

Analysing Research Trends in the Indian Hospitality and Tourism Sector: A Bibliometric Analysis for the Period 2000-21

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Abstract

The purpose of the study was to have an overview of the popular themes studied by Indian researchers from 2000 to 2021. The paper helped to identify the trends and development in the research area in the context of the Indian hospitality and tourism sector. The study selected 1821 research papers of Indian origin from the Scopus database published in 22 years (2000-2021). The selected publications were analysed using different bibliometric methods of analysis using biblioshiny and VOS viewer within the scope of several parameters. The entire period was divided into three distinct timeframes to study the research trends during that time frame. The maximum number of articles have been published in recent years, i.e., 2020, while the minimum number of article publications was observed in 2001. 1241 citations were received in 2019 and received only 110 citations were seen in 2005. "Worldwide Hospitality and Tourism Themes" and "International Journal of Contemporary Hospitality

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Management" have been reported to be the most productive journals. At the same time, 'Singh S.' is the most effective author with a maximum number of articles, while 'Jauhari V' has the most citations for the work. Sustainability and Conservation are the themes of common interest irrespective of timeframe, while the role of social media, covid 19, are recent trending topics for researchers. Despite contributing significantly to the hospitality and tourism literature in the Indian context, the study has a few limitations. The present study did not include publications other than articles like conference proceedings, book chapters, dissertations, etc. Selection of tools used and the keywords chosen for the study also limit the outcome. The findings of the analysis are helpful in better understanding the direction of research themes in the hotel and tourism sector. Evaluation of prominent authors and their work helps to focus on the trending themes in the sector among researchers. Additionally, it aids future researchers in determining the trends in the hospitality and tourism sector. To the best of the author's knowledge, the sample used for this study was the most extensive group of publications published in India's hospitality and tourism sector. By outlining the current research orientations and trends in hospitality and tourism, this study significantly contributes to the existing literature.

Keywords: Bibliometric Analysis, Hospitality, Tourism, Articles, Trends, Citations

1. Introduction

Tourism is one of the fastest-growing industries and plays a vital role in developing the global economy. According to World Travel & Tourism Council Report (2020), the tourism industry has registered continuous growth in 2019 with a contribution of 10.4% to World GDP and provided 10.6% employment, i.e., 334 million job opportunities. After the unprecedented pandemic in 2020, the tourism industry faced a sudden shock and reported job losses with a decreased contribution to GDP.

Despite ups and downs in this sector, researchers continue to contribute significantly to hospitality and tourism. Numerous research publications have been noticed in recent decades and have

attained the attention of many researchers in different fields (Qian, Law, Wei, & Wu, 2019). There is sufficient evidence available about the gearing up of the research in this domain, including the publication interests of investigations and Journal proliferation (José M. Merigó, Mulet-Forteza, Martorell, & Merigó-Lindahl, 2020; Mulet-Forteza, Genovart-Balaguer, Mauleon-Mendez, & Merigó, 2019). Therefore, it is necessary to identify trends in the publication of research articles in the hospitality and tourist fields in order to unravel the complexities of this field of study and throw light on the frontiers of this industry. This study examines articles published in the "hospitality" and "tourism" sectors using the bibliometric analysis approach. This study applies various analysis methods to explore the extracted Scopus database. It reveals the trends in the publication of articles. It identifies the publication and citation structure, most productive journal in terms of articles published, most productive journal in terms of most productive authors, no. of citations, and the top-performing institutions, etc.

The results demonstrate the exponential rise in the number of papers produced. The citation structure also revealed that articles published recently earned more citations than articles published in the early years. However, it is postulated that as more publications are published, the number of citations in the hospitality and tourism sector will rise (Mulet-Forteza et al., 2019).

Many researchers have analyzed the scientific content to overview of journals in the hospitality and tourism sector (Mulet-Forteza, Martorell-Cunill, Merigó, Genovart-Balaguer, & Mauleon-Mendez, 2018; Martínez-López, Merigó, Valenzuela-Fernández, & Nicolás, 2018; Guzeller & Celiker, 2019; José M. Merigó, Mulet-Forteza, Valencia, & Lew, 2019; Mulet-Forteza et al., 2019; Kumar, Sureka, & Vashishtha, 2020; Leong, Hew, Tan, Ooi, & Lee, 2021; Sharma, Singh, Tamang, Singh, & Singh, 2021; Singh, Sibi, & Sharma, 2021; Singh, Sibi, Sharma, Tamang, & Singh, 2021). There are studies on numerous topics, such as food and gastronomy research, with regard to bibliometric analysis in the hospitality and tourism sector as well (Okumus, Koseoglu, & Ma, 2018), Social Media (Nusair & Nikhashemi, 2019), trust (Palácios, Almeida & Sousa, 2021), Business Ethics (Köseoglu, Sehitoglu, Ross & Parnell, 2016). Evren & Kozak (2014) have also conducted a bibliometric study on

hospitality and tourism in Turkey. However, there has been no such systematic bibliographical study in the Indian context for the hospitality and tourism sector.

2. Research Methodology

'Bibliometric' this term was first defined by Pritchard (1969) as the "application of statistical and mathematical methods set out to define the processes of written communication and the nature and development of scientific disciplines by using recounting techniques and analysis of such communication". Also, Ye, Song and Li (2012) study highlighted that bibliometrics investigates the research findings, title, methodology, and samples. Bibliometric analysis has been recognised by Zupic & Čater (2015) as a method for examining changes in intellectual, social, and conceptual structure trends. Meanwhile, José M Merigó & Yang (2017) identified that the bibliometric technique classifies the bibliographic content and analyses quantitative research.

Bibliometric analysis is used in many hospitality and tourism studies (Koseoglu, Rahimi, Okumus, & Liu, 2016). Many examined the overview of journals (Hall, 2011; Ruhanen, Weiler, Moyle, & McLennan, 2015; Omerzel, 2016; García-Lillo, Úbeda-García, & Marco-Lajara, 2016; Mulet-Forteza, Martorell-Cunill, Merigó, Genovart-Balaguer, & Mauleon-Mendez, 2018; Strandberg, Nath, Hemmatdar, & Jahwash, 2018) including most cited paper, most cited author, co-citations, keywords co-occurrence, publication and citation structure, most contributing institute, and countries.

The practice of bibliometric analysis is exponentially increasing in the hospitality and tourism sector, stimulating the researcher to measure the performance of published research (Sainaghi & Baggio, 2020). It is noticed that researchers use the bibliometric analysis approach to examine and identify the trends of a journal and summarise the data with the details related to publications. This study extracted the Scopus database by adopting the bibliometric approach to identify the research trends in the hospitality and tourism domains of India, which includes the analysis of the database to conduct the research (Correia & Kozak, 2021; Leong et al., 2021; Martínez-López et al., 2018; Sánchez, de la Cruz Del Río Rama, & García, 2017; Singh, Sibi, & Sharma, 2021; Singh, Sibi, Sharma, et al., 2021). Scopus is the most extensive

database of peer-reviewed publications in the social sciences, chosen above other available databases (Norris & Oppenheim, 2007). The study used numerous methods to detect India's hospitality and tourism research trends, including the publication and citation structure (Van Eck & Waltman, 2014). The number of articles published indicates the productivity of the study, whereas the number of citations reveals the importance and impact of that study (Svensson, 2010). The study also examined the most productive authors and retrieved the most frequently used indices, h-index, g-index, and m-index. The researcher then analysed the institutes based on performance and contribution to research. With the use of Biblioshiny, the study investigated the most frequently occurred keyword in the title and author's keyword. In this trial, the study conducted a co-citation analysis that includes the most cited source, most cited author, and most cited reference.

