

Sustainable Tourism During Covid-19: Literature Review and Research Agenda

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Keywords:

Tourism, COVID-19, Pandemic, Travel, Sustainable.

Abstract.

The work systematically reviews the articles published on sustainable tourism during the COVID-19 pandemic. The paper focuses on the current state of knowledge on sustainable tourism, identifies the relevant opportunities for successful implementation and development of sustainability in the tourism industry and gives future directions. Scopus and Web of Science databases were searched, and 184 papers were identified from 2020to 2021. Each article was evaluated for the study's objective, the data collection steps, the data synthesis process, and the quality measures. The systematic review findings show an increasing interest in research on sustainable tourism adoption post-COVID-19 pandemic in the tourism industry. This is the very first article, which synthesises the published literature on sustainable tourism during COVID-19 pandemic, through Systematic Literature Review method. Our findings indicate that the applications of sustainability in tourism have been focused on all the tourism industry stakeholders. The study will be helpful to predict the extent of current and potential future pandemic effects on the tourism industry. It will also be beneficial for practitioners and policymakers to design new policies aimed at operational sustainability and capacity building of the tourism industry as an active recovery policy for counter-attacking the impact of COVID-19 on tourism.

Kata Kunci:

Pariwisata COVID-19, Pandemi, Bepergian, Berkelanjutan.

Abstrak.

Tujuan dari makalah ini adalah untuk secara sistematis meninjau artikel yang diterbitkan tentang pariwisata berkelanjutan selama pandemi COVID-19. Makalah ini berfokus pada pengetahuan terkini tentang pariwisata berkelanjutan, mengidentifikasi peluang yang relevan untuk keberhasilan implementasi dan pengembangan keberlanjutan dalam industri pariwisata dan memberikan arah masa depan ke arah itu. Basis data Scopus dan Web of Science digeledah, dan 184 makalah diidentifikasi selama 2020-2021. Setiap artikel dievaluasi untuk tujuan penelitian, langkah-langkah pengumpulan data, proses sintesis data, serta ukuran kualitas. Temuan tinjauan sistematis mengungkapkan minat yang tumbuh dalam penelitian tentang adopsi pariwisata berkelanjutan pasca pandemi COVID-19 pada industri pariwisata. Ini adalah artikel pertama yang mensintesis literatur yang diterbitkan tentang pariwisata berkelanjutan selama pandemi COVID-19, melalui metode Systematic Literature Review. Temuan kami menunjukkan bahwa penerapan keberlanjutan dalam pariwisata telah difokuskan pada semua pemangku kepentingan industri pariwisata. Studi ini akan membantu untuk memprediksi sejauh mana dampak pandemi saat ini dan potensi masa depan pada industri pariwisata. Ini juga akan bermanfaat bagi praktisi dan pembuat kebijakan untuk merancang kebijakan baru yang ditujukan untuk keberlanjutan operasional dan peningkatan kapasitas industri pariwisata sebagai kebijakan pemulihan aktif untuk serangan balik dampak COVID-19 terhadap pariwisata.

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Article history: Received 8th April 2022; Accepted 6th December 2022; Available 30th December 2022.

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1. Introduction

From a financial perspective, tourism is counted as one of the vital industries worldwide. Among the world's biggest industries, the tourism industry supports approximately one in every ten jobs globally, contributing 10.4% to the global GDP (WTTC, 2021). As wave after wave of the COVID-19 pandemic impacted every country globally, the first sector to get severely disrupted was the tourism sector from a global economic perspective. Before COVID-19, the scenario was such that the total number of tourists travelling every year was over-shooting the world's population (Hall, 2015). The number of travels of international tourists has gone up incrementally to pass 1.5 billion tourists incoming in the year 2019 (UNWTO, 2020). This number is expected to persist its run, with a prediction of approximately 1.8 billion international visitors by the year 2030 (UNDP, 2017), whilst this number may be re-examined post the impact of the COVID-19 pandemic on tourism (Gossling et al., 2020).

