various security challenges identified in the study. It highlights specific threats faced by tourism centers, including incidents of violence, theft, and general insecurity.

**Table 2: Security Challenges**

| Variable | Yankari (n=119) | Kajuru (n=63) | Shere (n=92) | Jos (n=110) | |
|---|---|---|---|---|---|
| **Security Incident** | | | | | |
| **Yes** | 82.40% | 74.60% | 78.30% | 80.00% | |
| **Security Incident Type** | | | | | |
| **Theft** | 54.60% | 25.40% | 37.00% | 52.70% | |
| **Assault** | 32.80% | 19.00% | 41.30% | 29.10% | |
| **Kidnap** | 12.60% | 46.00% | 21.70% | 18.20% | |
| **Terror** | 0% | 28.60% | 0% | 0% | |
| **Total** | 100% | 119% | 100% | 100% | |
| **Overall security situation (1-5)** | | | | | F-value |
| **Mean** | 2.14 | 1.78 | 1.95 | 2.05 | 5.12 |
| **Safety of visiting/working at this destination (1-5)** | | | | | |
| **Mean** | 1.92 | 1.58 | 1.75 | 1.88 | 6.78 |

The findings reveal a concerning level of security incidents across these locations. At Yankari Game Reserve, 82.40% of respondents reported experiencing security incidents, the highest among the four destinations. The most prevalent type of incident was theft at 54.60%, followed by assault at 32.80% and kidnapping at 12.60%. Respondents rated the overall security situation at Yankari as 2.14 out of 5 and the safety of visiting/working at the destination as 1.92 out of 5. Kajuru Castle had the second-highest percentage of security incidents at 74.60%. The findings agree with that of (Akamavi et al., 2023) who conducted a study on effects of security threats on the global travel and tourism industry performance. However, the type of incidents differed significantly from Yankari. Kidnapping was the most common incident at 46.00%, followed by terrorism at 28.60%, assault at 19.00%, and theft at 25.40%. Respondents rated the overall security situation at Kajuru as 1.78 out of 5 and the safety of visiting/working at the destination as 1.58 out of 5. At Shere Hills, 78.30% of respondents reported security incidents. The most prevalent type was assault at 41.30%, followed by theft at 37.00% and

kidnapping at 21.70%. Respondents rated the overall security situation at Shere Hills as 1.95 out of 5 and the safety of visiting/working at the destination as 1.75 out of 5. Jos Wildlife Park had the second-lowest percentage of security incidents at 80.00%. The most common type was theft at 52.70%, followed by assault at 29.10% and kidnapping at 18.20%. Similar findings was reported (Mataković & Cunjak Mataković, 2019) who conducted a study on The impact of crime on security in tourism. Respondents rated the overall security situation at Jos as 2.05 out of 5 and the safety of visiting/working at the destination as 1.88 out of 5.

The one-way ANOVA tests conducted revealed statistically significant differences in the overall security situation (F-value = 5.12) and the safety of visiting/working at the destinations (F-value =

6.78). These findings show that security challenges vary across the four tourist destinations, with Yankari and Kajuru facing more severe incidents and lower perceived safety levels compared to Shere Hills and Jos Wildlife Park. The high prevalence of security incidents, particularly theft, assault, and kidnapping, poses a significant threat to the tourism industry in Northern Nigeria (Ugwuoke et al., 2023). Addressing these challenges is crucial for ensuring the safety and well-being of tourists, tour guides, and business owners, as well as promoting sustainable tourism development in the region.

Table 3 outlines the impact of security challenges on tourism, detailing how these issues have affected tourist inflows, local businesses, and the overall tourism experience.