2.1. Selection of Articles

There was multiple choice, such as Web of Science, Google Scholar, EBSCO, etc., for selecting articles. For this study, the articles were retrieved from the Scopus database. Due to insufficient data coverage, usage of the web of science has been criticised in the social science field (Norris & Oppenheim, 2007). Further, Hicks (2004) mentioned that as many of the citations in social sciences are from books and monographs, there could be chances of insufficient data coverage. The Scopus database is considered an alternative to the web of science for evaluation in the social sciences field (Norris & Oppenheim, 2007). The findings of Jacso (2008) supplement that with Scopus adoption, the chances of errors regarding the details of authors and institutions are minimised. The Google Scholar database has received criticism due to the inaccuracy of the data, such as inconsistencies in the data related to the date of publication and the author's name (Bar-Ilan, 2008; Jacsó, 2005).

Moreover, the inaccurate data and facts displayed in the context of the number of user visits instead of in the context of quality indices are the reasons behind the criticism of Google Scholar (Falagas, Pitsouni, Malietzis, & Pappas, 2008). Google scholar lacks the quality control required for bibliometric analysis; in some cases, extensive data coverage is incomparable to the other similar

database (Aguillo, 2012). However, duplicacy of the data is one of the demerits of the Google Scholar database (Houshyar & Sotudeh, 2018).

Initially, multiple queries were used, like "Tourism" "Hospitality," to acquire the desired output. These keywords gave a limited number of articles to conduct the analysis. In order to perform the analysis, "Tourism" OR "Hospitality" keywords were employed, which fetched a good number of articles. Afterwards, filters were applied to skim the results on various parameters like country-wise, year-wise, document type-wise, and language-wise. The detailed process of selection of articles is described in Figure 1

From the first search, 121848 articles were retrieved using keywords. The process of identifying and selecting articles is presented in figure 1. The documents were filtered for the Indian context only that left with the 2835 documents.

In the research work, the articles were selected from the year 2000 to 2021. It is pertinent to mention that at the Master's Level, Tourism education was introduced in 1992 by Kurukshetra University, Kurukshetra (KUK). Further, hospitality education in India was undoubtedly introduced in early 1950 as a craft course/diploma program. The main focus of these courses was on skill development and was not focused on research. It was in the year 2002 when the first master's degree programme was launched by KUK, subsequently followed by others.

From 1990 to 2000, the research in the hospitality and tourism sector was in the nascent stage. The timeframe was then selected according to the research purpose was "2000-2021", and 2711 documents were received. The filter was applied to extract the "articles" only to narrow search results, which excluded the conference proceedings, book chapters, trade publications, etc., leaving 1825 articles. Finally, the articles written in English were selected, leaving the final 1821 articles for the research. After applying filters, the information was summarised and presented for bibliometric analysis.

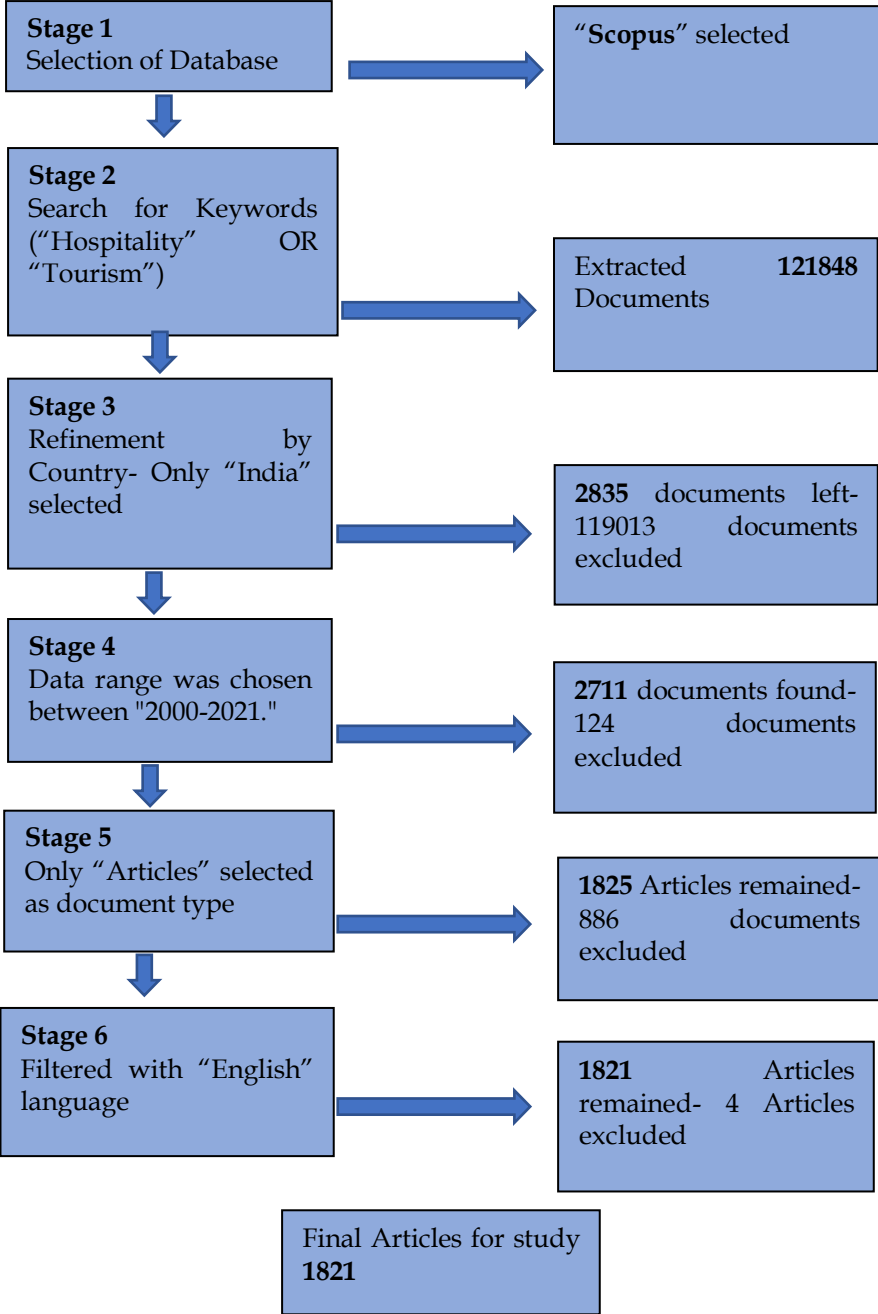


Figure 1: Procedure adopted for delineating Articles for the study

Table 1 presents the summary of selected articles used in the study. A total of 1821 articles were published during 2000-2021. A total wrote papers of 3579 authors, of which 272 were single-authored documents and 3307 were multi-authored publications. According to the Scopus database, the analysis revealed 0.509 papers per author, 5091 Author appearances, 7.199 average citations per document, 1.97 Authors per document, 2.8 Co-Authors per Document, and 2.22 Collaboration Index. The study also identified 5409 Author's keywords in the selected literature.