Numerous travel restrictions across the world and advisories have revealed that the tourism industry is vulnerable (De Sausmarez, 2004) and the waves of the COVID-19 pandemic catapulted the industry into a collapse (Romagosa, 2020). Such restrictions imposed on travelling across the globe led to a decline in tourist arrivals in every country. The impact of the COVID-19 pandemic crisis was devastating to both tourism and hospitality equally. Significant impact on the tourism industry due to COVID-19 includes the calling-off of some gigantic events, occurrences, and gatherings, which ultimately unfavourably impacted the host destination's local economy (Skift, 2020). This trend was observed across the segments associated with the tourism industry (Harchandani *et al.*, 2021).

As an impact of COVID-19, at least 90% of the world's population was underneath the limitations of cross-border movements, subsuming a complete or partial suspension of all the visa related application processes (Fragomen, 2020). Most airlines either downscaled or dropped their flight operations due to lesser calls from travellers or closedown of international borders (Darlak *et al.*, 2020). Among the most affected regions by the pandemic, the Asia-Pacific region severely suffered from a decline in tourist arrival by about 35%, followed by Europe, declining by 19% and America by 15% (Harchandani *et al.*, 2021).

There is a rapid growth in tourism in countries with a high reliance on low-replacement production and rural industriousness, where the whole nation is getting healed from political turmoil (UNWTO, 2012). Organizations and the stakeholders functioning in such countries affectionately view tourism as a viable instrument for slacking poverty and as a force for developing a business environment where economic expansion opportunities are limited (U.N., 2003; Harrison et al., 2007; Zhao et al., 2007; UNDP, 2011; Hummel et al. 2012). Although the tourism industry is directly dependent on health-related conditions and the surrounding natural environments, it also simultaneously negatively affects the conditions and environment. Minimizing the adverse effect necessitates tourism stakeholders to practice sustainable activities (Getz and Timur, 2012). Sustainable tourism attempts to upgrade its stakeholders' stature of life by optimizing the economic sustenance, safeguarding manmade and natural environment and providing an excellent experience for the tourists (Bramwell et al., 1993; Hall et al., 1998; McIntyre, 1993; Stabler, 1997). Extant literature emphasizes the need to focus on sustainable tourism detailing the environmental issues related to tourism development (Butler, 1999; Lu & Nepal, 2009; Waligo et al., 2013; Pjerotic et al., 2017). Questions that arise, what is the way forward for sustainable tourism? Role of sustainable tourism in helping to revive the tourism industry post-COVID-19 pandemic?

Burrai et al., (2019), emphasizes on the long-term and an inclusive sustainable tourism. Joo et al., (2020), states that it is vitally important to empower various stakeholders towards the achievement of sustainable tourism. Through this literature review we try to find out, what role sustainable tourism

can play in reviving the tourism industry in post-COVID-19 pandemic era. To accomplish this purpose, we compiled the existing research work and its created knowledge at one place. Which will be useful in making necessary strategies related with sustainable tourism in post pandemic world. The identified gaps in literature would also help the future researchers to further add new knowledge in this field.

We examine the above inquiry by applying a systematic review of the peer-reviewed research articles. Our research aims to interrogate and explore the imperative contents, topics, and uncertainties in sustainable tourism during COVID-19, to understand and help the future advancements in the tourism industry. We mainly searched online databases for articles that adopted sustainability-focused tourism-related articles during COVID-19. We also inspected precise inputs for the unfolding of a thriving tourism industry which preserves sustainability ideals post-pandemic rather than only proclaiming sustainable tourism concepts during unprecedented times of COVID-19. Through literature review, gaps in knowledge are pinpointed, and future research directions are emphasized.

2. Literature Review

In the year 2020, the whole world faced the COVID-19 pandemic with an inevitably esoteric shift in every aspect of life, from everyday routine activities to any lifestyle activity. Very quickly, the COVID-19 pandemic has given a new topic to researchers worldwide to observe and analyze in-depth the impact and its subsequent changes on organizations and industries with a supplement of literature. Numerous researchers across the different research domains make it necessary to have an organized and systematized study to fully extrapolate the result of this COVID-19 pandemic on the tourism industry. Looking from the managerial perspective, few contributions have started organizing the literature on COVID-19 and the future of tourism.

