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Risk Management Strategies: An Empirical Analysis of Strategies Employed by Tourism Business Managers in Plateau State, Nigeria during the COVID-19 Pandemic³

ABSTRACT

The ‘new normal’ era of the COVID-19 pandemic had debilitating effects from a number of restrictions on businesses that have had a significant impact on the travel and hospitality sectors. Chaos theory is applied to investigate the risk management strategies employed by tourism business managers in Plateau State Nigeria, during the pandemic. Interview responses were subjected to qualitative analysis and the findings of this study are consistent with chaos theory. As risk management strategies for the survival of tourism businesses, order and new stability reemerged from a chaotic tourism crisis era. Due to their experiences with the epidemic, managers and owners of tourism-related enterprises decided to base their decisions on planned behaviour. The viewpoints and experiences of managers of tourism-related businesses are valuable sources for practical risk management strategies that can be used in the event of a pandemic. These are priceless resources that will help other tourism sector players comprehend and weigh their alternatives for handling such extraordinary situations in the future.

Keywords: risk, risk management strategies, tourism, COVID-19, Plateau State

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INTRODUCTION

The tourism industry is vulnerable to a variety of dangers that could reduce its efficacy (Ritchie, 2004). An increasing number of occurrences, including quakes, floods, and storms, as well as social unrest, political upheaval, wars, financial and economic crises, terrorist attacks, and the spread of infectious diseases marked by pandemics and fatalities, have recently disrupted the tourism industry's relative stability on a number of occasions (Kim et al., 2005; Mansfeld, 2006; Speakman & Sharpley, 2012; Boukas & Ziakas, 2014; Rosselló et al., 2020). In addition, there have been reports of health-related issues and how they have impacted tourism. Examples of these include, the outbreaks of foot-and-mouth disease (Keeling et al., 2003; Rodway-Dyer & Shaw, 2005), severe acute respiratory syndrome (SARS) (Brug et al., 2004; McKercher & Chon, 2004; Cooper, 2005; Au et al., 2005; Colizza et al., 2007), zika virus (Gray & Mishtal, 2019), Ebola (Sifolo & Sifolo, 2015; Maphanga & Henama, 2019) and the SARS-CoV-2 virus (COVID-19) (Cori et al., 2020; Dube et al., 2020).

The Corona virus (COVID-19), which was first detected in December 2019 in Wuhan, Hubei province, China, spread rapidly throughout the world in the year 2020. In order to coordinate global reactions to the disease, the World Health Organization (WHO) was forced to declare Covid-19 a public health emergency (WHO, 2020). The public health community has previously experienced pandemics, with SARS serving as the first major international health emergency of the twenty-first century. The WHO declared SARS an epidemic when it first appeared in 2003. The majority of cases were in China, but clusters of cases also appeared in Taiwan and Canada. Following the WHO's designation of Hong Kong and the Chinese province of Guangzhou as high-risk tourist destinations, several regions of China were designated as epidemic zones (Jamal & Budke, 2020). International visitors were advised not to go, and an increasing number of nations began to impose entry restrictions on Chinese tourists (Zeng et al., 2005).

The COVID-19 pandemic led to changes in the global economy and tourism sector. This transformation can be contextualized as "an evolving chaotic ordering from a chaos theory perspective" (Boukas & Ziakas, 2014, p. 192). Complexity theory has been applied in crisis management studies (Zahra & Ryan, 2007); however, this paper builds on prior research (Burlando, 1994; Potts, 2009) that risk management can be studied using chaos theory to understand the dynamics of complex systems (Edgar & Nisbet, 1996; McKercher, 1999; Ritchie, 2004; Speakman & Sharpley, 2012). The focus of the paper is on risk management strategies adopted by managers of tourism businesses (restaurants, hotels, and tourist attractions) in Plateau State in Nigeria. The paper uses chaos theory to explain the risk management experiences of the tourism industry, particularly during and after the pandemic. The gaps revealed in the risk management and chaos theory literature suggest that more research on the experiences of tourism managers and/or owners, as well as the risk management strategies used during the COVID-19 pandemic is needed. To address this issue, Burlando's (1994) and Potts' (1999) application of chaos theory in risk management is considered, which provides a strong theoretical foundation and enables the incorporation of existing risk management and chaos theory literature for determining strategies for responding to risks during a crisis.

LITERATURE REVIEW

Tourism has always been vulnerable to risks, crises, disasters or pandemics (Huang et al., 2020). Risk management and strategic management during a crisis have been a primary focus of researchers who contend that strategy can be ‘purely deliberate’ involving strategy development and implementation according to plan or ‘purely emergent’ involving strategy development and implementation without any form of planning (Mintzberg & Waters, 1985; Gstaettner et al., 2017; Mikulić et al., 2018; Liu et al., 2019; Dvorsky et al., 2021; Zhong et al., 2021). In the context of the COVID-19 pandemic and tourism businesses, ‘purely deliberate’ risk management strategies had to be implemented as a strategy in order to improve businesses’ reputations (Coombs, 2007).

Although there is literature on health-related crises that employ various theories, research designs and empirical settings (Novelli et al., 2018), the complexity of the pandemic necessitates a reconsideration and rethinking of risk response strategies for the tourism industry, highlighting the importance of a chaos theory approach (Li et al., 2022). The chaos theory concepts of “butterfly effect, lock-in effect, edge of chaos, bifurcation, self-organization and strange attractors” (Russell & Faulkner, 2004, p. 557) aid in understanding how risk in a complex and chaotic tourism system can be managed in a complex and chaotic tourism system. According to McKercher (1999, p. 428) “chaos literally implies a complete lack of order.” However, in the context of tourism, chaos occurs 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). Russell (2006, p. 110) suggests that “chaos theory reflects the change-proneness, the dynamism, and the self-healing properties of living organisms”.

