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Impact of COVID-19 Pandemic on Beach Tourism in India

Joby Thomas*, Supriya Kujur, Rina Daline*****

Abstract *COVID-19 Pandemic has a profound Impact on the Indian tourism sector, especially on beach tourism. Research shows significant changes in the pattern of the ecological terrain of coastal areas and on the community dependent on tourism business and marine life, due to the imposition of lockdown for several months. The paper discusses the change in behavioral patterns of people during Pre and Post COVID-19 for visiting any beach destination in near future in terms of preferences in accommodation, selection of beaches based on crowd and other factors that will be considered in post pandemic days. This study brings out various key indicators shaping the pattern of beach holidays in the future based on the survey conducted among tourists belonging to youth population. The survey considered the tourists preferences of visits and factors they would look upon to choose beach holidaying in the Post COVID-19 years. The influence of the pandemic on quality of beaches, visitors' willingness to visit beaches in future, Post Pandemic opportunities and strategies of destinations for shaping tourism further have also been examined.*

Keywords: *Beach Tourism, Coastal Tourism, Marine Life, Accommodation, Social Distancing, Travel Preferences, COVID-19*

INTRODUCTION

Beach tourism has always been popular among the other kinds of tourism a country has to offer. In India, there are several beaches which are very famous to attract the domestic as well as international tourists. The 3S (Sun, Sea, and Sand) tourism has been a predominant resource for many countries. Beach tourism being a part of 3S is very popular and is responsible for improvising a significant part of the country's revenue (Mestanza-Ramón et al., 2020). Coastal countries have gone through a major paradigm shift in the last three decades. They have shifted from traditional marine activities to bestowing tourism-related activities. As a result, these countries depend highly on coastal tourism to boost their economy (Klein et al., 2004).

India is expected to emerge as a hot destination for beach tourism as the country possesses a plethora coastline of 7517 km and a humongous tourism potential of more than 200 beaches. Indian Government has unveiled 17 projects related to coastal development all over the country. Under the name of "Swadesh Darshan Scheme", a 2000 Crore project was planned to nurture beach tourism and coastal tourism (Sharma, 2018).

COVID-19 Pandemic has several impacts on beach tourism. Many factors have influenced the beach tourists' activities and preferences for selection of beach destinations. According to stakeholders, because of the pandemic and lockdown a major fluctuation was seen in the arrival of tourists. The problems faced by beach destinations due to the outbreak of coronavirus led to the complete shutdown of beach tourism at many destinations. Due to the closure of the industry, the beach tourism segment has faced an economic crisis. Many of the residents who are stakeholders of the tourism sector were affected badly as it was the sole source of income to them. Coronavirus has affected tourism all over the world. UNWTO has said that international tourism can decline in mass numbers as an effect of COVID-19. The figures of the United States show that the inflow of tourists has declined by

* Associate Professor, School of Business and Management, Christ (Deemed to be University), Bangalore, Karnataka, India.
Email: joby.thomas@christuniversity.in
** School of Business and Management, Christ (Deemed to be University), Bangalore, Karnataka, India.
Email: supriya.kujur@mba.christuniversity.in
*** Research Scholar, School of Business and Management, Christ (Deemed to be University), Bangalore, Karnataka, India.
Email: rina.daline@res.christuniversity.in

60- 80% in comparison with 2019 data. The pandemic has put the economic and health crisis which affected millions of jobs and livelihoods at great risk. This also resulted in revenue loss of $910 million to $1.2 trillion according to the World Tourism Organization report. The UNWTO expert panelists also state that domestic tourism is expected to come back soon in the coming years ("International tourism", 2020).

The pandemic has affected the Indian tourism industry a lot in terms of higher unemployment rate. The job loss in the industry has been estimated to be 38 million which is approximately 70 percent of the industry. The estimation of losses is said to be INR 10 lakh Crore. The industry is to have an opinion on the trends of "staycations" and "workcations" which is expected to be dominant in the near future for the hospitality industry. The government of India has further persuaded the "National Disaster Management Act" that has activated state wise funds to tackle the effect of pandemic. Certain tourism activities also have been resumed after COVID-19 negative tests to encourage stays for the hospitality industry (Kaushal & Shrivastava, 2020).