By analyzing and understanding the depth of unrealized consequences of COVID-19 on tourism, it may become helpful to predict the extent of current and possible future pandemic effects on the tourism industry. It will also be beneficial for practitioners and policymakers to design new policies aimed at operational sustainability and capacity building of the travel and tourism sector as an active recovery policy in reply to COVID-19 impact on tourism. Due to travel constraints and restrictions on moving across international borders, COVID-19 severely affected the domestic tourism industry and international tourism.

Table 1. Defining factors of sustainable tourism

Reference	Defining factor
Woodley (1993: 94)	Sustainable ecosystem.
Countryside Commission (1995: 2)	Local stakeholders and surroundings.
World Tourism Organization (1993: 7)	Fulfilling needs and strengthening future opportunities.
Eber (1992: 3)	Natural resources and local communities.
Hysa et al., (2022)	Smart tourism
Mondal & Samaddar, (2020)	Environment, local community, and economy
Kumar, S. (2020)	Average length of tourist stays
Era & Del Rosario, (2020)	Collaboration of all stakeholders
Tiago et al., (2021)	Local community and regulatory stakeholders' co-operation

We explored and examined (see Table 1) how sustainable tourism has been defined. For a specific area, Woodley (1993: 94) defines it from the perspective of a sustainable ecosystem. Countryside Commission (1995: 2) defines sustainable tourism as a framework that keeps the local stakeholders up without damaging their surroundings. Similarly, World Tourism Organization (1993: 7) defines sustainable tourism as an archetype for all the stakeholders of the tourism industry to fulfil the current needs of tourists and tourist destinations and preserve and strengthen their future opportunities. Eber (1992: 3) defines sustainable tourism, along with its allied resources, as a system that runs and utilizes the available natural resources efficiently at present times and will also maintain the same value in future, to keep the local community's life economically viable. Hysa et al., (2022), defines the sustainable tourism from smart tourism perspective. Mondal & Samaddar, (2020), define the sustainable tourism in terms of the total value to the environment, local community and ultimately to the economy. Kumar, S. (2020), defines the sustainable tourism from the average length of tourist stay's perspective. Era & Del Rosario (2020) defines the sustainable tourism in terms of collaboration and working together towards the sustainability, as a combined effort of all the stakeholders. Tiago et al., (2021), defines sustainable tourism form the perspective of co-operation among the local community and the regulatory stakeholders.

While sustainable tourism has its unequal position and has been improperly used in the tourism sector, a few have challenged its value propositions too (Weaver & Lawton, 2007; Bramwell & Lane, 2008; Buckley, 2012; Reimer & Walter, 2013). Nonetheless, sustainable tourism factors are also an extensively disputed topic (Butler, 1999; Sharpley, 2000; Hardy, Beeton, & Pearson, 2002; Page & Dowling, 2002; Lu & Nepal, 2009). The meaning of sustainable tourism in developed countries and developing countries may differ. However, some scholars have challenged the understanding of how practical and achievable sustainable tourism in an emerging economy is (Ioannides, 1995; Carbone, 2005; Chok, Macbeth, & Warren, 2008).

3. Methodology

The literature review aims to distinguish the various shifts during the COVID-19 pandemic and published literature in tourism. The time duration chosen for the study is from 1st January 2020 to 31st December 2021. For journal-wise articles published, see Figure 2. The published literature on tourism and COVID-19 increased rapidly during the year 2020. Still, a broad framework is absent for further findings in this emerging area of tourism during pandemic times.