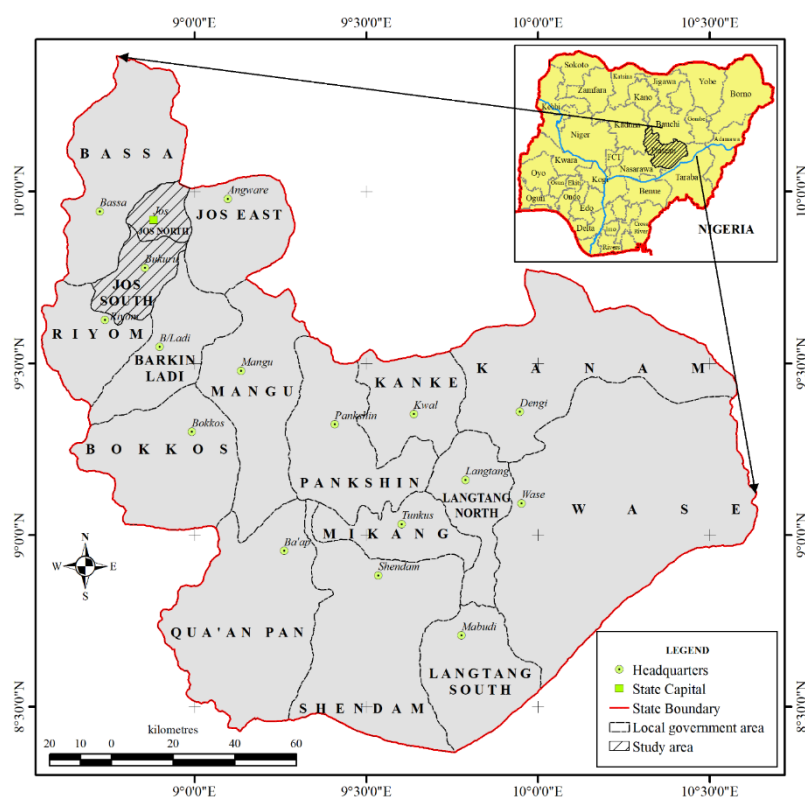
Chaos theory describes non-linear complex systems (McKercher, 1999; Russell & Faulkner, 1999) and acknowledges “the random, complex, unpredictable and dynamic nature of systems” (Speakman & Sharpley, 2012, p. 68) which is described as “an essential element of risk” (Burlando, 1994, p. 57). Chaos theory can be applied in risk management (Burlando, 1994; Potts, 1999) in various ways. It can be used to account for unpredictable and unexpected events with large-scale consequences that lead to the regrouping and emergence of a new order (Russell & Faulkner, 1999; Russell & Faulkner, 2004); it describes the behaviour of complex systems; and it clarifies unforeseen consequences (Russell & Faulkner, 1999; Correani & Garofalo, 2008). There is consensus that chaos theory provides an insightful paradigm for investigating the changing situations that influence a non-equilibrium system and it focuses on changes that accumulate over time and that accelerate system alterations (Scott, Laws & Prideaux, 2008). With the prospects of broadening severely limited skill set, managers can at least learn a few new risk management strategies from chaos theory which “may be the paradigm for a new science that has direct application to the risk management process” (Burlando, 1994, p. 61).

METHODS

Plateau State is in the middle-belt zone of Nigeria (Figure 1). The state derives its name from the picturesque mountainous terrain surrounding the state with captivating rock formations and a plateau.

It is the 12th largest of the 36 states of Nigeria and is located 313 kilometres (4 hours' drive) from Abuja, Nigeria's capital.

Figure 1. Plateau State, Nigeria



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

Nigeria recorded the first confirmed COVID-19 positive case in sub-Saharan Africa on 27 February 2020. To curb the spread and impact of the pandemic in Nigeria, along with mandatory vaccination (announced by the Nigerian government in early October and affective from 1 December 2021), a range of safety measures were instituted by the government which applied to every state. These involved lockdowns in most cities and states, physical and social distancing, border closures, the enforcement of movement restriction orders (MROs), compulsory wearing of face masks, hand washing and sanitizing, bans on cultural festivals, in addition to the imposition of a nationwide curfew (Awofeso & Irabor, 2020; FRN [Federal Republic of Nigeria], 2020; Africanews, 2021). The government initiated a phased lockdown strategy. Table 1 shows the various phases of lockdown and how the Nigerian government responded.

As nations of the world continued to manage the threat and spread of the pandemic which exacerbated the slump in the price of crude oil in the international market, many economies battled depression, which translated to limited access to funds and increased cost of living. Nigeria, by contrast, faced a triple-threat pandemic comprising the pandemic, escalating attacks by insurgents or bandits on rural communities (albeit amid the lockdown and MROs) and hunger tagged by the populace as the *hunger virus* (or HuVid-20) (because of the dramatic increases in food prices during this period) (Adie, 2020; Folarin, 2020; Mailafiya, 2020; Piwuna, 2020).

Table 1. The phases of COVID-19 lockdown in Nigeria

Phases	Features	Period of implementation (2020-2021)	Measures
Phase 1	Unprecedented virus spread Unpreparedness of health systems	30 March to 29 April 2020 Nationwide curfew introduced from 4 to 17 May 2020 to usher in eased lockdown.	Hard lockdown High restriction
Phase 2	Moderate virus spread Low to moderate health systems preparedness	2 June to 29 June 2020 Eased lockdown extended by one week to 6 August 2020.	Moderate restriction Easing of lockdown
Phase 3	Low virus spread High health systems preparedness	4 September 2020 to 25 January 2021 Phase 3 eased lockdown extended by one month from 26 January to 26 February 2021. This continued until 10 May 2021.	Low restriction Eased lockdown continued
Phase 4	Low virus spread High health systems preparedness	11 May 2021 to 26 July 2022	Low restriction Eased lockdown continues.

Source: Based on the data from FRN (2020); NCDC (2021); Sasu, 2022 edited by authors

A qualitative research approach was used in this study. The aim of the research is to analyze the risk management strategies employed by tourism business managers during the COVID-19 pandemic in Plateau State, Nigeria. To achieve this aim, an interview guide was developed which included open-ended questions to understand tourism business risk management strategies. A series of face-to-face interviews were conducted, mainly in English. The study population (participants) included hotels and guest houses, restaurants and tourist attractions managers and/or owners, who were willing and agreed to take part in the interview at their places of convenience such as their business premises. The size of the sample was based on previous qualitative tourism and hospitality studies in which samples ranged from 14 to over 30 interview participants (Yap & Ineson, 2009; Phelan, 2015; Kaushal & Srivastava, 2021). In this study the 44 respondents originally approached for participation were reduced to 24 consenting participants representing a 55% response rate. Thirteen, five and six respondents were managers/or owners of hotels/guest houses, restaurants and tourist attractions respectively. Out of the 24 respondents, 21% were females while 79% were males. Face-to-face and telephone interviews were carried out at the option of the participants. Eighteen interviews were conducted face-to-face while six were conducted telephonically. The style of questioning was formal to elicit information from the participants' perceptions and experiences during the COVID-19 pandemic. The interview questions were designed to assist the researchers gain a broader and deeper understanding of risk management strategies for promotion of tourism activities after the reopening of tourism businesses in Plateau State after the COVID-19 pandemic.

