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Tourists' Experiences During the Covid-19 Pandemic in Plateau State, Nigeria: An Empirical Evaluation Using Chaos Theory³

ABSTRACT

The safety of tourists' health when visiting any tourism business is critical in tourism management and development. By using chaos theory, this study aimed to understand how 408 tourists in Plateau State, Nigeria, behaved toward tourism-related businesses during the COVID-19 pandemic. Completed and retrieved responses were analyzed descriptively using an inductive method, following a pragmatic approach. The findings of this investigation are consistent with chaos theory. Results from our survey indicate that 93% of tourists took precautions. This suggests that in an otherwise random and chaotic period of the tourism crisis, self-organization brought order and new stability. With a mean score of 40%, safety and hygiene were ranked as the two main influencing factors that changed tourists' actual behaviour during the pandemic. The alteration in behaviour might be attributed to tourists' awareness of their risk of catching the COVID-19 virus when visiting tourist attractions. Empirical evidence shows that non-interactive restriction techniques had a significant impact on tourist behaviour. Thus, the impact of the pandemic on tourists' protective behaviour continues to play a part in tourists' behaviour during and after the pandemic, implying that the chaos theory approach might be used as a crisis management tool in the tourism industry.

Keywords: chaos theory, COVID-19 pandemic, tourists, tourist behaviour, tourist experience

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INTRODUCTION

Tourism is a reviving, rejuvenating, pleasurable, and thrilling leisure experience that allows visitors to escape the limits of daily life. These interactions must be lived, remembered, and recalled (Barros, 2012; Kim et al., 2012; Sarial-Abi et al., 2020). People who travel and visit tourist locations tend to choose areas that have meaning for them as a result of previous memorable tourism experiences (Wong et al., 2020). However, these experiences can be cut short due to crisis.

The COVID-19 pandemic is the worst crisis the world has seen in recent memory in terms of both intensity and impact on a global scale (Bama & Nyikana, 2021; Beirman, 2021; Ezra et al., 2021; Rogerson & Rogerson, 2022; Tlali & Musi, 2022). In one month, the coronavirus spread from Wuhan to cities across the Peoples Republic of China (PRC) and then to the rest of the world. Although the coronavirus's precise origin is unknown, evidence points to a connection with the Huanan Seafood market in Wuhan, China. As a result, on January 30, 2020, the WHO had to declare the COVID-19 outbreak a public health emergency.

Due to shifts in tourist behaviour following a trigger event, the tourism industry and travelers may be affected by public health-related crises (WHO, 2018). These health-related crises put tourists' wellbeing in jeopardy, which makes them act defensively (Rogers, 1975). When pandemics endanger public safety, tourists' willingness to travel to that location decreases (Basil, 2014). The COVID-19 pandemic affected tourists' behaviour and decisions to participate in tourism activities globally (Rogerson & Baum, 2020; Assaf et al., 2021; Cao & Nguyen, 2021; Kwok & Koh, 2021). The pandemic further amplified human anxieties, thinking, feelings and behaviour (Kock et al., 2020). The pandemic heightened human anxieties, thoughts, feelings, and behaviour (Kock et al., 2020). The pandemic has had a variety of effects on tourist behaviour. Scholars argue that the fear of contracting the virus is more important than changes in tourist behaviour (Balińska, & Olejniczak, 2021; Rasoolimanesh et al., 2021; Zenker et al., 2021). This fear is not unrelated to the pandemic, which was regarded as one of the most significant events of the current and previous centuries (Zenker et al., 2021; Spenceley, 2022). It is widely acknowledged that the pandemic altered tourist's behaviour, leaving "deep marks in the tourist's thinking and feeling and change how tourists travel" (Zenker & Kock, 2020, p. 2). According to Kock et al. (2020, p. 1), the pandemic reshuffled "taken-for-granted determinants of tourism as we know it" causing "a crucial shift in tourists' psyche" that may have led to evolving but sustainable tourist behaviour (Vogler, 2022; Zhu & Dolnicar, 2022).