Table 1: Selected Articles from the database

Summary of the main information	
Description	Results
Timespan	2000 to 2021
Total no of Articles	1821
Authors	3579
Authors of single-authored documents	272
Authors of multi-authored documents	3307
Documents per Author	0.509
Author Appearances	5091
Author's Keywords	5409
Average citations per document	7.199
Authors per Document	1.97
Co-Authors per Documents	2.8
Collaboration Index	2.22

3. Objectives of the study

The present study was carried out with the following objectives:

- 1) To find out the research publications' growth in the field of hospitality and tourism along with their citation trend during the selected period 2000-2021.

- 2) To know about the journals that contributed with the most number of articles during this period.
- 3) To identify the most impactful journals with the highest citations for their articles in the selected field and timeframe.
- 4) To review the most dominant institutions, authors, and articles of the selected field of research in the Indian context.
- 5) To study the research trends by analysing keywords during different phases to time.

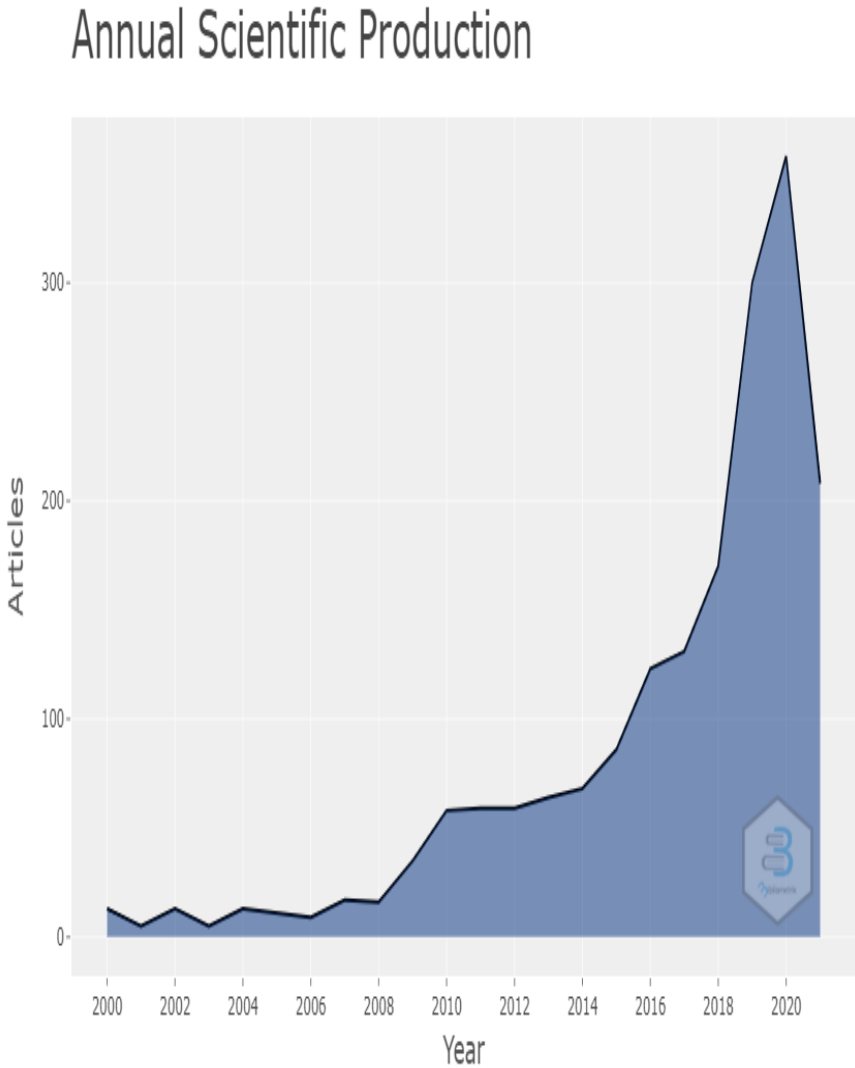
4. Analysis of gathered documents

The search of articles resulted in 1821 articles published during 2000-2021, as mentioned in Table 1. In order to fully understand the Annual results shown in Table 2, including Total Citations (TC), Mean TC per Article, Mean TC per Year, and Citable Years, the study analysed the publications and citation structure. Further, the study examined the Annual Scientific Production to detect the publications of articles published yearly and presented the data in Figure 2, and noticed the growth in article publication. The maximum and the minimum number of articles published in 2020 and 2001, respectively, as shown in Table 2.

4.1. Publication and Citation developments over the time

The annual numbers of articles published during 2000-2021 are presented in Figure 1. There were 13 articles published in 2000, which kept fluctuating till 2006. The number of published articles has continuously increased since 2007. Most articles were published in 2020. According to the findings, fewer publications were published in the early years than in recent years. Given that there were 208 articles as of August 1, 2021, it is anticipated that the number of publications in 2021 will rise throughout the coming years.

Figure 2: Annual Scientific Production



The Scopus database analysis identified 1821 articles published in the selected period and domain. The data shows that the recently published articles received more citations than those published in the initial years. The study also discovered that articles received a total of 13110 citations, and the years 2019, 2018, 2016, and 2020 received the maximum citations. The findings indicate the highest citation received in 2019 and the lowest in 2005, i.e., 1241 and 110, respectively.

Table 2: Publication and Citation structure

Year	N	Total Citations	Mean TC per Article	Mean TC per Year	Citable Years
2000	13	291	22.38	1.07	21
2001	5	127	25.40	1.27	20
2002	13	499	38.38	2.02	19
2003	5	128	25.60	1.42	18
2004	13	133	10.23	0.60	17
2005	11	110	10.00	0.63	16
2006	9	161	17.89	1.19	15
2007	17	778	45.76	3.27	14
2008	16	344	21.50	1.65	13
2009	35	492	14.06	1.17	12
2010	58	801	13.81	1.26	11
2011	59	787	13.34	1.33	10
2012	59	681	11.54	1.28	9
2013	64	933	14.58	1.82	8
2014	68	577	8.49	1.21	7
2015	86	905	10.52	1.75	6
2016	123	1088	8.85	1.77	5
2017	131	723	5.52	1.38	4
2018	170	1091	6.42	2.14	3
2019	300	1241	4.14	2.07	2
2020	358	1029	2.87	2.87	1
2021	208	191	0.92		0

4.2. Most Productive Journal in terms of Articles Published

The Scopus database retrieved the data related to the most contributing journal in the context of the maximum number of articles published. The top 10 contributing journals are enlisted in Table 3, with the details regarding the corresponding number of articles published in the journal. According to table 3, "Worldwide Hospitality and Tourism Themes" is the topmost productive journal with the contribution of 68 articles, followed by "Tourism Recreation Research" with 31 articles. "African Journal of Hospitality Tourism and Leisure" published 30 articles, while

"International Journal of Hospitality and Tourism Systems" contributed 29 articles to 1821 published articles. The last five journals on the list of the top 10 Productive journals in terms of articles published are "International Journal of Advanced Science and Technology", "International Journal of Scientific and Technology Research", "Indian Journal of Public Health Research and Development", "Tourism Management", and "International Journal of Contemporary Hospitality Management".