RESULTS

The interview process was aimed at investigating what risk management strategies tourism business managers and/or owners resorted to during the 'new normal' era of the COVID-19 pandemic. The collated participant profile revealed that 58% of the participants have had experience working in the tourism industry for between 10 to 30 years while one quarter had been in their current position for 10

or more years. This wealth of experiences explains managers' decisions to diversify and then shifting to alternative risk management strategies to continue operating and sustaining their businesses. To preserve the anonymity of the participants in the descriptions, they are referred to by the participant numbers given, for example P1, P13 and P17.

The strategies identified and introduced by tourism business managers and/or owners are the themes addressed in this study. The emerged themes validate and link to viewpoints of risk management strategies through interaction mediation instruments and include risk management plans, risk management teams, evaluation of plan, information dissemination, government policies and communication. The themes are consistent with the work done by Ural (2015), Fakhruddin et al. (2020), Kim and Lim (2020), and Fasth, Elliot and Styhre (2021). Table 2 summarizes the risk management themes and strategies that were identified in the study. This identified six risk management strategies introduced by tourism business managers and/or owners, are discussed in turn.

Table 2. Emerged themes of risk management strategies identified by the interviewed business managers

Theme	Strategy
Risk management plan	A plan to help businesses mitigate the risk of contracting COVID-19 at the business place
Risk management team	Update and incorporate risk management plan across the organization
Evaluation of plan	Regularly assessing the risk of the spread of COVID-19 and updating the plan
Information dissemination	Using all available social media channels to disseminate information, such as WhatsApp, Facebook, Instagram or emails, noticeboards and on-site live announcements
Government policies	Government policies, protocols and guidelines as precautionary measures
Communication and media engagement	Managers self-organize to communicate information to workers Media coverage and reportage

Source: Authors field survey, 2021

Risk management plans

Due to “a series of catastrophic incidents in the past, which have raised public consciousness of the risks associated with activities and sectors within the industry” (Santana, 2004, p. 300), tourists are now safety cautious even though crises appear to be unexpected and provide limited warning (Pacific Asia Travel Association [PATA], 2003). Any “occurrence such as a crisis, natural disaster or terrorist attack may not only damage a destination's infrastructure but may also jeopardize its image as a safe place to visit and so have a devastating effect on tourism demand and consumer confidence” (De Sausmarez, 2004, p. 158). Reflection on the frequency and consequences of the crises that keep bedevilling the tourism industry calls for an emphasis on reducing the risks at tourist destinations and businesses. One way to do this is to take a chaos-theoretic view of risk management by recognizing the edge of chaos and bifurcation phases and planning to respond accordingly (Speakman & Sharpley, 2012). Twenty-two of the twenty-four interviewed managers agreed that they recognized the bifurcation phase and then developed a COVID-19 risk management plan for the safety of their workers and customers.

The plans included written, audio and/or safety and risk management plans and guidelines for the business that were strictly in line with the state government's protocols and guidelines for reopening tourism businesses. Complying with all health guidelines and in line with international organizations such as WHO and CDC (centres for disease control and prevention), these plans were evaluated daily by the risk management team and discrepancies in plans were shared with the management and workers. This implies that "compliance with protocols in a tangible way for tourists to observe has a significant role in selecting a destination and tourism service providers in the destination" (Mirzaei et al., 2021, p. 8). Hygiene, disinfection and fumigation, as well as compliance with social distancing rules, were clearly visible in most plans as measures to maintain a safe distance to avoid transmission of the virus.

There are ample documentation in the tourism literature about hygiene as a crucial component of the tourism industry (Jauhari 2010; Tripathi et al., 2010; Cetin, 2020; Sigala, 2020; Mirzaei et al., 2021; Naumov et al., 2021). In this study, hygiene and safety remained prominent in the risk management plans of tourism businesses. Importantly, during a health crisis, managers, safety officers, and work planners are involved in the control of safety through the use of defined laws, rules, and instructions for the final control of some hazardous physical process (Rasmussen, 1997). Some of the plans "we introduced included contingency plans, especially for hygiene, safety training and COVID-19 awareness" (P17). The concern for hygiene and sanitation grew during the COVID-19 outbreak and tourism businesses employed aggressive disinfection and fumigation plans as stipulated by the state government to enhance tourists' willingness to patronize a tourism business.

Risk management teams

Risk management requires the identifying and confronting of risks and crises, as well as the ability to manage them as they arise. A salient "key to effective risk and crisis management is a structured and continuous learning process designed to equip key managers with the capabilities, flexibility and confidence to deal with sudden and unexpected problems/events or shifts in public perception of any such problems/events" (Robert & Lajtha, 2002, p. 181). Managers self-organized and became "strange attractors" (Speakman & Sharpley, 2012, p. 5). Having attended risk management training sessions and workshops, an impressive 88% of the interviewed managers reported that they had a designated COVID-19 risk management team headed by the managers. The team produced a health check form for contact tracing that had to be filled in daily by workers and customers. The information was evaluated daily by the risk management team and the findings were shared with the management and workers. Due to the low incidence of COVID-19 cases in Plateau State, this was later reduced to a weekly evaluation. The process worked well in most businesses as none of their workers or customers showed up with any COVID-19 symptoms. None of the managers reported temporary closure of business facilities as they complied strictly with the COVID-19 government-approved protocols.

The risk management teams developed several measures to contribute to the well-being of workers and customers and to minimize the risk and vulnerability of contracting COVID-19. Some of the

measures reported in the literature have been adapted by the Plateau State government in line with the measures stipulated by the Presidential Steering Committee (PSC) on the pandemic. The teams were saddled with the responsibility of planning in conjunction with other workers and communicating with them to keep the process open to suggestions for improvement. The major reason why the COVID-19 risk management teams were instituted was “basically to prevent and minimize potential harm to the workers and our customers” (P1). To reduce the likelihood of ‘super spreaders’, “we do daily temperature checks for our workers, introduced protective barriers and risk education during our staff meetings as a way of promoting a COVID-19 prevention culture” (P13). Change is inevitable as businesses resorted to contingency risk management plans to ensure that all the COVID-19 protocols were observed to minimize the risk of infection at workplaces.