A literature review based on content analysis is widely an acceptable study for assessing the available pool of knowledge and bringing up new questions to enhance the general awareness of the subject to a greater extent (Tranfield *et al.*, 2003). As per Tranfield *et al.*, (2003) this method tries to investigate "key scientific contributions", lower the bias and "provide collective insight" into the area. Caulley, (2007) defines it as an organized, precise and re-creatable outline for recognizing, assessing, and understanding the available information of archived data. Seuring *et al.*, (2012) inferred the literature review based on content analysis as a standardized and coherent approach to producing solid outcomes from the available literature. So, we chose content analysis-based literature review as a suitable method for our research study.

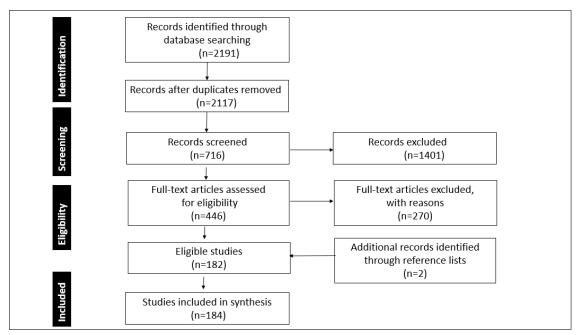


Figure 1. PRISMA Flowchart *Source*: Adapted from Moher et al. (2009)

For reviewing the published literature related to tourism and COVID-19, various ways, guided by Pickering and Byrne, (2014) were ensured to capture the relevant articles. The examined search keywords were: "travel," "tourism," "sustainable tourism," "pandemic", and "COVID-19". These were scanned from three major databases – Scopus, Google Scholar and the Web of Science (WoS) – with boundary conditions of articles published during the years 2020 and 2021. First, Harzing's tool (Annamalai & Varshney, 2018) Publish or Perish 8, was used for identifying tourism-related publications. Similar to Leung *et al.*, (2013) we applied keywords search that included different word combinations of tourism, e.g. "travel" or "tourism" or "sustainable tourism" and "pandemic" or "covid-19". For Scopus, the combinations of keywords used are: "travel" or "sustainable tourism" and "pandemic" or "covid-19". A total of 235 papers were found. No duplicate articles were found in data collected from Scopus. Exact keywords were also used to collect the published articles from the Web of Science (WoS).

Table 2. Inclusion and exclusion criteria

Inclusion	Exclusion
	Conference papers, book chapters, commentary, notes,
Journal articles	editorials
English articles	Articles of other languages
Articles with defined keywords	Articles without defined keywords
Peer-review articles	Other types of published articles

The six-stage process by Durach *et al.*, (2020) defines the research question, sets inclusion and exclusion criteria, determines searching databases, applies criteria, synthesizes appropriate literature, and gives an account of the findings. As an initial step, we designed the research question of our study. For inclusion and exclusion criteria, we chose only English articles published in reputed journals. To ensure the representativeness and reliability of our result, we developed a search string of related keywords as per the study. "COVID-19" and "tourism" are the combinations identified as keywords were used in the online database searches.

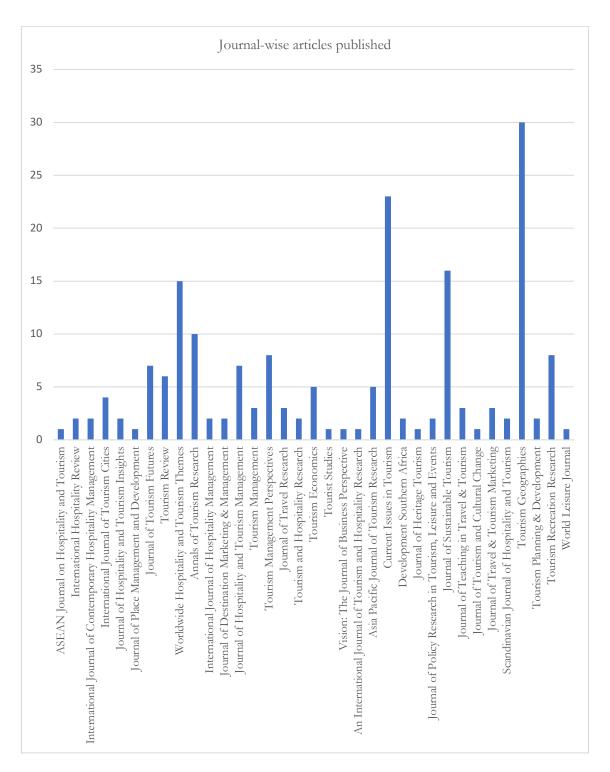


Figure 2. Journal-wise articles published *Source*: Retrieved from Scopus database (2022).