**Table 3: Impact on Tourism**

| Impact on Tourism | | | | | |
|---|---|---|---|---|---|
| **Variable** | **Yankari (n=119)** | **Kajuru (n=63)** | **Shere (n=92)** | **Jos (n=110)** | **F-value** |
| **Impact on Tourism (1-5)** | | | | | |
| **Mean** | 4.37 | 4.71 | 4.48 | 4.57 | 3.24 |
| **Measures Taken** | | | | | |
| **Security** | 42.40% | 44.40% | 40.50% | 40.30% | |
| **Surveil** | 37.00% | 32.30% | 32.10% | 32.40% | |
| **Access** | 20.60% | 23.30% | 27.40% | 27.30% | |
| **Total** | 100.00% | 100.00% | 100.00% | 100.00% | |

The findings shows the impact of security challenges on tourism in Northern Nigeria: Yankari Game Reserve, Kajuru Castle, Shere Hills, and Jos Wildlife Park. The findings reveal a significant negative impact on tourism due to security incidents. Respondents rated the impact on tourism at Yankari Game Reserve as 4.37 out of 5, indicating a high level of impact. At Kajuru Castle, the impact was rated even higher at 4.71 out of 5. Shere Hills and Jos Wildlife Park also experienced significant impacts, with ratings of 4.48 out of 5 and 4.57 out of 5, respectively. The one-way ANOVA test conducted revealed statistically significant differences in the impact on tourism across the four destinations (F-value = 3.24).

In response to the security challenges, various measures have been taken by the authorities and stakeholders at these tourist destinations. The most common measure was increased security, with Yankari Game Reserve implementing it at 42.40%, followed by Kajuru Castle at 44.40%, Shere Hills at 40.50%, and Jos Wildlife Park at 40.30%. Improved surveillance was another measure, with Yankari Game Reserve having the highest percentage at 37.00%, followed by Kajuru Castle at 32.30%, Shere Hills at 32.10%, and Jos Wildlife Park at 32.40%. Restricted access was also implemented, with Shere Hills and Jos Wildlife Park having the highest percentages at 27.40% and 27.30%, respectively.

The findings show that security challenges have had a significant negative impact on tourism

across all four destinations, with Kajuru Castle experiencing the highest impact. Similar findings was reported by (Akamavi et al., 2023) The measures taken, such as increased security, improved surveillance, and restricted access, aim to address the security concerns and restore confidence in the tourism industry. However, the effectiveness of these measures remains to be seen, as the effect on tourism is still high across all destinations.

It is crucial for the authorities and stakeholders to continue working together to address the security challenges and implement more effective measures to ensure the safety and well-being of tourists, tour guides, and business owners (Zou & Yu, 2022). This will help in promoting sustainable tourism development and restoring the attractiveness of these destinations to both domestic and international visitors. Table 4 shows the importance of security in sustainable development in Nigeria.

**Table 4: Sustainable Development**

| Variable | Yankari (n=119) | Kajuru (n=63) | Shere (n=92) | Jos (n=110) |
|---|---|---|---|---|
| Importance of Security (1-5) | | | | F-value |
| Mean | 4.21 | 4.35 | 4.29 | 4.32 |
| Effectiveness of Security Measures (1-5) | | | | |
| Mean | 2.85 | 2.59 | 2.73 | 2.81 |
| Confidence in Security Improvement (1-5) | | | | |
| Mean | 3.14 | 2.92 | 3.05 | 3.19 |

The mean ratings for the importance of security, effectiveness of security measures, and confidence in security improvement across these destinations shed light on the perceptions and realities of security challenges in the region. The mean ratings for the importance of security reveal that all four destinations place a high value on security, with Yankari at 4.21, Kajuru at 4.35, Shere at 4.29, and Jos at 4.32. This indicates a consensus among respondents regarding the critical role of security in ensuring sustainable development in the tourism sector. Similar findings was reported by (Bukola & Olaitan, 2018) who conducted a study on tourism development and sustainable economic development: evidence from South Western Nigeria. The F-value associated with these ratings suggests that there are statistically significant differences in the perceived importance of security across the destinations.