The situation has hit Indian Tourism hard in terms of inbound, outbound and domestic tourism. The effect is in almost all verticals of tourism which consists of MICE, adventure, niche, corporate, cruise, heritage and other segments too. Not just this but also the organized and flourished chains of tour operators, hotels, destinations, entertainment venues, recreational parks and transportation has all come to a stake. India, which usually starts to get bookings for seasons, has been all muted for the session of October 2020 – March 2021 with a lot of cancellations as well. The cancellation of visas for foreign tourists by the government has affected the market pretty high ("Impact of coronavirus", 2020).

The beach tourism which is one of the popular leisure activities for tourists also got affected by the pandemic leaving these destinations on stake as some of the destinations in India serving beach tourism went totally closed and affected it economically. But this created an opportunity for the beach destinations to proceed for clean drives. Beaches which were rated low before quarantine are now rated high as the quality of these destinations and the presence of species have improved (Ormaza-González & Castr-Rodas, 2020).

LITERATURE REVIEW

Impact of COVID-19 on Indian Beach Destinations

COVID-19 is most likely to result as Spanish flu, one of the major pandemics in the world with a dropdown of GDP from -4.8 percent to -6.7 percent. (McKibbin & Fernando, 2020; McKibbin & Sidorenko, 2006). It is very important for a destination to have open transit destinations in between. Since due to travel restrictions, accommodation sector suffered for the week of 21, March, 2020 where number of tourists declined by 50% compared to one arrived in the same week in 2019. Even the IATA traffic fell by 48 % which was 55% below 2019. (Hall, 2020)

Destinations in Kerala popular for beaches, lighthouses, palaces and museums which were flooded with tourists during season mainly for its beaches destinations had to go through a revenue loss of 2 Crore which was only for the month of May,2021 alone. The loss borne by the state in 2018 for flood and outbreak of Nipah virus which came to the tracks again collapsed with the global pandemic. There were no occupancies in hotels in these times because of the cancellation of all events. The Kashmiri migrants came for jobs had to close down their handicraft shops. The Kerala State Cooperative Tourism Federation Ltd has planned some attractive packages for the time tourism starts again. The management is also planning to convert the rooms of hotels into private dining halls for families. This will be taken care of by all the safety measures of social distancing norms and make sure that only family members are kept together (Simon, 2020).

The idea to boost up the tourism of the state Maharashtra has come up bringing new plans for covering the losses the beaches had to deal with in the past few months. The plan is to open the eight beaches of the state for eco-friendly shacks where it is mandatory that 80% of the income opportunities will be given only to the host community ("COVID-19 impact", 2020).

Environmental Effects on Beaches and Marine Life

In the context of developing countries, the possible effect of SARS-CoV-2-infected wastewaters is extremely significant. Viruses can retain their infectious capacity in the water for a long period of time, reaching the aquatic environment through sewage discharges, despite the dangerous circumstances of the marine environment. They may also cling to suspended solid particles in the surrounding water or sand particles on the beach. The effect of the chemicals used in large quantities to clean public spaces is the second environmental consideration that local governments and beach managers should carefully examine. The SARS-CoV-2 virus can be inactivated by quaternary ammonium surfactants and their derivatives, which are commonly used. However, when these substances are transported to the ocean through sewage and rainwater drainage systems, they have an effect on marine organisms. They may have an eco-toxicological impact, resulting in the extinction of certain animal species (Zielinski & Bortero, 2020).

The new environmental setting established by the COVID-19 lockdown resulted in noticeable changes in the ecological community of previously affected beaches. Longer-term research focusing on endangered species and ecosystem resources will be necessary to determine if tourist beaches can be used for successful biological conservation. Despite a long history of human influence on these beaches previous to the lockout, these habitats showed signs of recovery. Increase in biodiversity and system efficiency in response to reduced stressor exposure has been noticed. The positive effects of most bio-indicators improved during lockdown. These are likely to be short-lived, and it's unclear how conservation would fare in the consequences of the pandemic (Soto et al., 2021).