While the tourism industry in places like Egypt and Israel has been severely damaged by prolonged periods of terrorism accentuated by health pandemics like Swine Flu and Acute Respiratory Syndrome (SARS), the tourism industry in places like Bali, Spain and the United Kingdom has experienced short-term decreases in inbound tourism as a result of terrorism (Milman & Pizam, 1988). Plateau State, Nigeria, on the other hand, has made significant efforts to promote its tourism industry. The region is well-known for its leisure, sports, medical, agricultural, cultural, educational, ecological and business tourism (Gonap, et al., 2020). Natural beauty, culture and traditions, people's hospitality and

a high standard of services and facilities are among the many positive attributes that contribute to the region's status as one of Nigeria's top tourist destinations. The state has been designated as the 'hub' of Nigeria's scenic tourism zone (Gonap, et al., 2020). However, in recent years, the tourism industry's growth has been hampered by the negative image of the region as a result of the region's ongoing crisis, which has been exacerbated by the COVID-19 pandemic (Gonap, et al., 2020). Because of the market's sensitivity and the tourism industry's risk perception and vulnerability, the effects of crises and pandemics on destinations are likely to be greater among tourists who tend to avoid such places (Chi & Qu, 2008).

There have been reports on tourists' perceptions of risk in the tourism literature (Schroeder & Pennington-Gray, 2016) but few have looked at tourists' risk reduction strategies (Lo et al., 2011) and even fewer have looked at tourists' protective behaviour while travelling (Chien et al., 2016). Such encounters accurately predict future visitor behaviour (Kim et al., 2012). Theoretical foundations for analyzing tourist behaviour during a pandemic are provided by chaos theory. The application of chaos theory in the tourism context reveals that comprehending tourists' protective behaviour during a crisis necessitates a knowledge of the self-organization component. In this sense, "the spread of COVID-19 is closely related to human contact, and that social distancing is a viable measure against spread will have an impact on post-COVID travel behavior" (Miao et al., 2021, p. 6).

The chaos theory can be used to explain tourists' experiences, particularly those that occur during and after a pandemic. For this study, tourists are defined as domestic or proximate tourists (residents of Nigeria taking part in tourism activities in Plateau State). Restaurants, hotels and tourist attractions are specific tourism businesses that are taken into account. Given that the COVID-19 pandemic never destroyed the tourist attractions that trigger tourists' experience, the objective of this study is to highlight, from the perspective of chaos theory, the experiences of tourists in terms of their behaviour and attitude towards tourism businesses during the COVID-19 pandemic in Plateau State, Nigeria.

Numerous unanticipated events that create chaos continue to have impact on tourist destinations around the world (Rindrasihi et al., 2019; Aldao et al., 2021; Park et al., 2022). According to McKercher (1999, p. 428) "chaos literally implies a complete lack of order." Contrarily, chaos occurs in the tourism industry "when a system is dislodged from its steady condition by a triggering event that is as random and unpredictable as the outcome" (Russell & Faulkner, 2004, p. 557). The ideas of chaos theory can be used to examine chaotic and extraordinarily complex systems such as the tourism industry (Russell & Faulkner, 1999; Sellnow et al., 2002; Zahra & Ryan, 2007; Speakman & Sharpley, 2012). Chaos theory, in the opinion of Russell (2006, p. 110), "reflects the change-proneness, dynamism, and self-healing properties of living organisms." According to chaos theory and a number of recent events, "the only certainty about the future is that the unexpected will happen" (Faulkner & Valeiro, 1995, p. 33). Chaos theory, according to researchers, provides an insightful paradigm for examining the changing circumstances that affect a non-equilibrium system, focuses on changes that accumulate over time, and accelerates system changes (Scott et al., 2008).

Tourism operates at a multi-dimensional level and scale. Even though factors that affect the system change at various levels, the relationships between each element in McKercher's chaos model continue to hold true (McKercher, 1999). These factors make it easier to comprehend why the tourism industry rejects the top-down growth control strategy that benefits the majority of public sectors. For example, a significant global event had an impact on the diverse tourism industry, and the butterfly effect had a significant impact on the global tourism system. In this case, the sudden and unexpected change in the entire tourism industry is undoubtedly due to the COVID-19 pandemic.

As a result, during a crisis, chaos theory provides an opportunity to learn and reflect. It facilitates responses effectively during a tourism crisis, demonstrating that the standard crisis management models and/or frameworks and the chaos theory perspective in crisis management are not mutually exclusive (Speakman & Sharpley, 2012). Some studies have been conducted to examine how the tourism industry responds to and addresses health-related issues (McKercher & Chon, 2004; Au et al., 2005; Cooper, 2005; Rodway-Dyer & Shaw, 2005; Gray & Mishtal, 2019; Maphanga & Henama, 2019). Despite the fact that chaos theory has been used in tourism studies (Ritchie, 2004; Speakman & Sharpley, 2012; Boukas & Ziakas, 2014), it is still underutilized in studying tourists' experiences during a pandemic, highlighting the need for this study.