Next, we excluded all duplicate papers and implemented the defined inclusion and exclusion criteria (see Table 2). At the closing of collecting the data on 31st March 2022, using the PRISMA flowchart (see Figure 1), a total of 184 journal articles specifying keywords such as "COVID-19" and "tourism"

from online databases of five reputed publishers were collected. Publication houses-wise number of articles published is mentioned in Table 3.

The main aim of content analysis is to make valid deductions and conclusions of available information through a scientific process of data collection, categorization, synthesis, and compilation. It also provides an in-depth knowledge of the whole scenario. The primary purpose of content analysis is to organize, categorize, and synthesize to extract the appropriate knowledge from the available data. Through constant comparison, thematic analysis can be conducted. This method's limitations and shortcomings are also mentioned towards the end part of this study.

We adopted the analytical framework for our study. The current research involves a systematic analysis of tourism literature published during the covid pandemic. To clarify the objective of this study, there are specific steps to review the research progress building-up on tourism during the covid pandemic by applying a systematic review method. The subsequent steps are collecting, extracting, and evaluating the published literature on tourism. Finally, the future direction of tourism post covid pandemic is determined.

The main research questions addressed in this literature review are:

- What is the present status of understanding sustainable tourism during the COVID-19 pandemic?
- What are the future directions of research?

This literature review also analyses the following sub-questions:

- In which contexts have sustainable tourism been investigated during Covid-19?
- What are the identified implications of sustainable tourism?

Which theories were used to demonstrate the results of sustainable tourism post-pandemic?

4. Discussion and Future Directions

Repercussions of COVID-19 profoundly impact the well-being of tourism players and the industry. It has also affected many other stakeholders related to the tourism industry. As per the research findings (Madgavkar *et al.*, 2020; Baum & Hai, 2020) the study states that there is an increase in pressure on workers due to household work of the family members who are connected with the tourism industry are facing job losses, financial losses, and opportunity losses. There is also an increase in domestic and sexual violence cases due to an economic loss of workers in the tourism industry.

Publisher	Number of Articles published	Percentage-wise
Elsevier	32	17.39 %
Emerald	39	21.19 %
Institut Teknologi Bandung	1	0.54 %
Sage	12	6.52 %
Taylor & Francis	100	54.34 %

As per Becker, (2020) the tourism industry has fallen steeply in the wake of the COVID-19 pandemic. Gossling *et al.*, (2020) state that the effect of the COVID-19 pandemic on the tourism industry should be seen as an opportunity to critically evaluate tourism's growth trajectory for the future and focus

on the available opportunity this pandemic brings. Doing so may start a new benefit of positive outcomes of COVID-19 on tourism as an industry. Butler, (1999) in the research article, gave clarity about sustainable tourism being different from tourism in the context of sustainable development. As per Butler, (1999) sustainable tourism is "tourism which is in a form which can maintain its viability in an area for an indefinite period". The author stated tourism in the context of sustainable development as "tourism which is developed and maintained in the area (community, environment) in such a manner and at such a scale that it remains viable over an indefinite period and does not degrade or alter the environment (human and physical) in which it exists to such a degree that it prohibits the successful development and well-being of other activities and processes" (Butler, 1999, p. 35). As per Higgins-Desbiolles, (2020) in the post-COVID-19 era, responsible tourism should not only be concerned with sustainability in tourism but also about responsible tourism. And as a result, these will revive the current economic situation over some time, along with the revival of the tourism industry. Although tourism marketing is essential during regular times, tourism in the post-pandemic era has even greater importance during post-COVID-19 crises (Beirman, 2006).