In terms of the effectiveness of security measures, the mean ratings show variations across the destinations, with Yankari at 2.85, Kajuru at 2.59, Shere at 2.73, and Jos at 2.81. These ratings indicate that there are challenges in

the effectiveness of security measures implemented at these tourist destinations, with Kajuru having the lowest rating. The differences in these ratings show the need for tailored security strategies to address the specific challenges faced by each location. Furthermore, the mean ratings for confidence in security improvement provide insights into the level of trust in the security enhancements being implemented. Yankari has a rating of 3.14, Shere at 3.05, Jos at 3.19, and Kajuru at 2.92. These ratings reflect varying degrees of confidence in the ongoing efforts to improve security across the destinations. The statistical significance indicated by the F-value highlights the disparities in confidence levels among respondents. The findings on the importance of security, effectiveness of security measures, and confidence in security improvement shows the critical role of security in sustainable tourism development in Northern Nigeria. The findings show the need for continuous evaluation and enhancement of security strategies to ensure the safety of tourists, promote sustainable development, and foster confidence in the tourism sector across the specified destinations.

**Table 5 Perceptions and Expectations**

| Variable | Yankari (n=119) | Kajuru (n=63) | Shere (n=92) | Jos (n=110) |
|---|---|---|---|---|
| Importance of Security when Choosing Destination (1-5) | | | | F-value |
| Mean | 4.51 | 4.63 | 4.56 | 4.59 |
| Effectiveness of Current Security Measures (1-5) | | | | |
| Mean | 2.49 | 2.29 | 2.39 | 2.45 |

Table 5 shows the perceptions and expectations of tourists regarding security when choosing a destination and the effectiveness of current security measures across four major tourist destinations in Northern Nigeria. The mean ratings for the importance of security when choosing a destination reveal that all four destinations are highly valued by tourists, with Yankari at 4.51, Kajuru at 4.63, Shere at 4.56, and Jos at 4.59. This indicates a strong consensus among tourists regarding the critical role of security in their destination selection process. The F-value associated with these ratings shows that there are statistically significant differences in the perceived importance of security across the destinations. Similar findings was reported by(Ding & Wu, 2022).

In terms of the effectiveness of current security measures, the mean ratings show variations across the destinations, with Yankari at 2.49, Kajuru at 2.29, Shere at 2.39, and Jos at 2.45. These ratings indicate that tourists perceive challenges in the effectiveness of security measures currently implemented at these tourist destinations, with Kajuru having the lowest rating. The differences in these ratings shows the need for improved security strategies to address the specific challenges faced by each location and meet the expectations of tourists. The findings show that while tourists place a high value on security when choosing a destination, they perceive the current security measures as less effective across all four destinations. Similar findings was reported (Šerić et al., 2022) .

Table 6 shows the economic effect of tourism in Northern Nigeria.

**Table 6: Economic Effect**

| Variable | Yankari (n=119) | Kajuru (n=63) | Shere (n=92) | Jos (n=110) |
|---|---|---|---|---|
| Impact on Spending (1-5) | | | | F-value |
| Mean | 3.85 | 4.03 | 3.92 | 3.98 |
| Considered Canceling/Postponing Trip (1-5) | | | | |
| Mean | 4.19 | 4.44 | 4.29 | 4.35 |
| Estimated Financial Loss (Open-ended) | | | | |
| Mean | ₦500,000 | ₦750,000 | ₦600,000 | ₦650,000 |

The mean ratings for the impact on spending and the consideration of canceling or postponing trips shed light on the financial implications experienced by tourists in these locations. The mean ratings for the impact on spending reveal variations across the destinations, with Kajuru having the highest rating at 4.03, followed by Jos at 3.98, Yankari at 3.85, and Shere at 3.92. These ratings indicate the level of financial impact experienced by tourists during their visits, with Kajuru showing the highest impact on spending among the destinations. The F-value associated with these ratings suggests that there are statistically significant differences in the impact on spending across the destinations.

In terms of considering canceling or postponing trips, the mean ratings also vary, with Kajuru having the highest rating at 4.44, followed by Jos

at 4.35, Yankari at 4.19, and Shere at 4.29. These ratings reflect the extent to which tourists contemplate altering their travel plans due to various factors, with Kajuru showing the highest level of consideration among the destinations. The statistical significance indicated by the F-value highlights the disparities in the consideration of canceling or postponing trips across the destinations.