Evaluation of risk management plans

As the COVID-19 conditions modified over time, risk management plans were examined. This was to enable managers and/or owners to “reflect, monitor, review, or (re)develop the COVID-19 risk management plan as the COVID-19 trajectory and information from National Centre for Disease Control (NCDC) was monitored by the risk management team” (P4). Consistent with the aim “of protecting workers, customers and the business, daily COVID-19 information disseminated on the government-approved website was constantly evaluated in line with the progress of our business” (P7). The situation reports “offered valuable information that guided our decisions on what measures to put in place for the sustainability of our business” (P23). Evaluations of “risk management plans guided our response and safety measures which kept losses at a minimum for our business” (P17). The global situation reports and “the situation reports from NCDC helped us to re-channel our priorities as a business” (P15). This is described in chaos theory as self-organization which is useful in evaluating risk management plans as affirmed by respondent P15. Risk management plans, as a way of evaluating “business sustainability must include strategies for business regeneration plans for viable social and economic activities” (P10).

These interview responses show that risk management plans helped the risk management teams to identify the extent of the potential threats of the pandemic to their workers and clients. These enabled the communication of mitigation measures through the risk management plans that yielded better outcomes, including financial outcomes, by keeping losses at a minimum as affirmed by P17. The risk management plans aided managers in evaluating what was being done during the pandemic, helped managers to respond and guided how they channelled the priorities of their businesses to survive the impacts of the pandemic. This may have contributed to minimizing their downtimes, increased their productivity and helped in avoiding significant reputational damages.

Information dissemination

Social media is a vital tool for communication, advertising, marketing, brand management, service recovery, research, and other management implications that businesses utilize to disseminate information during a crisis event. SM enables businesses to manage their information communication and offer updates to employees and clients as the event evolves (Mehraliyev et al., 2020; Kontis et al., 2021; Kwok et al., 2021). The pandemic intensified rapid information dissemination in this century through SM providing the opportunity to reach a nearly unlimited audience (Chan et al., 2020; Kudchadkar & Carroll 2020; Bellini et al., 2021; Kontis et al., 2021). A real-time and instant communication platform such as social media enhanced the quick distribution of information which became a major conduit for sharing COVID-19 pandemic-related information and experiences (Chan et al., 2020; Kudchadkar & Carroll, 2020; Bellini et al., 2021; Kontis et al., 2021).

Social media has become a critical part of people's lives (Utz et al., 2013) and provides opportunities for employees and employers to connect, especially at a time when many employees had to work from home. The interviews with participants revealed that managers of most of the businesses used social media tools such as WhatsApp, Facebook, Instagram, emails and on-site live announcements to disseminate updated information on the safety of their businesses. This was essential because, according to a respondent P11, "everyone is an actor; everyone is a role player. Understanding, participating and sharing resources with the risk management team through any of the available social media channels is compulsory for every worker. We have to be collectively alive, for the business to stay alive." As a constant reminder for workers and customers to always wear their face masks, the "No face mask No entry" sign was seen at every tourism business site the researchers visited during the data collection exercises. This was mandated by the Plateau State government as one of the compulsory requirements for the reopening of tourism businesses.

Government policies

Governments can self-organize through government policies and measures to attract foreign investment, reduce taxes, increase financing for tourism and increase funding for national tourism organizations (Speakman & Sharpley, 2012). During the pandemic, government strategies and plans were needed to sustain tourism businesses. The interviewees reiterated governments' roles through plans and strategies to cushion the impact of the pandemic and to sustain businesses. Interviewed in July 2021, respondent P11 noted that:

Some governments in some places have been able to support some businesses by giving tax waivers, I expect the same should be done for hospitality businesses. To my greatest surprise, after the reopening of lockdown to government activities and businesses, the agencies in charge immediately swung into tax collection. From what was brought to our hotel, I noticed that tax has been increased. It is when you have customers patronizing you, then you will be able to generate income to pay taxes. So, I think the government should consider a tax waiver or tax holiday for a period.

In dealing with the pandemic bifurcation, respondents urged the government for a tax grace over the local government taxation fee charged on tourist accommodation, restaurants and tourist attractions for at least six months of the hard lockdown year (2020). Interviewee P22 proposed the introduction of a social tourism plan for domestic or proximate tourists as international tourists were nowhere to be seen. According to the respondent:

Even if more international tourists get to be in sight, the lack of synergy between government and tourism practitioners further sends the industry into a comatose aside the economic impact of the COVID-19 pandemic. This is not healthy for the industry (Interview in May 2021).

In addition to local governments and tourism organizations, tourism policymaking should encompass all the relevant actors and stakeholders (Csapó, 2013; Guth et al., 2013; Lempek & Tésits, 2021). This “tourism policy should motivate stakeholders to reach an agreement through negotiating trade-offs for the efficient sharing of tourism benefits that will satisfy environmental, social and economic concerns, thereby leading to sustainability” (Boukas & Ziakas, 2014, p. 205). The implementation and clear communication of these measures will help build the trust and confidence of the people in the government. The frequent communication of updates, responses of governments, individuals and business managers and/or owners during a crisis is crucial and this is taken up next.

Communication and media engagement

Tourism business managers, along with the rest of the world, did not only fight the COVID-19 pandemic but also the ‘infodemic’ “where facts and inaccurate information was [sic] spreading faster than the virus” (Pang, 2021, p. 100). COVID-19 is the most acute crisis of our lifetime and in order to contain the ‘infodemic’, leaders must provide and maintain quality communications for effective engagement (Woodward, 2020). Scholars maintain that “proper crisis management is critical to keep stakeholders informed, protected, and anticipated. Well-prepared and designed crisis communication strategies can promptly and effectively communicate with one another during a crisis that allows organizations to protect employees and customers and ensure business continuity” (Kwok et al., 2021, p. 1). These can be enhanced by the actions, communications and crisis management strategies that businesses employ to minimize the impact of the COVID-19 pandemic on businesses thereby re-establishing order after a crisis as suggested by chaos theory (Bundy et al., 2017). By providing a platform for communication and fostering collaboration, managers became ‘strange attractors’, bringing order out of chaos and creating the conditions for a new order (Speakman & Sharpley, 2012).