Table 3: Top 10 Most Productive Journal in terms of Articles Published

Rank	Sources	Articles
1	Worldwide Hospitality And Tourism Themes	68
2	Tourism Recreation Research	31
3	African Journal of Hospitality Tourism and Leisure	30
4	International Journal of Hospitality and Tourism Systems	29
5	International Journal of Recent Technology and Engineering	24
6	International Journal of Advanced Science and Technology	23
7	International Journal of Scientific and Technology Research	23
8	Indian Journal of Public Health Research and Development	21
9	Tourism Management	20
10	International Journal of Contemporary Hospitality Management	19

4.3. Most Productive Journal in terms of No. of Citations

The bibliometric analysis examined the leading journals in the term of No. of Citations. This analysis identified the top 10 most productive journals in terms of No. of Citation, as shown in Table 4. As per table 4, "International Journal of Contemporary Hospitality Management" is the most productive journal with 1060 citations

and contributions of 19 articles. Also, the analysis found that "Worldwide Hospitality and Tourism Themes" published the highest number of articles and received 344 citations. "Tourism Management" got 734 citations and attained the second rank in seeking citations with the publication of 20 articles. With 357 citations and 14 articles, "Tourism Management Perspectives" subsequently emerged as the third most cited journal. However, "The International Journal of Contemporary Hospitality Management" and "Tourism Management" journals secured first and seventh rank, respectively, in the aspects of productivity, according to the SCImago Journal Ranking (2021). In contrast, the International Journal of Contemporary Hospitality Management and Tourist Management journals contribute less to articles published in the Indian hospitality and tourism industry than journals that had a lower ranking in the SCImago Journal Ranking (SJR).

Table 4: Most Productive Journal in Terms of No of Citations

Rank	Source	Documents	Citations
1	International Journal of Contemporary Hospitality Management	19	1060
2	Tourism Management	20	734
3	Tourism Management Perspectives	14	357
4	Worldwide Hospitality and Tourism Themes	68	344
5	International Journal of Hospitality Management	19	288
6	Journal of Travel and Tourism Marketing	11	283
7	Marine Pollution Bulletin	15	197
8	Journal of Hospitality and Tourism Management	14	195
9	Environmental Monitoring and Assessment	12	194
10	Benchmarking	8	138

4.4. Most Productive Authors

The most productive authors in "Tourism" and "Hospitality" were shortlisted according to data analysis. The names of the top 10 most productive authors are unveiled and enlisted in table 5. The tabular data presents the details of authors regarding the number of published articles, h index, g index, m index, total citations, and publications year starts. The findings shortlisted the top 10 authors from 3579 and ranked based on the maximum number of publications. The top three most productive authors were Singh S, Kumar S, and Jauhari V, with 24, 17, and 16 articles, respectively. At the same time, Jauhari V got 760 citations and 16 g-index which is the maximum compared to the rest of the authors.

Table 5: Most Productive Authors

Rank	Element	No. of Articles	h index	g index	m index	TC	Publication Year Start
1	Singh S	24	8	13	0.40	198	2002
2	Kumar S	17	7	13	0.50	185	2008
3	Jauhari V	16	7	16	0.44	760	2006
4	Rather Ra	14	10	14	2.50	420	2018
5	Sharma P	14	6	11	0.55	143	2011
6	Sharma S	14	4	7	0.33	71	2010
7	NayakJk	13	7	13	0.88	179	2014
8	Mandal S	11	6	11	0.30	224	2002
9	Gupta S	10	3	5	0.23	39	2009
10	Rahman Z	10	8	10	0.89	351	2013

4.5. Top Performing Institutions

The institute analysis of top-performing institutes summarised details regarding productive institutes in terms of the number of published articles by institutes since 2000. Table 6 presents the list of the top institutions in terms of the maximum number of publications in the "tourism" and "hospitality" sector. In the highest number of publications, "Amity University" is the top-performing institute with 66 articles, followed by the Indian Institute of

Technology Roorkee, which published 45 articles. The third institute in the list of top 10 performing institutes was "University of Delhi," with 41 articles. At the same time, "Siksha O Anusandhan Deemed to be University" also published 39 articles.

Table 6: Top Performing Institutions

Rank	Affiliations	Articles
1	Amity University	66
2	Indian Institute of Technology Roorkee	45
3	University of Delhi	41
4	Siksha O Anusandhan Deemed to be University	39
5	Lovely Professional University	37
6	University of Jammu	30
7	University of Kashmir	29
8	Kurukshetra University	29
9	Manipal Academy of Higher Education	28
10	Jawaharlal Nehru University	28

4.6. Top Performing Research Articles

The findings identified the top-performing articles that received maximum citations. According to the analysis, the most cited article was published in "International Journal of Contemporary Hospitality Management" by Manaktola K., Jauhari V. in 2007 with the title "Exploring Consumer Attitude and Behaviour towards Green Practices in the Lodging Industry in India" and received 497 citations. The second most cited article was published in "International Journal of Quality and Reliability Management" by Talib F., Rahman Z., Qureshi M. N. in 2013 on "An Empirical Investigation of Relationship between Total Quality Management Practices and Quality Performance in Indian Service Companies" and got 145 citations. The results showed that two of the top three performing research articles were published in "Tourism Management" and one of the top three was published in the "International Journal of Contemporary Hospitality Management".

Table 7: Detail of Top Performing Research Articles

Rank	Title	Author	Year	Journal	Citations
1	Exploring Consumer Attitude And Behaviour Towards Green Practices In The Lodging Industry In India	Manaktola K., Jauhari V.	2007	International Journal of Contemporary Hospitality Management	497
2	An Empirical Investigation of Relationship Between Total Quality Management Practices And Quality Performance In Indian Service Companies	Talib F., Rahman Z., Qureshi M.N.	2013	International Journal of Quality and Reliability Management	145
3	Service Quality and The Training of Employees: The Mediating Role Of Organizational Commitment	Dhar R.L.	2015	Tourism Management	141
4	India's Image As A Tourist Destination - A Perspective of Foreign Tourists	Chaudhary M.	2000	Tourism Management	130

5	Local Residents Perception of Benefits and Losses From Protected Areas In India And Nepal	Karant K.K., Nepal S.K.	2012	Environmental Management	108
6	An Exploratory Study of Competencies Required to Co-Create Memorable Customer Experiences In The Hospitality Industry	Bharwani S., Jauhari V.	2013	International Journal of Contemporary Hospitality Management	99
7	Impact of Responsible Tourism on Destination Sustainability and Quality of Life of Community in Tourism Destinations	Mathew P.V., Sreejesh S.	2017	Journal of Hospitality and Tourism Management	96
8	Water Quality Management In The Lower Stretch Of The River Ganges, East Coast of India: An Approach Through Environment	Sarkar S.K., Saha M., Takada H., Bhattacharya A., Mishra P., Bhattacharya B.	2007	Journal of Cleaner Production	94

	al Education				
9	Conservation Policy-People Conflicts: A Case Study From Nanda Devi Biosphere Reserve (A World Heritage Site), India	Maikhuri R.K., Nautiyal S., Rao K.S., Saxena K.G.	2001	Forest Policy and Economics	90
10	Competencies For A Career In The Hospitality Industry: An Indian Perspective	Jauhari V.	2006	International Journal of Contemporary Hospitality Management	84

4.7. Most Cited Sources

The analysis identified the most prominent cited source in "hospitality" and "tourism" sector and enlisted the top 10 cited sources in table 9. As per the analysis findings, "Tourism Management" is the maximum cited source with 2677 citations, followed by "Annals of Tourism Research" with 1527 citations. "Journal of Travel Research" secured the third rank in the list of most cited sources and received 1250 citations, while "International Journal of Hospitality Management" attained the fourth rank in the list of most cited sources with a total of 825 citations. However, "International Journal of Contemporary Hospitality Management" attained the fifth rank and got 801 citations. Besides the top five most cited sources, the rest of the top-cited sources as per their ranks are "Journal of Sustainable Tourism", "Journal of Marketing", "Journal of Business Research", "Current Issues in Tourism", and "Journal of Marketing Research".