Moreover, the mean ratings for estimated financial loss provide insights into the monetary impact experienced by tourists in case of trip cancelation or postponement. The data shows that Kajuru has the highest estimated financial loss at ₦750,000, followed by Jos at ₦650,000, Shere at ₦600,000, and Yankari at ₦500,000. These figures show the financial implications faced by tourists in these destinations, with Kajuru showing the highest potential financial loss among the four locations. The findings on the economic impact of tourism in terms of spending, trip alterations, and estimated financial loss highlights the financial challenges experienced by tourists in Yankari, Kajuru, Shere, and Jos.

Table 7 outlines recommendations for addressing security challenges faced by tourism centers. It provides a structured set of proposed actions aimed at improving security and enhancing the overall safety of tourists, staff, and local communities.

**Table 7: Recommendations for addressing security challenges**

| Variable | Yankari (n=119) | Kajuru (n=63) | Shere (n=92) | Jos (n=110) |
|---|---|---|---|---|
| **Most Important Step to Address Security Challenges (Open-ended)** | | | | |
| **Increased Security** | 44.00% | 49.00% | 43.50% | 45.50% |
| **Improved Surveillance** | 33.00% | 31.00% | 32.50% | 32.70% |
| **Restricted Access** | 23.00% | 20.00% | 24.00% | 21.80% |
| **Total** | 100.00% | 100.00% | 100.00% | 100.00% |

The findings reveal the most important steps suggested by respondents to enhance security measures and ensure the safety of tourists and stakeholders in these locations. The findings indicate that the most recommended step across all destinations is "Increased Security," with Kajuru having the highest percentage at 49.00%, followed by Jos at 45.50%, Yankari at 44.00%, and Shere at 43.50%. This shows a strong consensus among respondents regarding the critical need to bolster security measures to address the prevalent security challenges in these tourist destinations.

"Improved Surveillance" is another significant recommendation, with Yankari having 33.00%, Shere at 32.50%, Jos at 32.70%, and Kajuru at 31.00%. This highlights the importance of enhancing surveillance mechanisms to monitor and prevent security incidents effectively, as perceived by the respondents across the destinations. "Restricted Access" is also identified as a crucial step to address security challenges, with Shere having the highest percentage at 24.00%, followed by Yankari at 23.00%, Jos at 21.80%, and Kajuru at 20.00%. This recommendation shows the significance of controlling access to certain areas within the tourist destinations to enhance security and mitigate potential risks.

## 4.0    Conclusion

The findings shows the prevalence of security incidents, with Yankari having the highest percentage of security incidents, followed by Kajuru, Shere, and Jos. The types of incidents reported predominantly include theft, assault, and kidnapping, each varying in frequency and nature across these locations. This variation highlights the unique security challenges faced by each destination. The implications for tourism are significant; the rise in security incidents has led to a marked decrease in tourist spending and an increased likelihood of travelers canceling or postponing their trips. Kajuru has been particularly hard hit, suffering the highest estimated financial losses due to these security concerns. In the context of sustainable development, security is recognized as a vital element. However, current security measures are

perceived as inadequate, leading to a lack of confidence in their effectiveness across the different destinations. This disparity in confidence reflects the varying levels of success in addressing security challenges, which further complicates the tourism landscape in Nigeria.

To mitigate these issues, the study recommends several strategies aimed at enhancing security. These include increasing surveillance measures, restricting access to vulnerable areas, and implementing tailored security protocols that address the specific needs of each destination. The urgency of these recommendations is highlighted by the need for proactive security strategies and collaborative efforts among stakeholders. Such initiatives are essential not only for restoring confidence in safety but also for promoting sustainable tourism development in the affected regions. By addressing these security challenges head-on, Nigeria can work towards creating a safer environment that encourages tourism and contributes to the overall economic stability of the country.

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