METHODS

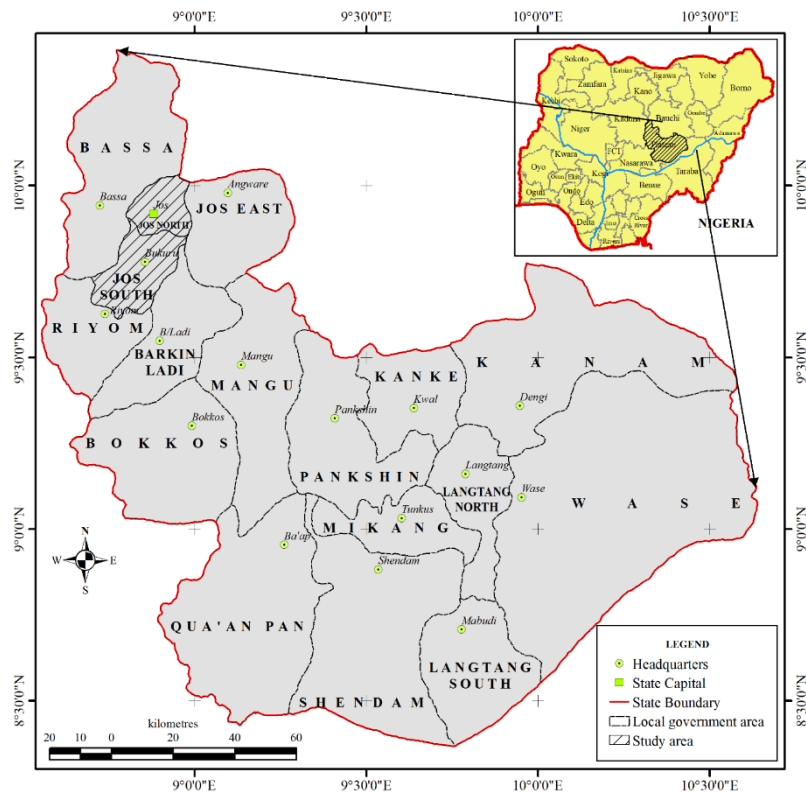
Plateau State is located in Nigeria's middle belt (Figure 1) (Emmanuel, 2015; Oosterom et al., 2021). The state gets its name from the beautiful mountainous terrain that surrounds it, complete with captivating rock formations and a plateau (Ajala, 2020). It is the 12th largest of Nigeria's 36 states and is located 313 kilometers (4 hours' drive) from Abuja, the country's capital (World Atlas, 2019). The state is home to 56 indigenous ethnic groups distinguished by shared linguistic, ancestral, social, cultural, and religious experiences (Gontul et al., 2007). Plateau State's climatic conditions are unique in some ways, which are important factors in the tourism industry (Gontul et al., 2007).

Despite being in the tropical zone, the state enjoys clement (mild) temperate-like weather and climatic conditions as a primary tourist attraction, which also drew Europeans to Jos during earlier colonial periods (Gontul et al., 2007). The average maximum temperature is 22°C, and the average minimum temperature is 18°C. Because of the north-easterly trade wind (harmattan), the weather on the Jos-plateau is generally cold from December to February. Jos, the capital of Plateau State, is known as the coldest state capital in Nigeria and a popular holiday destination for both Nigerians and expatriates.

This study therefore examines tourists' experiences in Plateau State, Nigeria, during the COVID-19 pandemic using an inductive method, following a pragmatic approach. Because of the real-world outcomes and applications to better human existence, the pragmatic philosophical perspective was chosen for this study (Brown, 2021). Pragmatists prioritize real-world situations because they value information used in problem solving rather than knowledge in abstract forms (Creswell, 2014). Prag-

matism, rather than emphasizing ideas such as truth and reality, emphasizes the flow of processes, experiences, and practical solutions and outcomes in a real-life setting in order to promote equity, freedom, and justice as a means of achieving practical consequences for society (Creswell, 2014).

Figure 1. Plateau State, Nigeria



Source: Compiled in 2021 by the GIS Lab, Department of Geography and Planning, University of Jos, Nigeria.

Previous studies have used questionnaires (Ma et al., 2017) or interviews (Moal-Ulvoas, 2017) to assess tourists' behaviour and experiences. The inductive method, following a pragmatic approach was appropriate for this study because it enabled the researchers to examine tourists' experiences during the COVID-19 pandemic using descriptive statistics. Secondary data on unexpected events, previous pandemics, and the COVID-19 pandemic were obtained from peer-reviewed journal articles, textbooks, newspapers, and websites that were relevant and helpful in generating ideas and facts for the study.