Table 9: Most Cited Sources		
Rank	Source	Citations
1	Tourism Management	2677
2	Annals of Tourism Research	1527
3	Journal of Travel Research	1250
4	International Journal of Hospitality Management	825
5	International Journal of Contemporary Hospitality Management	801
6	Journal of Sustainable Tourism	567
7	Journal of Marketing	549
8	Journal of Business Research	524
9	Current Issues In Tourism	418
10	Journal of Marketing Research	407

4.8. Analysis of Research trend by studying Keywords occurrence used by the author

In order to study the research trend, the selected papers were divided into three timeframes by analysing the publication trends given in Figure 2. The criterion for defining each timeframe was first decided to have an equivalent number of years in each time frame. However, it was found that the number of publications in the initial years was relatively less than those published in the recent year. Therefore, the total of 1821 articles was divided into 3 timeframes, namely 2000-2014, 2015-2018, and 2019-2021, to have a comparable number of papers in each timeframe and take publication trends into account. The number of documents in each timeframe selected is shown in table 10.

Table 10. Periods of timeframe and number of Articles per period			
Timeframe	Period	No. of Articles	No. of Citations
1	2000-2005	60	1288
2	2006-2010	135	2576
3	2011-2015	336	3883
4	2016-2021	1290	5363

The extracted keywords for all three periods were further refined and standardised by-

- Merging of synonyms
- Removing redundant keywords
- Removal of hyphens

Table 11: Author keywords and their occurrence during selected timeframes

2000-2005		2006-2010		2011-15		2016-21	
K	O	K	O	K	O	K	O
India	36	India	67	India	135	India	345
Tourism	19	Tourism	33	Tourism	59	Tourism	314
Article	14	Human	12	Article	49	Article	118
Asia	10	Article	9	Human	38	Human	108
Eurasia	10	South Asia	9	Medical Tourism	29	Tourism Development	83
South Asia	9	Asia	8	Humans	18	Ecotourism	70
Human	8	Eurasia	8	Ecotourism	17	Hospitality	62
Biodiversity	6	Religion	7	Biodiversity	14	Medical Tourism	62
Ecotourism	6	Ecotourism	6	Tourist Destination	14	COVID-19	59
Ecosystem	5	Himalayas	6	Water Quality	14	Sustainability	58
Travel	5	Female	5	Conservation	13	Tourist Destination	57
World	5	Tourism Development	5	Conservation Management	13	Tourism Management	51
Conservation	4	Adult	4	Female	13	Perception	49
Eastern Hemisphere	4	Algae	4	Himalayas	12	Sustainable Development	45
Environmental Protection	4	Animalia	4	Male	12	Hospitality Industry	38
Himalayas	4	Developing World	4	Sustainability	12	Humans	36
Nonhuman	4	Hospitality Services	4	Remote Sensing	11	Economic Growth	35
Protected	4	Internet	4	Tourism	11	Tourist	33

Area				Development		Behavior	
Tourism Management	4	Male	4	Urbanization	10	Adult	32
Water Quality	4	Medical Tourism	4			Satisfaction	32
Water Sampling	4	Numerical Model	4			Social Media	32
		Phytoplankton	4			Tourism Economics	32
		Remote Sensing	4			Service Quality	31
		Sikkim	4				
		Sustainable Development	4				
		Tourism Management	4				
		Tourist Destination	4				
		Uttarakhand	4				
		Water Management	4				

K – Keyword

O - Occurrence

The occurrence of keywords over time can be used to study the research trends, as shown in table 11. It is clearly reflected that India, Tourism, and Articles have a consistent presence across all quarters. However, domains like Asia, Euroasia, South Asia, Biodiversity, and Ecotourism have been the key areas from 2000 to 2005. The paradigm shift was observed from 2006 to 2010 when research areas shifted from eco system to the Himalayas, humans, and Religion. Further, from 2011 to 2015, the research had new add-ons like biodiversity, tourist destination, water quality, and conservations. Interestingly from 2016 to 2021, Hospitality, Medical Tourism, Sustainability, and Covid-19 are the key areas that gained the attention of the researchers, and domains like Religion, etc., were left behind. This is also an indication of research areas marching towards in sync with the United Nations Sustainable Development goals. Due to the pandemic, 2019-21 was dominated by the 'covid-19' theme. The other themes popular during this timeframe were 'social media', 'customer satisfaction', and 'sustainability'. Figures 3, 4, and 5 represent the author keyword linkages for the selected three-time frames.