Respondent P16 emphasized that “communication can limit the fast spread of this coronavirus, especially at the workplace.” To take the lead in crisis communication means acknowledging the problem or issue; expressing empathy; explaining actions; providing clear, credible (factual and transparent) and consistent (communicating frequently) messages to other team players by providing updates; and making the messages meaningful (Woodward, 2020). Leveraging communications is a way to make crisis management real and understandable to key stakeholders, particularly employees and customers (Woodward, 2020).

There has been extensive media coverage of past epidemics, which has raised public awareness of the mobility of certain viruses, such as the outbreak of the Ebola virus in West Africa, the recurring waves of bird and swine flu in Southeast Asia and the Zika virus in the Caribbean (Rasoolimanesh et al., 2021). During health crises (such as the COVID-19 pandemic), tourists are more exposed than usual to media coverage, hence misleading information or media that spread others' reactions to the crises and their fear of them (Zheng et al., 2021). These all influence tourists' decisions to engage in tourism activities or patronize tourism businesses (Zenker et al., 2019). Respondents also shared their views about media engagement in "building back better tourism businesses" during and after the pandemic. Without mincing words, one interviewee (P13) declared: "I laud the Plateau State media establishments and their roles in bringing awareness about the COVID-19 pandemic." However, another respondent (P19) claimed that: "I noticed some biased reporting where anonymity was not considered. There were photos on social media of supposed person(s) who escaped from the government COVID-19 isolation facility." This generated an uproar regarding "professionalism, carelessness, and confidentiality especially of the health workers at the facility who shared a photo of the individual that later went viral" (P7). In this era of high and improved technology, news (fake and genuine) spread faster than the media establishments could get to the true picture. However, the interviews with the managers revealed unanimity in acknowledging the media's potential in assuaging the impact of the pandemic through positive publicity as a deterrent to 'infodemic'. Thus, respondent P3 commented that:

Although it is financially demanding, media engagement is very instrumental in helping to build back businesses, because in this age, virtually everyone has access to the media which is a way of putting your business out to a wider audience (Interview in June 2021).

The interviews revealed that various strategies were instituted by tourism business managers and/or owners to mitigate the impact of the pandemic on their employees and clients. The pandemic provided an opportunity to explore workable strategies to establish the wide range differences among businesses and their management strategies among managers and/or owners which inherently determined the risk management strategies employed.

CONCLUSIONS

Tourism is dependent on travelers and customers and therefore requires a comprehensive risk management plan to effectively deal with the economic impact of disaster events (Boukas & Ziakas, 2014). The COVID-19 pandemic has taught business managers and/or owners to focus on developing risk management contingency plans and allowing room for flexible decision-making (Evans & Elphick, 2005). Risk management in "the tourism system needs to be viewed through the prism and principles encapsulated by chaos theory" (Boukas & Ziakas, 2014, p. 193) arising "from the fact that order can be found in chaos" (Potts, 1999, p. 64). When there is a crisis or a downturn in the economy, managers and business owners are crucial to the survival of the tourism industry. Enhancing and improving preparedness, as well as having dynamic risk management plans, risk management teams, evaluating

risk management plans, proper information communication and dissemination channels and policy options for the tourism industry during a crisis can be critical for the industry's long-term viability. This study demonstrates managers' and business owners' ability to learn a few new risk management strategies from chaos theory. It also adds to the debate by potentially serving as the paradigm for a science with direct relevance to chaos theory and the risk management process. Thus, chaos theory provides an innovative framework for identifying real-world, relevant and operational risk management strategies of "self-organization" for tourism businesses. As a result, tourism businesses can enjoy some sangfroid during and after a period of crisis, particularly in light of the COVID-19 pandemic's experiences. Using chaos theory, this research adds to the body of knowledge and assists tourism enterprise managers in increasing their severely limited capacity for risk management. Managers and/or owners of tourism establishments can use their lived experiences to bring order to chaos and generate creative risk management strategies. The findings of this study could form a basis for further research that would broaden the risk management strategies of tourism establishment managers and/or owners.

REFERENCES

- Adie, V. (2020, August 20). Tackling COVID-19 and looking beyond. *GGA*. <https://gga.org/tag/presidential-task-force-on-covid-19/>
- Africanews. (2021). Nigeria fines and jails coronavirus rule breakers in mobile court. <https://www.africanews.com/2021/02/12/nigeria-fines-and-jails-coronavirus-rule-breakers-in-mobile-court/>
- Au, A. K., Ramasamy, B., & Yeung, M. C. (2005). The effects of SARS on Hong Kong tourism industry: An empirical evaluation. *Asia Pacific Journal of Tourism Research*, 10, 85–95. <https://www.doi.org/10.1080/1094166042000330236>
- Awofeso, O., & Irabor, P. A. (2020). Assessment of government response to socioeconomic impact of COVID-19 pandemic in Nigeria. *Journal of Social and Political Sciences*, 3(3), 677–686.
- Bellini, M. I., Montserrat, N., Naesens, M., Neyens, T., Schneeberger, S., & Berney, T. (2021). The power of online tools for dissemination: social media, visual abstract, and beyond. *Transplant International*, 34(7), 1174–1176. <https://doi.org/10.1111/tri.13929>
- Boukas, N. & Ziakas, V. (2014). A chaos theory perspective of destination crisis and sustainable tourism development in Islands: The case of Cyprus. *Tourism Planning and Development*, 11(2), 91–209. <https://doi.org/10.1080/21568316.2013.864995>
- Brug, J., Aro, A. R., Oenema, A., De-Zwart, O., Richardus, J. H., & Bishop, G. D. (2004). SARS risk perception, knowledge, precautions, and information sources, the Netherlands. *Emerging Infectious Disease*, 10(8), 1486–1489. <https://doi.org/10.3201/eid1008.040283>
- Bundy, J., Pfarrer, M. D., Short, C. E., & Coombs, W. T. (2017). Crises and crisis management: Integration, interpretation, and research development. *Journal of Management*, 43(6), 1661–1692. <https://doi.org/10.1177/0149206316680030>