Convenience sampling was used to choose respondents (domestic or proximate tourists). The technique of convenience sampling, which is a non-probability sampling involves choosing study participants based on their availability and willingness to participate (Etikan et al., 2016; Stratton, 2021). Similar studies have successfully employed convenience sampling (Kim, 2018; Sharma & Nayak, 2019). The target population for this study was thought to be tourists visiting Plateau State (Jos North and Jos South). Prospective participants were contacted in places where there was a high likelihood of encountering tourists such as at the tourist attractions, restaurants and selected hotels. Convenience

sampling was used because random sampling was impractical due to the large number of tourists who visit tourism businesses being unknown or unspecified. This is because tourists cannot be sampled in an uncontrolled environment (Stratton, 2021).

Although convenience sampling was used in this study, Cochran's (1963) sample size formula (used to calculate sample size for populations that are large with unknown variability to yield a representative sample for proportions) was used to determine the study's sample size (Cochran, 1963, as cited in Israel, 1992). The sample size formula is given as follows:

$$n_o = \frac{Z^2 Pq}{e^2}$$

where

n_o is the sample size,

Z is the abscissa of the normal curve (a value of 1.96 is given for Z and is found in statistical tables which contain the area under the normal curve that represents the confidence level),

e is the desired level of precision,

p is the estimated proportion of an attribute that is present in the population and

q is 1- p .

Assuming $p=0.5$ (maximum variability), 95% confidence level and $\pm 5\%$ precision (Israel, 1992). In determining the sample size for this study, the level of precision, level of confidence and the degree of variability were considered. For a representative sample, 95% confidence level was used at $\pm 5\%$ precision level. The sample size for this study is calculated as follows:

$$n_o = \frac{Z^2 Pq}{e^2} = \frac{(1.96^2)(0.5)(0.5)}{(0.05)^2}$$

$$n_o = 385$$

A questionnaire was designed and was to be distributed to 385 tourists based on the calculated sample size. However, the sample size was increased by 10% to account for respondents who could not be contacted and to account for potential nonresponses (Israel, 1992; Martinez-Mesa et al., 2014). As a result, 426 respondents were approached for data collection. Due to the prevalence of unaccounted values, 18 of the 426 completed questionnaires collected from respondents were removed. In the end, 408 questionnaires were saved for further examination.

RESULTS

Demographic characteristics of respondents

The survey's objective was to investigate how the pandemic affected tourists' interactions with tourism businesses. Their responses provided detailed information on the activities of tourists, their protective behaviour and their attitudes towards tourism businesses. Table 1 shows the percentage of sampled visitors at each of 12 tourism businesses.

Table 1. Percentage of sampled visitors at various tourism businesses

Tourism business	Number	%
National Museum Jos	62	15.2
Restaurants	61	15.0
Jos Zoological Garden	54	13.2
Rayfield Holiday Resort	50	12.3
Jos Wildlife Park	42	10.3
Solomon Lar Amusement Park	32	7.8
Korret Hamlet Amusement Park	29	7.1
Tourism accommodation (hotels and guest houses)	22	5.4
Museum of Traditional Nigerian Architecture (MOTNA)	17	4.2
Mees Palace	15	3.6
Just-Relax Garden	13	3.2
Elsee Garden	11	2.7

Source: Field survey, 2021

The majority of respondents were drawn from the National Museum Jos (NMJ). This is likely due to the museum's location, accessibility and proximity to the heart of Jos town (central business district). The NMJ is located in the same area as the Jos Zoological Garden and the Museum of Traditional Nigerian Architecture (MOTNA). Visitors to Jos Wildlife Park, Solomon Lar amusement park and Korret hamlet amusement park were plentiful. Rayfield holiday resort had more sampled visitors than Mees Palace amusement park, despite being in the same location and close proximity. Although situated in close proximity to the heart of Jos town, Just-relax Garden and Elsee Garden had the fewest visitors.

Table 2 shows the background information of the sampled participants. Respondents were classified as either residents (proximate tourists) or visiting tourists whose numbers exceeded the resident tourists twofold.

Table 2. Socio-demographic characteristics of the survey respondents

Variable	Number (n=408)	%
Tourists' status		
Resident (proximate)	129	31.6
Visitor	279	68.4
Residents' duration of stay in Plateau State		
1–10 years	32	7.8
11–20 years	35	8.6
21–30 years	42	10.3
31–40 years	16	3.9
Longer than 40 years	4	1.0
Gender		
Male	228	56
Female	180	44
Age		
18–25 years	114	27.9
26–35 years	135	33.1
36–55 years	133	32.6
≥56 years	26	6.4
Average household income		
≤ ₦30 000	14	3.4
₦30 000 – ₦100 000	143	35.0
₦101 000 – ₦200 000	108	26.5
₦201 000 – ₦400 000	81	19.9
₦401 000 – ₦600 000	42	10.3
≥ ₦601 000	20	4.9
Education		
Primary	8	1.9
Secondary	88	21.6
Tertiary	282	69.1
Informal	30	7.4

Note: The percentage of residents' duration of stay does not total 100 as 68.4 accounts for visitors to Jos during the survey period.