Figure 3: Author keywords linkages during 2000-2014

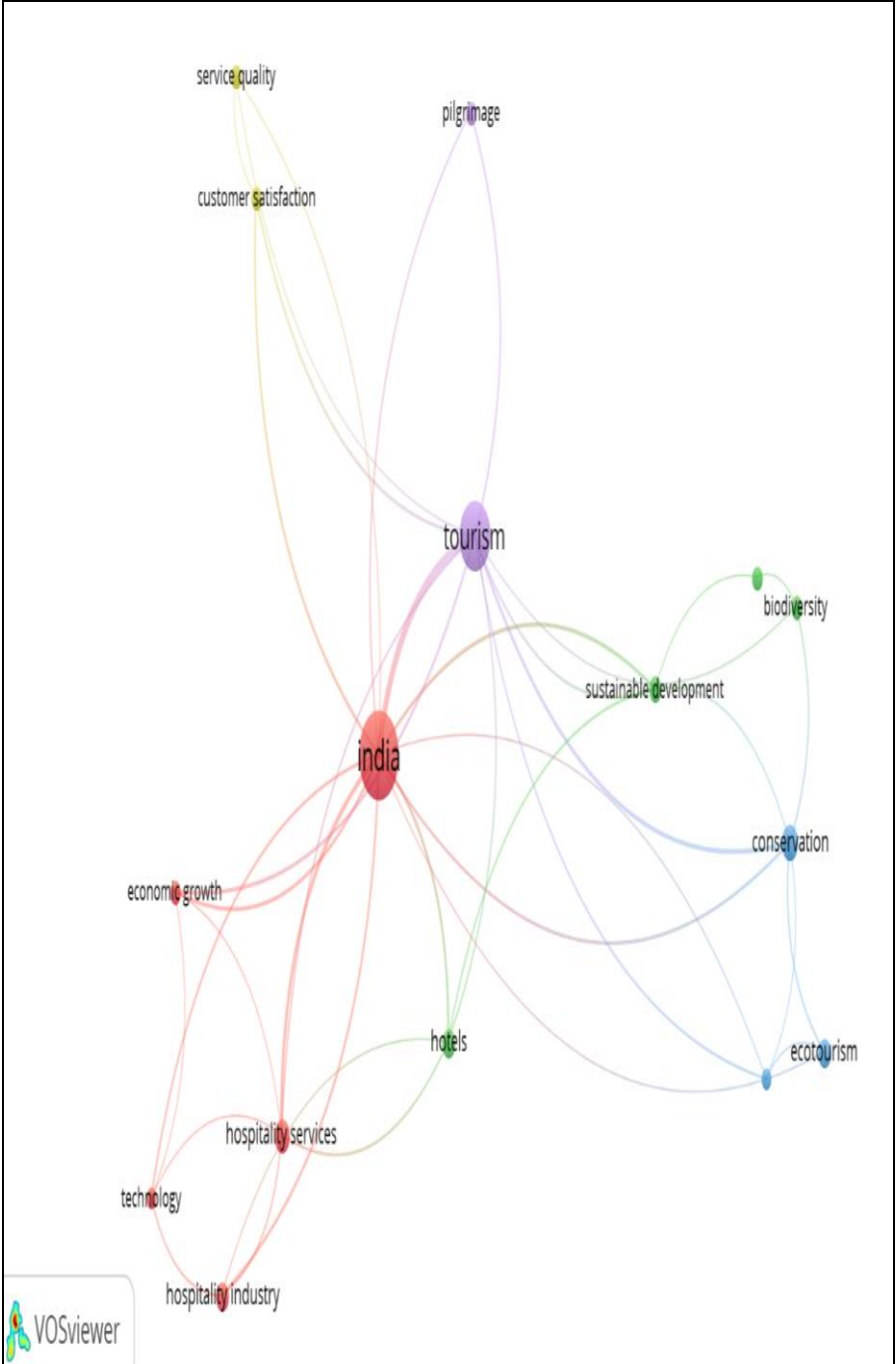


Figure 4: Author keywords linkages during 2015-2018

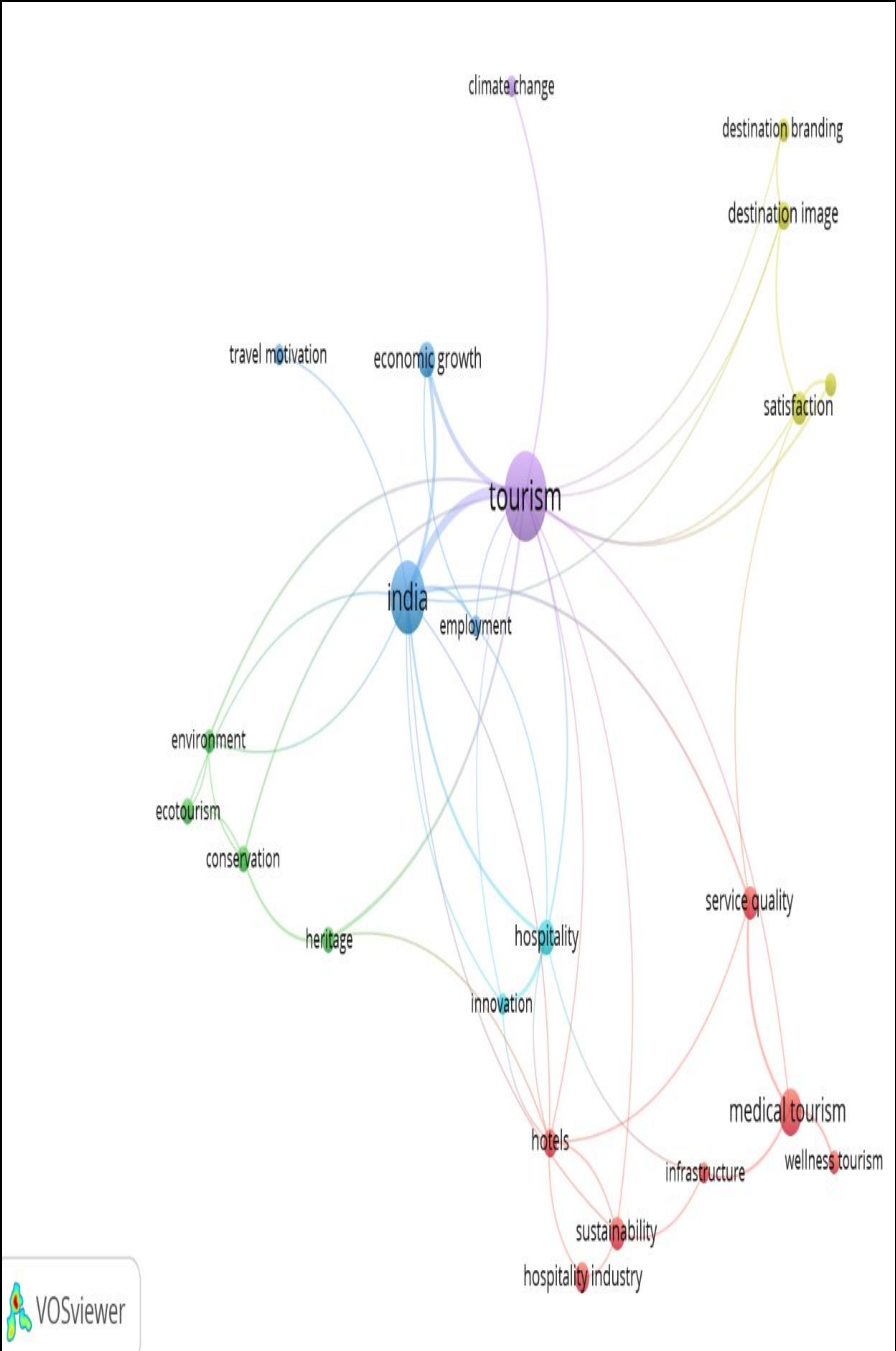
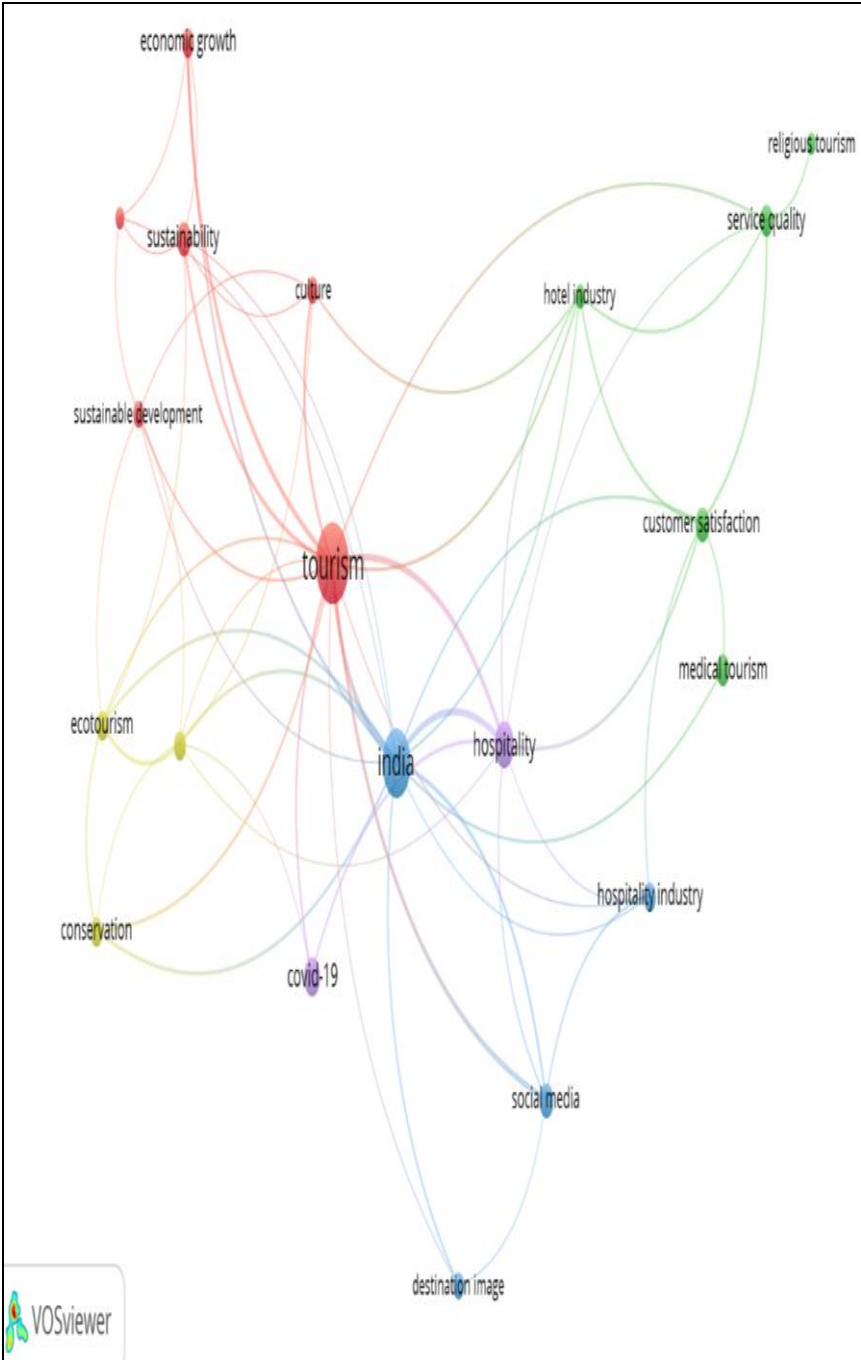
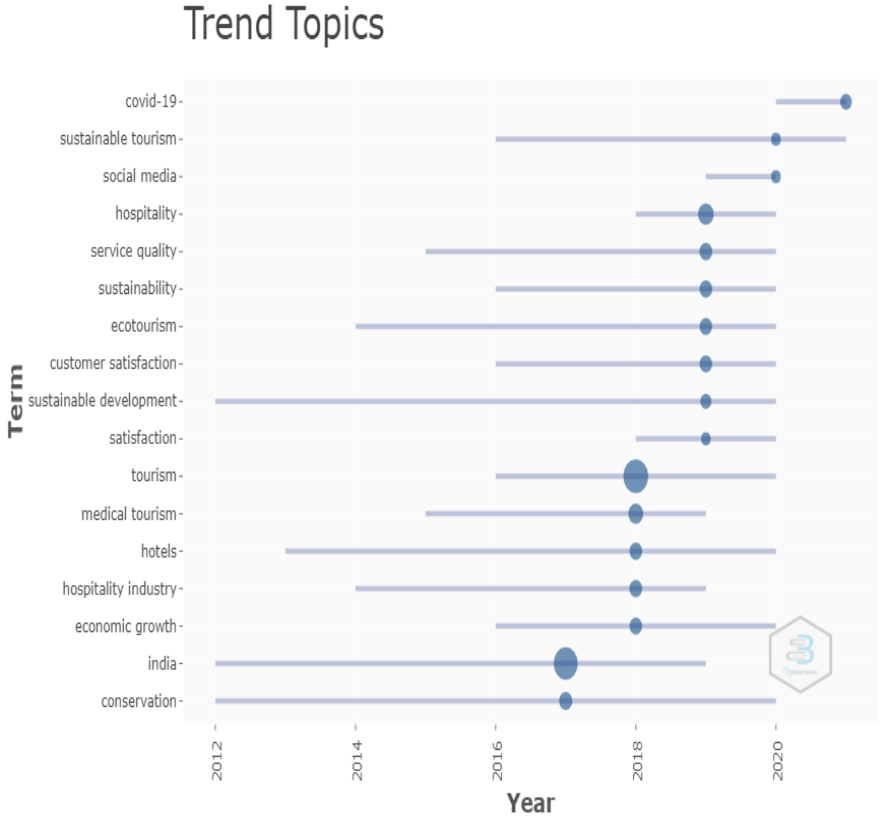