The academic advances on sustainable tourism during the considered two years provide interesting insights. A word cloud by assigning the 45 most frequently occurring keywords within the realms of sustainable tourism were considered to understand the significance of those words in the tourism industry. A word cloud is a presentation of word frequency in a visually appealing way, such that the higher frequency words are assigned increased font size and a more arresting colour for easy identification (Annamalai & Varshney, 2018; Johansson *et al.*, 2021). A word cloud is generated with selected articles' keywords as shown in Figure 3. While choosing the keywords, uninformative terms like tourism, covid, or sustainable and broader terms like management or pandemic were eliminated. Further, only those keywords with an occurrence frequency of 5 or more were retained for further analysis.

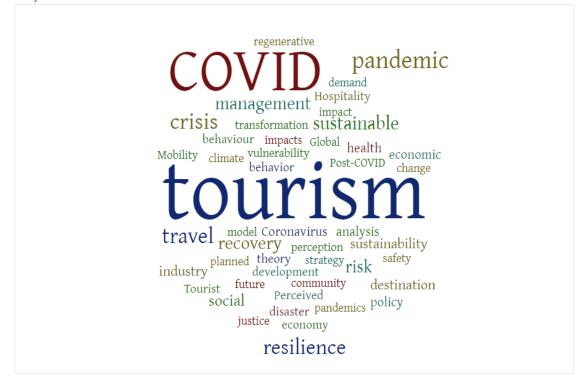


Figure 3. Word cloud from the keywords of selected articles

Based on the word cloud (Miley et al., 2011) four prominent topics, namely resilience, risk, recovery and social, were subjectively identified, representing either the underlying impact or the study objective. Here the study objective represents the broad concept, while the underlying impact is related to the effect of COVID-19 on tourism. The word cloud helped to identify the prominent topics of sustainable tourism. Resilience has been viewed as an outcome, a process, a pattern or a trait of life, or a broad conceptual domain encompassing all these ideas (Masten et al. 1990; Panter-Brick et al. 2013). Kaplan, (1981) states that risk is a combination of uncertainty attached to probable damage. Recovery, in general terms, is a process of change through which an individual or industry achieves a relaxed physical state of improved quality of life. Parsons et al., (2017) state that the social system is composed of the actions of individuals interacting with others, in which complex rules orient the action.

4.1. Theoretical models

We analyzed the literature and identified the related theoretical frameworks used in tourism-related research works. The theories which are predominantly used are mentioned in Table 4.

Table 4. Theories, model and framework

Theories, model and framework	Implication	Reference
Theory of Planned Behaviour (TPB)	Tourists' individual decision to engage in a specific behavior.	Rahmafitria <i>et al.</i> , (2021); Sánchez-Cañizares <i>et al.</i> , (2021); Rather <i>et al.</i> , (2021); Bae <i>et al.</i> , (2021).
Time Series Forecast Model	Dependent on historical data and previous trends to forecast future tourism.	Gu et al., (2021); Zhang et al., (2021); Yang et al., (2021).
Resilience Theory	When crisis events occur in the tourism industry, they will rapidly return to their initially balanced state or even achieve better performance and qualities than the previous state.	Traskevich et al., (2021); Bui et al., (2021); Lew et al., (2020).
Social Exchange Theory (SET)	If the local community perceives that the tourism industry's benefits are more than the costs, in such a case, the community will readily support the developments in the tourism industry.	Woosnam et al., (2021); Joo et al., (2021).
Tourism Disaster Management Framework (TDMF)	A framework on crisis and disaster management to handle pandemic like situations.	Dayour <i>et al.</i> , (2020); Miao <i>et al.</i> , (2021); Yeh, S. S. (2021).
Computable General Equilibrium (CGE) Model	It explicitly incorporates information supply constraints, identifying prices to create preferences among tourists.	Lim, W. M. (2021); Khalid <i>et al.</i> , (2021); Wang <i>et al.</i> , (2021).
Crisis Management Framework	A framework on crisis management in which reconstruction of tourist destinations in post-pandemic situations is the prime purpose.	Zhong et al., (2021); Li et al., (2021); Volgger et al., (2021).