- Burlando, T. (1994). Chaos and risk management. *Risk Management*, 41(4), 54–69. <https://www.proquest.com/docview/227004100?pq-origsite=gscholar&fromopenview=true>
- Cetin, G. (2020). Impact of COVID-19 on tourism industry. *Journal of Tourismology*, editorial letter. https://www.researchgate.net/publication/340940302_Impact_of_Covid-19_on_Tourism_Industry
- Chan, A. K. M., Nickson, C. P., Rudolph, J. W., Lee, A., & Joynt, G. M. (2020). Social media for rapid knowledge dissemination: Early experience from the COVID-19 pandemic. *Anaesthesia*, 75(12), 1579–1581. <https://doi.org/10.1111/anae.15057>
- Colizza, V., Barrat, A., Barthelemy, M., & Vespignani, A. (2007). Predictability and epidemic pathways in global outbreaks of infectious diseases: The SARS case. *BMC Medicine*, 5(1), 1–34. <https://doi.org/10.1186/1741-7015-5-34>
- Coombs, W. T. (2007). Protecting organization reputations during a crisis: The development and application of situational crisis communication theory. *Corporate Reputation Review*, 10(3), 163–176. <https://doi.org/10.1057/palgrave.crr.1550049>
- Cooper, C. (2005). Japanese tourism and the SARS epidemic of 2003. *Journal of Travel and Tourism Marketing*, 19(2–3), 117–131. https://doi.org/10.1300/J073v19n02_10
- Cori, L., Bianchi, F., Ennio-Cadum, E., & Anthonj, C. (2020). Risk perception and Covid-19. *International Journal of Environmental Research and Public Health*, 17(9), 3114. <https://doi.org/10.3390/ijerph17093114>
- Correani, L., & Garofalo, G. (2008). Chaos in the tourism industry. *Munich Personal RePEc Archive*. https://mpra.ub.uni-muenchen.de/9677/1/MPRA_paper_9677.pdf
- Csapó, J. (2013). Investigation of sustainable aspects of tourism planning in the area of Béda-Karapanca. *Modern Geográfia*, 8(4), 1–8. https://moderngeografia.eu/wp-content/uploads/2013/12/2013_IV_01_csapo.pdf
- De Sausmarez, N. (2004). Crisis management for the tourism sector: Preliminary considerations in policy development. *Tourism and Hospitality Planning and Development*, 1, 157–172. <https://doi.org/10.1080/1479053042000251070>
- Dube, K., Nhamo, G., & Chikodzi, D. (2020). Covid-19 cripples global restaurant and hospitality industry. *Current Issues in Tourism*, 24(11), 1487–1490. <https://doi.org/10.1080/13683500.2020.1773416>
- Dvorsky, J., Belas, J., Gavurova, B., & Brabenec, T. (2021). Business risk management in the context of small and medium-sized enterprises. *Economic Research*, 34(1), 1690–1708. <https://doi.org/10.1080/1331677X.2020.1844588>
- Edgar, D. A., & Nisbet, L. (1996). A matter of chaos - some issues for hospitality businesses. *International Journal of Contemporary Hospitality Management*, 8(2), 6–9. <https://doi.org/10.1108/09596119610111659>
- Evans, N., & Elphick, S. (2005). Models of crisis management: An evaluation of their value for strategic planning in the international travel industry. *International Journal of Tourism Research*, 7(3), 135–150. <https://doi.org/10.1002/jtr.527>

- Fakhruddin, B., Clark, H., Robinson, L., & Hieber-Girardet, L. (2020). Should I stay or should I go now? Why risk communication is the critical component in disaster risk reduction. *Progress in Disaster Science*, 8, 100139. <https://doi.org/10.1016/j.pdisas.2020.100139>
- Federal Republic of Nigeria [FRN]. 2020. *The Quarantine Act (CAP Q2 LFN 2004): COVID-19 Regulations*. https://covid19.ncdc.gov.ng/media/archives/COVID19_REGULATIONS_2020_20200330214102_KOhShnx.pdf
- Fasth, J., Elliot, V., & Styhre, A. (2021). Crisis management as practice in small and medium-sized enterprises during the first period of COVID-19. *Journal of Contingencies Crisis Management*, 1–10. <https://doi.org/10.1111/1468-5973.12371>
- Gray, D., & Mishtal, J. (2019). Managing an epidemic: Zika interventions and community responses in Belize, *Global Public Health*, 14(1), 9–22. <https://www.doi.org/10.1080/17441692.2018.1471146>
- Gstaettner, A. M., Dodger, K., & Lee, D. (2017). Visitor perspectives of risk management in a natural tourism setting: An application of the theory of planned behaviour. *Journal of Outdoor Recreation in Tourism*, 19, 1–10. <https://doi.org/10.1016/j.jort.2017.04.001>
- Guth, L., Topa, Z., & Szabó, L. (2013). An examination of the relationship between the stakeholders of tourism in the Hungarian Danube section. *Modern Geográfia*, 8(3), 11–28. http://www.modern-geografia.eu/wp-content/uploads/2013/10/ModGeo_2013_III_02_topa-1.pdf
- Huang, L., Yin, X., Yang, Y., Luo, M., & Huang, S. S. (2020). Blessing in disguise: The impact of the Wenchuan earthquake on inbound tourist arrivals in Sichuan, China. *Journal of Hospitality and Tourism Management*, 42, 58–66. <https://doi.org/10.1016/j.jhtm.2019.11.011>
- Jamal, T., & Budke, C. (2020). Tourism in a world with pandemics: Local-global responsibility and action. *Journal of Tourism Futures*, 6(2), 181–188. <https://doi.org/10.1108/JTF-02-2020-0014>
- Jauhari, V. (2010). How can the visitor experience be enhanced for spiritual and cultural tourism in India? *Worldwide Hospitality Tourism Themes*, 2(5), 559–563. <https://doi.org/10.1108/17554211011090166>
- Kaushal, V., & Srivastava, S. (2021). Hospitality and tourism industry amid COVID-19 pandemic: Perspectives on challenges and learnings from India. *International Journal of Hospitality Management*, 92, 102707. <https://doi.org/10.1016/j.ijhm.2020.102707>
- Keeling, M. J., Woolhouse, M. E. J., May, R. M., Davies, G., & Grenfell, B. T. (2003). Modelling vaccination strategies against foot-and-mouth disease. *Nature*, 421, 136–142. <https://doi.org/10.1038/nature01343>
- Kim, S. S., Chun, H., & Lee, H. (2005). The effects of SARS on the Korean hotel industry and measures to overcome the crisis: A case study of six Korean five-star hotels, *Asia Pacific Journal of Tourism Research*, 10(4), 369–377. <https://doi.org/10.1080/10941660500363694>
- Kim, Y., & Lim, H. (2020). Activating constructive employee behavioural responses in a crisis: Examining the effects of pre-crisis reputation and crisis communication strategies in employee voice behaviours. *Journal of Contingencies and Crisis Management*, 28(2), 141–157. <https://doi.org/10.1111/1468-5973.12289>