Figure 5: Author keywords linkages during 2019-2021



The trends of key themes have been depicted in Figure 6. It is evident from the figure that the themes like social media and covid 19 are a quite recent development in the research area. While themes related to sustainability and resource conservation have been the predominant themes among researchers in the hospitality and tourism sector.

Figure 6: Popular Key terms and their trends during the timeframe



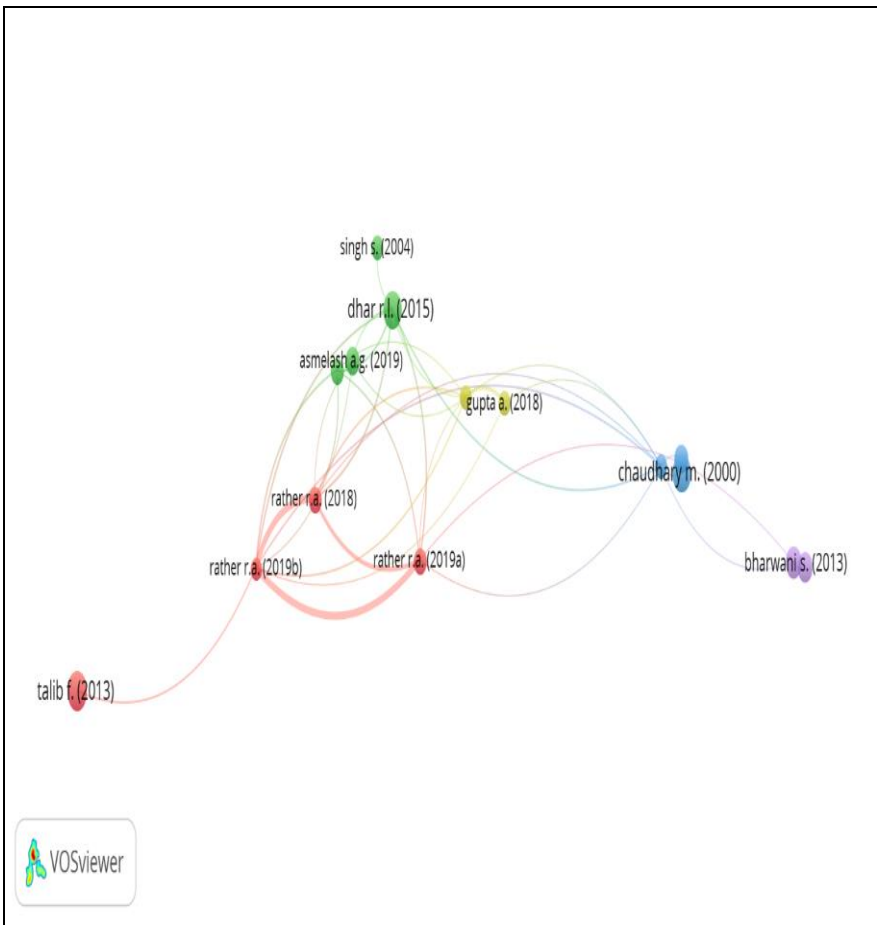
4.9. Bibliographic Coupling

Figure 7 illustrates the analysis of the bibliographic coupling of documents. The articles with at least 50 citations were selected as the most appropriate articles for the coupling. The coupling helps to recognise clusters and relationships among authors about specific topics. The analysis helps to show the future lines of research as it shows the relationship of recent publications on

popular themes. The result presents four clusters, as indicated by different colours in Figure 7.