4.2. Suggestions for future research

Current research study engrossed consumption to reset tourism to promote sustainability in the coming days. Although the need for a more holistic approach to methodology adoption still exists. By accepting the tourism industry's best practices and cultural and environmental practices (Grilli et al., 2021) such a holistic approach can be taken into consideration for the re-development of the tourism industry. The ecological perspective plays a vital role in understanding tourists' behaviour, as such behaviour is critical in redesigning entire services to promote sustainability across tourism's stakeholders. Further, it is also essential to investigate the various roles of local communities, governments, stakeholders, destinations, and tourists to develop tourism sustainability (Lee et al., 2019).

Transforming tourism into an economic activity for creating a positive impact on the whole world is critical, especially after the dreadful experience of the COVID-19 pandemic. More research is needed on how an organizational strategy should be evolved in a phased manner for an effective transformation. The investigation should also include the required collaboration and support for smooth transitioning. Now, cooperation is the key to crisis management, especially between authorities and tourism industry stakeholders (Cardoso, 2020; Jones et al., 2020; Vargas, 2020) to revive the whole industry and make it sustainable. For effective recovery, all the stakeholders need to be aware of the guidelines and directions toward sustainable development and follow them (Cardoso, 2020) strictly. Redesigning tourism will be the ultimate way forward as numerous research works state crisis as an opportunity to develop sustainability in tourism. Very little research gives the logical direction and guidelines for achieving revival turnaround of the tourism industry. Further study is needed to measure the effectiveness of the government's policy for the recovery of the tourism industry and its ancillary industries and, finally, make the policy makers aware of the appropriate and prompt steps to take. Any country-specific factors, such as culture and demographics, should also be considered in future studies.

5. Conclusions and Limitations

This systematic literature review gave a significantly clear understanding of tourism-related behaviour, the situation of the tourism industry and its various stakeholders and the government's effort towards the re-start of tourism in their respective countries. This review also identified significant gaps in tourism for sustainable growth and development in the post-pandemic era, which might be used for future research on the tourism industry. Memories of past photographs of holidays, travel descriptions and fun enjoyment during past visits shared on a tourism-related social platform might arouse a desire to travel, steering other tourists towards planning the same type of holiday/vacation/trip to the same or similar destinations. An affective forecast helps to induce an impulsive travel decision within the group of potential tourists during or before going for a holiday (Karl et al., 2020).

Future researchers also need to study the sustainable development indicators in tourism post-pandemic. The monitoring and evaluation of government policy, process and revival efforts need to be taken care of. For sustainable long-term growth in tourism, decision making, deliberative planning and the ability of all the stakeholders to create an impact for re-shaping the tourism-related policy instruments are critical for the flourishing of the tourism industry. Indeed, effective governance is required to enable the impactful implementation of sustainable tourism, including different aspects of economic development, social inclusion and environmental protection related to the tourism industry. In case of any future pandemic crises, they should be dealt with promptly. To do so, the practitioners and the policymakers must need an effective contingency plan for faster implementation.

This study uniquely contributes in four ways: a) captures the progress of literature in the field of sustainable tourism, b) to understand the dominant research patterns during Covid-19 pandemic, c) to identify current factors, journals, publishers, and theoretical models used in the published research articles, and d) to offer the future research directions of sustainable tourism.

Finally, this study must acknowledge that it has several limitations. Current analysis has been done taking a specific time duration and a longitudinal work can test the findings' consistency in future work. Future research may consider conducting a comparative analysis between two regions on other aspects of sustainable tourism. The demographic variables of tourists can also be studied across all age groups. Limitations notwithstanding, the study intended to review the current state of knowledge on sustainable tourism during Covid-19, for which the work provides a definitive treatment.

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