According to a survey completed by 69 people in Salinas and 39 people in Manta (Galapagos), which focused on information about lived experience, observation, and a desire to improve things for local tourism and species protection observers on a quarantined boat in Galapagos registered turtles. The beach and water have changed in appearance and since the beaches were free of people for about three months the beaches and water were cleaner during the pandemic with less plastic and more transparent water. During the quarantine period, marine life was benefited with a rise in aquatic activity due to low human presence and the lack of noise on the beach or at sea (by boat engines) (Ormaza-González, 2021).

Among various countries, some countries have heavily been impacted due to COVID-19. These are mostly the small island nations. The countries which are dependent on tourism industry for source of GDP are 15 upon 20 countries. Australia is one of those, where most of their small to medium sized tour operators are reliant on Chinese travelers. This reflected the downfall in tourism of theirs at the earliest compared to other countries. Employment in Kenya also got affected as their fishing economy was completely dependent on the orders they used to get for sea-foods from hotels and restaurants. There is 17 % drop in carbon emissions in the period of early April, 2020 which indicates a positive sign to marine life which last spotted back in 2006. Domestic tourism is most likely to resume earlier than international so the stakeholders of industry will have to adapt to domestic consumer demands (Carr, 2020).

People on Visiting Beach Destinations

The most negative and tough scenario of tourism in COVID times, is the spread of infection among people before the arrival of vaccines. This creates a deep fear of social interaction among the visitors. These concerns had a devastating impact on beach tourism. With this recovery of pandemic, global transformation is likely to overlap current economic systems to have carbon neutrality. This has also pushed many industrial leaders to rethink sustainable approaches of tourism. The prediction of domestic tourism is more likely to return in short terms than international tourism by scholars and experts. It also states that a shift to a carbon neutral economy and sustainable approaches would be difficult to implement because of the government and companies who would like to recover for their losses after this huge economic crisis. According to experts, destinations that are less available and remote will be viewed as having a lower risk of infection and therefore will be favored. People are therefore more likely to restrict their personal mobility by selecting local environments that can match their different goals. To recover from self-isolation and avoid crowded areas, they are more likely to move alone or in small groups. To avoid crowds and human interaction, beach goers are more likely to arrive early in the morning or later in the evening (Zielinski & Bortero, 2020).

Since some people perceive a high level of risk, it is fair to say that the number of people visiting rural and natural beaches which are normally less crowded, would increase. Even a small rise in visitors to beaches that are more vulnerable to human stresses would have a greater environmental effect than a comparable increase on urban beaches.

Surf tourism has become popular during the past decade. Martin & Assenoy introduced a Surf Resource Sustainability Index (SRSI) to study the sustainability of surf tourism sites. The study supports the importance of social, economic, environmental, and governance factors in the conservation process (Martin & Asseno, 2014).

Impact of COVID-19 in Tourism Sector and Businesses at Global Beach destinations

Tourism has also shown new aspects of travel in the United States where destinations such as Smoky mountains between Tennessee and North Carolina showed rise in travel. In between this global pandemic these destinations have managed to be top destinations in the country. Short term rentals and private houses are being preferred by the visitors with some of the service providers like Airbnb. 67% of Americans prefer to travel by road to the familiar destinations as it is more comfortable. People of North Carolina prefer beaches over other destinations as they feel familiar, safe and convenient (Bryant, 2020).

Since the world health organization announced the emergency of the coronavirus pandemic, many countries imposed a lockdown by canceling all flights and rail connectivity in the country. This led the country to undergo huge loss as they saw dying mass tourism in the city of Ukraine's Lviv. Lviv is a city famous for gastronomy tourism. When the city closed all the famous restaurants and cafes were forced to

shut down. Even the big events had to be canceled which led to huge loss to travel agencies in Lviv. They even tried to manipulate the tourists by creating a discount of 30% on visiting. Numbers dropped significantly for visitors. Large-scale quarantine has triggered an economic crisis and enacted restrictive laws. The tourism industry in Lviv recovers in stages from the quarantine shutdown, avoiding fatalities but suffering financial losses (Rutynski & Kushniruk, 2020).