The first cluster (shown in red) with four items constitutes papers on customer engagement in the hospitality and tourism sector. The second cluster (in green) has four articles focusing on different tourism concepts and sustainability. The third cluster, with three items shown in blue, focuses on tourist perspective and service quality. The fourth cluster, with two items in yellow, revolves around digital adoption and social media in tourism. Finally, the key competencies necessary in the hospitality and tourism sector are discussed in the fifth cluster, which has two items highlighted in purple.

Figure 7: Bibliography coupling of articles related to the field of Hospitality and Tourism



5. Discussion and Implications

The study identified articles pertaining to the hospitality and tourism sector in India. The Scopus database extracts the information about the articles published. The data regarding published articles was extracted from the Scopus database. The articles were further divided into different time frames to study the research trends. The analysis was projected to get the findings against our set objectives for the study. The study outlined the most compelling writers, journals, and institutions engaged in the hospitality and tourism sector publications from 2000 CE. The timeline was divided into three different timeframes to understand the research trend, and their respective author keywords were analysed to have themes of interest during each era. The networking diagram or bibliometric coupling of authors presented the authors who worked on common themes. According to the objectives following findings were obtained.

The study examined the Annual Scientific Production and their citations and noticed a growth in the article publication. In a period of 22 Years, from 2000 to 2005, 60 research articles were published. From 2006 to 2010, 135 research articles were published; from 2011 to 2015, 336 research articles were published; in recent years, from 2016 to 2021, 1290 research articles were published. This demonstrates the growth of research in the hospitality and tourism sectors. In recent years, the year with the most number of articles published was 2020, and the year with the minimum number of published articles was 2001.

Further, citations are also widely used in research policy and the research system as performance indicators. Citations typically represent the research's quality and impact (Aknes, Longfeldt, & Wouters, 2019). The study also revealed that 1241 citations received in 2019 secured the top rank and the lowest number of citations received in 2005, i.e., 110.

The analysis of the journal with the most articles found that "Worldwide Hospitality and Tourism Themes" is the most productive journal, contributing 68 articles. "Tourism Recreation Research" is the second-most productive journal, contributing 31 articles. The "International Journal of Hospitality and Tourism

Systems" provided 29 articles to the 1821 published articles, while the "African Journal of Hospitality, Tourism, and Leisure" published 30 articles. The last five journals on the list of the top 10 Productive journals in terms of articles published are "International Journal of Advanced Science and Technology", "International Journal of Scientific and Technology Research", "Indian Journal of Public Health Research and Development", "Tourism Management", and "International Journal of Contemporary Hospitality Management". Subsequently, According to the analysis of Journals with the highest number of citations, "International Journal of Contemporary Hospitality Management" is the most prolific journal, with 1060 citations and 19 articles. The analysis also revealed that "Worldwide Hospitality and Tourism Themes" had the most published articles and citations (344). With the publication of 20 papers, "Tourism Management" received 734 citations and secured the second position in seeking citations. With 357 citations and 14 articles, "Tourism Management Perspectives" emerged as the third most referenced journal.

The research area of the top-performing institutes such as "Amity University" shed light on Tourism development, Medical Tourism, Destination Image, Customer Satisfaction, and Culinary tourism. While the research areas of the "Indian Institute of Technology Roorkee" are corporate social responsibility, tourism management, tourism destination, dark tourism, destination image, and Natural resources like lakes, Himalayas, and Climatic changes. Moreover, the "University of Delhi" studies focused on Ecotourism, Biodiversity, Carrying Capacity, Heritage Tourism, and the Hospitality Industry. At the same time, "Siksha O Anusandhan Institute" emphasised on human resource management, Economic Growth, Information Technology, Medical Tourism, Cultural Tourism, Destination image, and Virtual and augmented reality. Moreover, the research areas of "Lovely Professional University" were Covid-19, Branding, Destination Branding, Economic Growth, Foreign Direct Investment, and Heritage Tourism. The "University of Jammu" researched Brand Loyalty, Branding, Destination Image, Eco-Tourism, Service Quality, Sustainable, and Customer Engagement. Furthermore, the field of study of the "University of Kashmir" was Himalaya, Sustainability, Remote Sensing, Kashmir, Climate Change, and Destination Image. Similarly, the area of

investigation of “Kurukshetra university” was Religious tourism, and apart from that, the “Kurukshetra University” analysed the perception of tourists, suppliers and covid-19 impacts, and corporate governance practices. Also, the analyses found that Behavioural intention, Eco-Tourism, Motivation, Sustainability, and Tourism Economics were the research areas of “Manipal Academy of Higher Education”. Besides that, “Jawaharlal Nehru University” studies concentrated on Medical Tourism, Biodiversity, Biosphere Reserves, Delhi, Climate Modelling, and Eco-Tourism.

Afterwards, the top 10 authors out of 3579 were selected for shortlisting and ranked according to the number of publications. With 24, 17, and 16 papers each, Singh S., Kumar S., & Jauhari V. were the top three most productive authors. Jauhari V received the most citations and g-index (16) out of all the authors simultaneously, totalling 760 citations. The research found that the paper with the most citations was published in 2007 and titled "Exploring Consumer Attitude and Behaviour towards Green Practices in the Lodging Industry in India" by Manaktola K. & Jauhari V and received 497 citations. The second-most cited paper, "An Empirical Investigation of Relationship between Total Quality Management Practices and Quality Performance in Indian Service Companies," was published in 2013 and had 145 citations authored by Talib F., Rahman Z., & Qureshi M. N.

The study benefits the students and researchers of Hospitality and tourism who always get confused about which area of Hospitality and tourism they should choose. Who are the other authors working in this field? Which are the Institutes that are pioneers in hospitality and tourism research? The study will also help identify and select the journals to publish the research work. The study results will also help the researchers examine the paradigm shift in the Indian hospitality and tourism research trends and enlist the top-performing articles.

6. Limitations and Suggestions for future study

Though the present study brought interesting facts and implications for hospitality and tourism research from 2000 to 2021 in India, it is not free from limitations. Scopus database was

selected for the selection of articles, and hence our reach was limited to Scopus indexed articles only. Those articles which are not a part of Scopus but are relevant and present in any other database were not included. Thus, future study of a similar nature using various databases or integrating their results is possible. The researcher only used research articles for the analysis and excluded other publications like conference papers, book chapters, etc. By incorporating the aforesaid underutilised resources, future studies could provide a more in-depth analysis of the chosen topic. Also, the manual search to select the data may have excluded or overseen other relevant publications due to strict keyword search. Expanding the keywords could have resulted in a more exhaustive review. Further, in this study, there was no filtration on the type of journal; future studies can be carried out explicitly using journals of Hospitality and tourism.

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