Source: Field survey, 2021

Resident tourists (proximate tourists) are tourists who engage in tourism activities in their city of residence. Scholars (Richards, 2016; Diaz-Soria, 2017; Hoogendoorn & Hammett, 2020; Romagosa, 2020; Bolchinova, 2021) have recognized resident or proximate tourists (tourists in their city) as citizens who are curious to encounter and explore tourism activities in their own urban space. Ten per cent of the sampled resident tourists have lived in Plateau State for an average of 21–30 years. They are proximate tourists who sustain the local tourism industry. There are equal numbers of respondents aged 26–35 and 36–55 years (middle aged). The majority of respondents (66%) are between the ages of 26 and 55. This is consistent with the findings of other studies (Akande et al., 2021), which show that a higher proportion of the middle-aged population participates in travel and tourism while the proportion decreases for younger age groups.

According to the respondents' income profiles, nearly two fifths (38%) earned a monthly household income of less than ₦101 000 (USD130) per month. More than one quarter earned a monthly income of ₦101 000 to ₦200 000 per month while more than one third earned more than ₦200 000 per month. This implies that less than one quarter of the study population have sufficient disposable income to engage in leisure, travel and tourism activities. A large proportion of respondents (70%) had attained a tertiary education and at least one in every five a secondary education (Table 2). The high level of participation in tourism activities can be attributed to the high educational levels attained. This is consistent with the findings of other studies (Bozic & Jovanovic, 2019; Dingil & Estergàr-Kiss, 2022), which show that education level influences the proclivity to engage in travel and tourism. Furthermore, tourists purchasing behaviour are heavily influenced by employment (Ramya & Ali, 2016; Pena-Sanchez et al., 2020; Shebi et al., 2021). This study's sample included 74% employed people and 26% unemployed people. It is significant that three quarters of the respondents were still working at the time of the survey and then had discretionary income for spending on luxuries like tourism.

Tourists activities during the COVID-19 pandemic

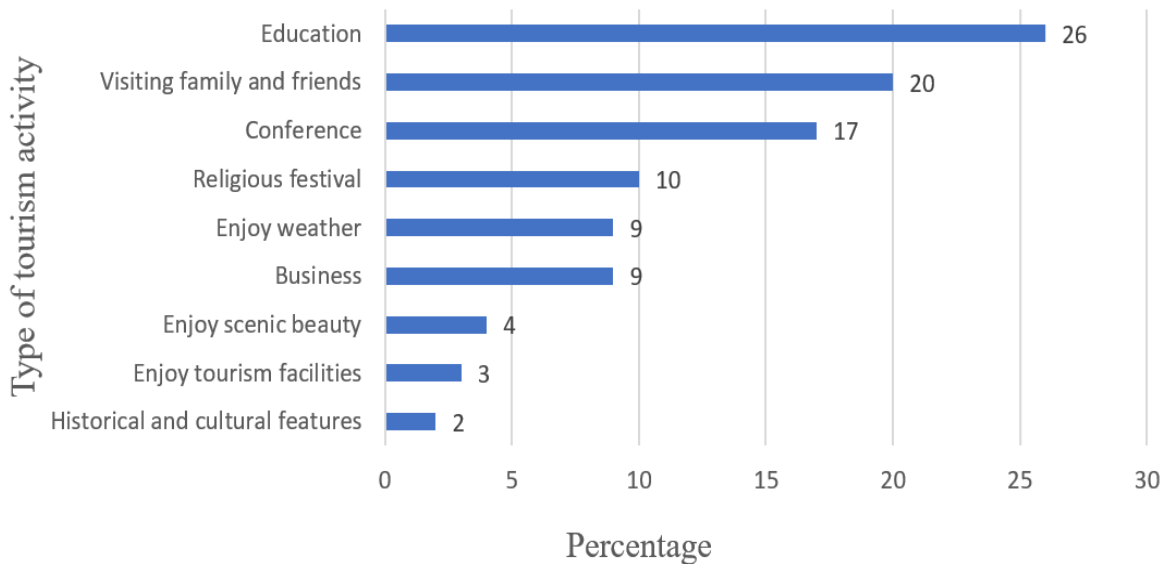
In terms of facilities and services provided, respondents were asked to name the top three tourism attractions. The most responses were for Jos Wildlife Park, Rayfield Resort, and the National Museum Jos (46%, 28%, and 26%, respectively). This is most likely due to the general popularity of these attractions in Jos as opposed to other attractions spread throughout the city.