- Kontis, A. P., Kourkoulou, I., & Vlassi, E. (2021). Social media during the COVID-19 era in 5-star hotel in Attica, Greece. In A. Kavoura, S. J. Havlovic & N. Totskaya (Eds.), *Strategic innovative marketing and tourism in the COVID-19 era* (pp. 223–230). Routledge. https://doi.org/10.1007/978-3-030-66154-0_24
- Kudchadkar, S. R., & Carroll, C. L. (2020). Using social media for rapid information dissemination in pandemic: #PedsICU and coronavirus diseases 2019. *Pediatric Critical Care Medicine*, 21(8), 535–546. <https://doi.org/10.1097/PCC.0000000000002474>
- Kwok, L., Lee, J., & Han, S. H. (2021). Crisis communication on social media: What types of COVID-19 messages get the attention? *Cornell Hospitality Quarterly*, 1–16. <https://doi.org/10.1177/19389655211028143>
- Lempek, M. Z., & Tésits, R. (2021). Tourism-based development opportunities for rural areas on the example of the Siklós District. *Modern Geográfia*, 16(2), 87–112. <https://doi.org/10.15170/MG.2021.16.02.05>
- Li, S., Wang, Y., Filieri, R., & Zhu, Y. (2022). Eliciting positive emotion through strategic responses to COVID-19 crisis: Evidence from the tourism sector. *Tourism Management*, 90, 104485. <https://doi.org/10.1016/j.tourman.2021.104485>
- Liu, Y., Cheng, P., & OuYang, Z. (2019). Disaster risk, risk management, and tourism competitiveness: A cross-nation analysis. *International Journal of Tourism Research*, 21(6), 855–867. <https://doi.org/10.1002/jtr.2310>
- Mailafiya, O. (2020). Northern governor commander of Boko Haram. <https://theinterview.ng/2020/08/11/northern-governor-commander-of-boko-haram-mailafia-obadiah/>
- Mansfeld, Y. (2006). The role of security information in tourism crisis management: The missing link. In Y. Mansfeld, & A. Pizam (Eds.), *Tourism, security & safety from theory to practice*. Elsevier, Butterworth-Heinemann.
- Maphanga, P. M., & Henama, U. S. (2019). The tourism impact of Ebola in Africa: Lessons on crisis management. *African Journal of Hospitality, Tourism and Leisure*, 8(3), 1–13. https://www.ajhtl.com/uploads/7/1/6/3/7163688/article_59_vol_8_3_2019.pdf
- McKercher, B. (1999). A chaos approach to tourism. *Tourism Management*, 20(4), 425–434. [https://doi.org/10.1016/S0261-5177\(99\)00008-4](https://doi.org/10.1016/S0261-5177(99)00008-4)
- McKercher, B., & Chon, K. (2004). The over-reaction to SARS and the collapse of Asian tourism. *Annals of Tourism Research*, 31(3), 716–719. <https://doi.org/10.1016/j.annals.2003.11.002>
- Mehraliyev, F., Choi, Y., & King, B. (2020). Theoretical foundations of social media power in hospitality and tourism: A hierarchical model. *Cornell Hospitality Quarterly*, 62(2), 215–284. <https://doi.org/10.1177/1938965520924650>
- Mikulić J., Sprčić D. M., Holiček H., & Prebežac D. (2018). Strategic crisis management in tourism: An application of integrated risk management principles to the Croatian tourism industry. *Journal of Destination Marketing & Management*, 7, 36–38. <https://doi.org/10.1016/j.jdmm.2016.08.001>

- Mintzberg, H. & Waters, J. A. (1985). Of strategies, deliberate and emergent. *Strategic Management Journal*, 6(3), 257–272. <https://doi.org/10.1002/smj.4250060306>
- Mirzaei, R., Sadin, M., & Pedram, M. (2021). Tourism and COVID-19: Changes in travel patterns and tourists' behavior in Iran. *Journal of Tourism Futures*, 1–13. <https://doi.org/10.1108/JTF-01-2021-0017>
- Naumov, N., Varadzhakova, D., & Naydenov, A. (2021). Sanitation and hygiene as factors for choosing a place to stay: Perceptions of the Bulgarian tourists. *Anatolia An International Journal of Tourism and Hospitality Research*, 32(1), 144–147. <https://covid19.ncdc.gov.ng/media/files/COVIDResponseMarch1.pdf>
- Nigeria Centre for Disease Control [NCDC]. (2021). Public health advisory on COVID-19. <https://covid19.ncdc.gov.ng/advisory/>
- Novelli, M., Burgess, L. G., Jones, A., & Ritchie, B. W. (2018). 'No Ebola...still doomed'- the Ebola-induced tourism crisis. *Annals of Tourism Research*, 70, 76–87. <https://doi.org/S0160738318300306>
- Pang, L. L. (2021). Leadership and crisis communication during COVID-19: The case of Brunei Darussalam. *Policy & Governance Review*, 5(2), 97–112. <https://doi.org/10.30589/pg.r.v5i2.388>
- Pacific Asia Travel Association [PATA]. 2003 *Crisis: It won't happen to us*. PATA.
- Phelan, K. V. (2015). Elephants, orphans and HIV/AIDS: Examining the voluntourist experience in Botswana. *Worldwide Hospitality and Tourism Themes*, 7(2), 127–140. <https://doi.org/10.1108/WHATT-12-2014-0049>
- Piwuna, C. G. (2020). Piwuna call on Gov. Lalong to resign his office for “lack of capacity” and “incompetence”. <https://www.viewpointnigeria.org/piwuna-calls-on-gov-lalong-to-resign-his-office-for-lack-of-capacity-and-incompetence/>
- Potts, M. (2009). Corporate boards: Managers of risk, sources of risk. In R. W. Kolb, & D. Schwartz (Eds.), *Risk management, chaos theory, and the corporate board of directors* (pp. 55–69). Wiley-Blackwell.
- Rasmussen, J. (1997). Risk management in a dynamic society: A modelling problem. *Safety Science*, 27(2–3), 183–213. [https://doi.org/10.1016/S0925-7535\(97\)00052-0](https://doi.org/10.1016/S0925-7535(97)00052-0)
- Rasoolimanesh, S. M., Seyfi, S., Rastegar, R., & Hall, C. M. (2021). Destination image during the COVID-19 pandemic and future travel behavior: The moderating role of past experience. *Journal of Destination Marketing & Management*, 21, 100620. <https://doi.org/10.1016/j.jdmm.2021.100620>
- Ritchie, B. W. (2004). Chaos, crises and disaster: A strategic approach to crisis management in the tourism industry. *Tourism Management*, 25, 669–683.
- Robert, B., & Lajtha, C. (2002). A new approach to crisis management. *Journal of Contingency and Crisis Management*, 10(4), 181–191. <https://doi.org/10.1111/1468-5973.00195>
- Rodway-Dyer, S., & Shaw, G. (2005). The Effects of the foot-and-mouth outbreak on visitor behaviour: The Case of Dartmoor National Park, South-West England. *Journal of Sustainable Tourism*, 13, 63–81. <https://doi.org/10.1080/17501220508668473>