Tourists' objectives and activities vary (Törzsök, 2015). Respondents were asked to identify the type of tourism activity they participated in while visiting Plateau State. According to the findings in Figure 2, 43% of the respondents were in the study area for educational and conference tourism activities. Nine per cent were in the study area for businesses, while visiting family and friends and religious festivals accounted for a third of the tourist activities. Others (18%) stated that they came to appreciate the Jos Plateau's weather, quiet scenic beauty, tourism amenities, and historical and cultural characteristics. This study found that during the pandemic, education tourism, visiting family and friends, conference tourism, business tourism and religious tourism featured in the study area (Figure 2).

The pandemic impacted travel patterns, with solo activities predominating due to caution about making excursions and vacations during this era (Davies et al., 2020; Kock et al., 2020; Su et al., 2021). However, findings from this study show that 42% of respondents travelled with others (family, spouses, and friends). COVID-19 had a clear impact on the prevalence of scheduled trips. According to the findings, half of the respondents who decided to engage in tourism in company or alone were concerned about becoming infected when participating in any tourism activity. Only approximately 4% thought it was unsafe to engage in tourism activities due to the COVID-19 pandemic and widespread

fear of transmitting or contracting the virus (Choi & Bum, 2020). Confidence in being accompanied by family and friends also had a significant role.

Figure 2. Tourism activities engaged in by respondents in Plateau State



Source: Field survey, 2021

Defensive behaviour of tourists

The nature of tourists' satisfaction with safety measures at destinations during the pandemic is influenced by their perceptions and protective behaviour. COVID-19 was perceived by 44% of this study's participants to be a health crisis or pandemic, an act of God (12%), a natural phenomenon (16%), man-made (17%), and 11% did not know what to attribute it to. Thirty-six per cent and 7% respectively, believed there was a likely and extreme likelihood of contracting COVID-19 at any tourism business location, so they took precautionary measures to protect themselves (93% agreed). Studies in China have confirmed that the pandemic prompted visitors to self-organize into conscious and precautionary behaviour to safeguard oneself while traveling rather than avoiding travel (Zheng et al., 2021).

One-third of the surveyed respondents in this study used social isolation as a strategy to reduce the risk of the COVID-19 infection. This is consistent with the findings from other studies, that social isolation can be a protective strategy, removing the possibility of contracting COVID-19 (Imet al., 2021). This demonstrates that tourists can self-organize to keep the tourist system running during a pandemic. This implies that, "there is, surprisingly, a certain degree of order within a chaotic system. This paradox derives from the fact that the systems displaying chaotic characteristics are operating somewhere between stability and instability and within certain boundaries" (Edgar & Nisbet, 1996, p. 7).

According to Jeuring and Becken, (2013, p. 194) “tourism safety depends not only on top-down measures of the tourism industry or local governments but also on pro-active behaviour of tourists themselves” and good tourist practices (Raffay & Gonda, 2020). This provided a new opportunity for destinations to improve their safety and precautionary measures, particularly in places where tourists must take precautions to protect themselves. In terms of respondents’ confidence in the effectiveness of the precautionary measures, they reported that they were effective (60%) or extremely effective (18%). Six per cent said the measures were ineffective, completely ineffective (2%) or not effect at all (3%), and 11% said they were neutral. The high level of trust in the efficacy of precautionary measures is primarily due to the harsh penalties for non-compliance and non-adherence to the COVID-19 safety protocols and guidelines (Asadu, 2021; Africanews, 2021). In accordance with the national strategy, the Plateau State government established a COVID-19 pandemic non-compliance mobile court to prosecute defaulters (Africanews, 2021). These defaulters faced penalties such as ₦10 000 (USD25) (or more depending on the judge’s decision), prison terms and in some cases both.

On the examination of which factors influenced the defensive behaviour of tourists using cross tabulation, 23% of 18–25 years and 20% of 26–35 age cohorts were influenced by loyalty rewards and discounts/price reduction in products, 70% of the tourists with tertiary education were influenced by safety and hygiene, 31% of respondents with the lowest income level (₦30 000 to ₦100 000) were influenced by discounts/price reduction in services. To determine what influenced the defensive behaviour of tourists, a Chi-Square analysis between income and motivation for tourism engagement was carried out to determine their dependence. The result is shown in Table 3.

Table 3. Chi-Square Test of income and motivation

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	13.805 ^a	15	.540
Likelihood Ratio	15.672	15	.404
N of Valid Cases	408		

a. 7 cells (29.2%) have expected count less than 5. The minimum expected count is 1.65.

The high p-value of the Chi-Square test results indicates a link between income and motivation to participate in tourism activities. The symmetric measure table (Table 4) does, however, show the effective size of the association between income and motivation. A nominal-by-nominal Phi coefficient of 0.2 indicates a weak link between income and motivation to participate in tourism activities. This result suggests that, despite the pandemic and the possibility of infection, low-income earners were more concerned with price reductions in tourism products and services rather than with their safety. A simple explanation could be Plateau State’s cash crunch experienced during the lock down which severely limited the purchasing power of domestic tourists.

Table 4. Symmetric Measures

		Value	Approximate Significance
Nominal by Nominal	Phi	.184	.540
	Cramer's V	.106	.540
N of Valid Cases		408	

More so, because of the pandemic, 85% of the surveyed respondents reported that managers of attractions reduced tour times and cancelled many activities, potentially reducing people's sense of joy (Liu et al., 2016). Tourists' emotional experiences are intricately linked to some sensory stimuli, wearing masks while traveling weakened their emotional experiences. However, the reopening of outdoor tourism destinations elicited positive emotions which allowed tourists to have close contact with the natural environment, bringing satisfaction of vision, hearing, and smell, as well as eliciting special emotions (Buckley & Westaway, 2020). "Therefore, understanding tourists' emotional experiences in reopened tourism destinations is critical to the tourism industry [during] the post-disaster tourism recovery period" (Yang et al., 2021, p. 391).

Tourists' perceptions of tourism businesses

This study found that more than half of the respondents (56%) did not feel comfortable or not comfortable at all using public transportation because it posed high risk for COVID-19 transmission (Table 5). This finding supports the claims of other researchers that public mass transportation declined during this pandemic era (Gupta & Sajnani, 2019; Giddy & Rogerson, 2020; Balińska, & Olejniczak, 2021; Cao & Nguyen, 2021; Zenker et al., 2021).

With an overall mean score of 51%, respondents felt comfortable patronizing all the eight of the listed tourism business types. However, the 19% neutral in their responses indicate a sense of uncertainty about patronizing businesses in 2021. Sixty-six per cent of the respondents were comfortable or extremely comfortable visiting zoos and gardens. Most respondents felt comfortable, even extremely comfortable (combined, 54%) patronizing tourism accommodation, probably due to the establishments' safety precautions and cleaning standards. The respondents also expressed an easiness with patronizing amusement parks. The average score of 57% expressed an overall feeling of comfort with patronizing tourism businesses. The mean scores also indicate that one quarter of the respondents were not comfortable or not comfortable at all with patronizing all the tourism businesses.

One-quarter of the respondents confirmed that the fear of contracting the virus while using public transportation discouraged them from using it. This concern was also raised by Balińska, and Olejniczak, (2021), who discovered that approximately one-third of their respondents had cancelled their travel plans due to their fear of COVID-19 infection in public places. These respondents were concerned about tourism businesses' hygiene (safety and cleanliness), which is linked to "consumers expectations towards service providers and the physical environment in which a service takes place"

(Balińska, & Olejniczak, 2021, p. 8). In this study, safety and hygiene as shown in Table 6 were rated highly (mean score of 40%) as an influencing factor to patronize a tourism business.

Table 5. How tourists felt about visiting tourism businesses during the COVID-19 pandemic

Businesses or activity	Comfort with patronizing tourism businesses				
	Not comfortable at all %	Not comfortable %	Neutral %	Comfortable %	Extremely comfortable %
Dining at a restaurant	11.3	12.0	17.6	56.6	2.7
Staying at a tourism accommodation (hotels and guest houses)	9.6	16.0	19.9	44.6	9.7
Using public transportation	21.8	34.0	16.2	26.2	1.5
Visiting wildlife parks	7.1	14.0	18.4	56.1	4.7
Visiting amusement parks	5.6	13.0	21.1	53.4	7.2
Visiting resorts	5.1	13.0	19.1	57.6	5.7
Visiting museums	6.4	12.0	18.6	57.1	6.4
Visiting zoos and gardens	5.1	10.0	18.6	59.6	6.4
Mean score	9.0	15.5	18.7	51.4	5.5