- Rosselló, J., Becken, S., & Santana-Gallego, M. (2020). The effects of natural disasters on international tourism: A global analysis. *Tourism Management*, 79, 1–10. <https://www.doi.org/10.1016/j.tourman.2020.104080>
- Russell, R., & Faulkner, B. (1999). Movers and shakers: Chaos makers in tourism development. *Tourism Management*, 20(4), 411–442. [https://doi.org/10.1016/S0261-5177\(99\)00014-X](https://doi.org/10.1016/S0261-5177(99)00014-X)
- Russell, R., & Faulkner, B. (2004). Entrepreneurship, chaos and the tourism area lifecycle. *Annals of Tourism Research*, 32(3), 556–579. <https://doi.org/10.1016/j.annals.2004.01.008>
- Russell, R. A. (2006). Chaos theory and managerial approaches. In D. Buhalis & C. Costa (Eds.), *Tourism management dynamics: Trend, management and tools* (pp. 108–115). Butterworth-Heinemann.
- Santana, G. (2004). Crisis management and tourism: beyond the rhetoric. *Journal of Travel & Tourism Marketing*, 15(4), 299–321. https://doi.org/10.1300/J073v15n04_05
- Sasu, D. D. (2022). Cumulative number of confirmed coronavirus cases (COVI-19) in Nigeria from February 28, 2020 to July 26, 2022. <https://www.statista.com/statistics/1110879/coronavirus-cumulative-cases-in-nigeria/>
- Scott, N., Laws, E., & Prideaux, B. (2008). Tourism crises and marketing recovery strategies. *Journal of Travel and Tourism Marketing*, 23(2–4), 1–13. https://doi.org/10.1300/J073v23n02_01
- Sifolo, N., & Sifolo, P. P. S. (2015). The tourism inconvenience of the Ebola epidemic: Lessons for the South African tourism sector. *African Journal of Hospitality, Tourism and Leisure*, 4(10), 1–11.
- Sigala, M. (2020). Tourism and COVID-19: Impacts and implications for advancing and resetting industry and research. *Journal of Business Research*, 117, 312–321. <https://doi.org/10.1016/j.jbusres.2020.06.015>
- Siu, A., & Wong, Y. R. (2004). Economic impact of SARS: The case of Hong Kong. *Asian Economic Papers*, 3(1), 62–83. <https://doi.org/10.1162/1535351041747996>
- Speakman, M. & Sharpley, R. (2012). A chaos theory perspective on destination crisis management: Evidence from Mexico. *Journal of Destination Management and Marketing*, 1(1–2), 67–77. <https://doi.org/10.1016/j.jdmm.2012.05.003>
- Tripathi, G., Choudhary, H., & Agrawal, M. (2010). What do the tourists want? The case of the Golden Temple, Amritsar. *World Hospitality and Tourism Themes*, 2(5), 494–506. <https://doi.org/10.1108/17554211011090111>
- Ural, M. (2015). Importance of risk management for the sustainability of tourism. *Balikesir University The Journal of Social Sciences Institute*, 18(33), 163–178. <https://dergipark.org.tr/en/download/article-file/852745>
- Utz, S., Schultz, F., & Glocka, S. (2013). Crisis communication online: How medium, crisis type and emotions affected public reactions in the Fukushima Daiichi nuclear disaster. *Public Relations Review*, 39(1), 40–46. <https://doi.org/S0363811112001816>

- WHO (World Health Organization) (2020). *Coronavirus disease (COVID-19) Situation Report 140*. <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/situation-reports>
- Woodward, I. C. (2020). *Jacinda Ardern and Andrew Cuomo are crisis comms champions*. INSEAD. <https://knowledge.insead.edu/blog/insead-blog/jacinda-ardern-and-andrew-cuomo-are-crisis-comms-champions-14006>
- Yap, M. H. T., & Ineson, E. M. (2009). HIV-Infected employees in the Asian hospitality industry. *Journal of Service Management*, 20(5), 503–520.
- Zahra, A. & Ryan, C. (2007). From chaos to cohesion-complexity in tourism structures: An analysis of New Zealand's regional tourism organization. *Tourism Management*, 28, 854–862. <https://doi.org/10.1016/j.tourman.2006.06.004>
- Zeng, B., Carter, R. W., & De Lacy, T. (2005). Short-term perturbations and tourism effects: The case of SARS in China. *Current Issues in Tourism*, 8(4), 306–322. <https://doi.org/10.1080/13683500508668220>
- Zenker, S., Wallpach, S. V., Braun, E., & Vallaster, C. (2019). How the refugee crisis impacts the decision structure of tourists: A cross-country scenario study. *Tourism Management*, 71, 197–212. <https://doi.org/10.1016/j.tourman.2018.10.015>
- Zheng, D., Luo, O., & Ritchie, B. (2021). Afraid to travel after COVID-19? Self-protection, coping and resilience against 'travel fear'. *Tourism Management*, 83(1), 104261. <https://doi.org/10.1016/j.tourman.2020.104261>
- Zhong, Y., Li, Y., Ding, J., & Liao, Y. (2021). Risk management: Exploring emerging human resource issues during the COVID-19 pandemic. *Journal of Risk and Financial Management*, 14(5), 228. <https://doi.org/10.3390/jrfm14050228>

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