Source: Field survey, 2021

Table 6. Factors influencing tourists' decisions to patronize tourism businesses

Businesses	Influencing factors					
	Price of products and services %	Promotion or discounts %	Safety and cleaning protocols %	Loyalty rewards %	Facilities %	Fear of virus %
Restaurants	21.3	7.1	37.3	8.1	15.9	10.3
Tourism accommodation (hotels/guest houses)	13.0	4.7	44.4	4.2	20.8	12.9
Public transportation	19.4	4.4	32.8	4.4	13.7	25.3
Wildlife parks	23.1	10.2	35.2	7.0	8.7	15.8
Amusement parks	22.8	4.8	40.1	5.2	6.4	20.7
Resorts	22.5	8.7	38.7	8.8	4.3	17.0
Museums	12.4	5.5	45.4	9.8	7.1	19.8
Zoos and gardens	10.4	7.5	44.6	6.4	5.8	25.3
Mean score	18.1	6.6	40.0	6.7	10.3	18.4

Source: Field survey, 2021

This is consistent with findings by Cao & Nguyen (2021) that safety and hygiene at tourist sites were rated highly during the pandemic. This suggests that more attention be given to sanitary conditions of these places. The present study further revealed that respondents were concerned (mean score 10%) about the presence of facilities at tourist attractions, quite likely because service provision and facilities at tourist sites make visits pleasurable and contribute to high levels of patronage (Khadaroo & Seetanah, 2007; Lempek, & Tésits, 2021; Csapó & Végi, 2023). Loyalty rewards, promotions and

discounts did not matter much to tourists compared to the fear of contracting the coronavirus and the price of products and services.

According to a previous study, “tourism and transportation are naturally linked. On the one hand, tourists are obliged to travel to and from their destination, so transportation is part of the tourism experience” (Barros, 2012: 520). However, in the aftermath of the pandemic, public and mass transportation suffered setbacks because people avoided crowded places due to the risk of contracting COVID-19 (Rogerson & Rogerson, 2021). This is also consistent with literature (Giddy & Rogerson, 2020; Balińska, & Olejniczak, 2021; Cao & Nguyen, 2021; Mirzaei et al., 2021; Park et al., 2021; Zenker et al., 2021), that due to the increased perceived risks and exposure to the pandemic, public transportation declined while private modes of transportation increased.

Apart from the fear of contracting the virus, the pandemic had an impact on Plateau State’s tourism activities and tourist behaviour. One-third of the respondents reported that tourism businesses were underutilized because tourists avoided tourist attractions. This inevitably resulted in a decrease in revenue for businesses, which in turn had a negative impact on Plateau State’s internally generated revenue (IGR) (Jugu et al., 2021). This is consistent with Laws and Prideaux (2017)’s pre-COVID assertion that crisis-affected nations or regions will see a decrease in tourism numbers and revenue for tourism businesses due to destination substitution. This pushed destinations that rely heavily on international travel revenue to bear the brunt of the global lockdown impacts (Movono & Scheyvens, 2022). The decrease in tourist influx into Plateau State was mentioned by nearly 25% of surveyed tourists as slowing down business and economic activities. Respondents also reported the cancellation of major festivals and tourism events, the avoidance of tourist attractions due to the fear of contracting the COVID-19 at the sites, a loss of interest in social activities and the cessation of tourism activities as a result of tourism businesses being crippled. This supports the findings of Dube et al. (2020) and Dube (2021), who reported that the pandemic crippled the hospitality industry.

CONCLUSIONS

In Plateau State, Nigeria, during the COVID-19 pandemic, the behaviour of tourists toward tourism businesses was investigated through this study. The survival of the tourism industry depended heavily on domestic tourism. The majority of travel during this period was for conferences and education. The pandemic presented a variety of experiences for tourists. The study’s findings revealed that tourists’ decisions to patronize tourism businesses during the pandemic were significantly influenced by safety and cleaning procedures. The study also made a significant discovery: the psychological effects of the pandemic on tourists’ protective behaviour persist long after the pandemic has passed. The hypothesis is that chaos theory can be used to explain tourist behaviour and that the tourism industry’s sustainability will be heavily reliant on proximate tourists to support the economy and secure jobs. The study emphasizes that the COVID-19 pandemic made tourists more cautious, while also emphasizing the theoretical and practical foundations of the topic. Domestic tourism will thrive despite the uncertainty

surrounding the tourism sector's recovery from a crisis, and proximate tourism will be investigated as a potential industry alternative. As a result, future research may investigate how the pandemic affected tourists purchasing power.

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