During COVID-19 pandemic the decrease in tourist numbers from different countries had a negative effect on the economies of Indonesia. During the pandemic, Indonesia lost 97 percent of its foreign exchange, and as many as 2000 hotels were forced to close due to the closure of many tourist destinations. The Ministry of Tourism in Indonesia has taken steps to address this situation, including providing temporary direct support to tourism sector workers who have been directly affected by the pandemic, initiatives to help tourism sector competence, and partnering with hotel and transportation businessmen to provide lodging facilities for health workers serving in various locations. Tourism and creative economy offices were also encouraged to make efforts to be able to provide support and rewards to informal staff who are directly linked to tourist destinations within their jurisdiction that are closed (Santoso, 2020).

Bintan is indeed one of the Riau Archipelago's islands, which the Indonesian government is currently developing as a main tourist destination after Bali. Trikora Beach, Senggiling, and Beralas Pasir Island are some of Bintan's more well-known tourist attractions. Bintan's tourism industry has been hampered by its reliance on Chinese visitors. The effects of the coronavirus in Bintan's tourism sector have revealed the local government's inability to diversify the island's economy and reduce its reliance on Chinese tourists, who account for the majority of visitors. Due to the COVID-19 outbreak, businesses in the Bintan tourism industry, such as hotels, gift shops, and local fishermen, have seen a drop in visitors from mainland China. The decline in tourist numbers has resulted in a drop in hotel demand; gifts, rooms and food intake are all factors to consider. (Dinarto, Wanto & Sebastian, 2020).

While the first case of COVID-19 in the Maldives was officially recorded, it was widely assumed that the pandemic would inevitably hit their shores, wreaking havoc on the country's tourism industry. As a result, rumors began to circulate of resorts taking preventative measures such as terminating employees and/or requiring forced leave, as well as resorts closing entirely. They had a pay cut on all workers salaries by 10% the week before, beginning with the lowest pay bandwidth. More than 45,000 workers in tourist resorts are impacted by the inclusion of international payroll employees. A significant number of employees working for the resorts' third-party service providers are also affected. Employees who have been employed have lost a substantial portion of their incomes while the rest have been put on no-pay status for the period April-June 2020 (Shakoor, 2020).

Smart Tourism Initiatives for Beach Tourism

One of the feasible ways of sustaining a beach destination is to transform them into smart destinations. Smart Destinations increases the longevity and life span of the destination. With the assistance of public-funded projects and technology destinations are empowered to Smart destinations. Spain has deployed this strategy to design urban destinations and maintain their sustainability (Ghosh & Datta, 2017). Thailand has tested six components of management to maintain the sustainability of beaches. The management on marketing and promotion, tourist attraction management, participation management, environmental, cultural and education management, process, plan, and policy management, and personal management are tested respectively. This was tested in the Royal coast area, situated in the Gulf of Thailand. According to the study the need for marketing and promotion emerged as the first priority followed by the participation of stakeholders as well as attraction management. However other elements are also considered important and should be included in working towards sustainability (Prabpriree et al., 2016).

Objectives of the Study

The paper aims to focus on various objectives to find out strategies for the return of beach tourism in India in the Post COVID-19 era. The specific objectives of the study are as follows:

- To study the impact of COVID-19 on beaches.
- To examine tourist readiness to visit beaches post pandemic.
- To analyze the environmental impact on beaches and marine life.

Research Methodology

Survey method is adopted to collect primary data for the research. Survey is conducted with the help of online questionnaires shared through email and various social networking sites such as Facebook, LinkedIn and Whatsapp. Respondents of the survey belonged to different Indian states. The questionnaire consists of questions that are based on the variables identified through literature reviews and objectives of the study.

Profile of the Respondents

Respondents of the survey predominantly belonged to Indian Youth. A total of 169 survey responses were collected. The survey respondents belonged to different age groups of 18 to 40. However, 80% of the respondents were within the age group of 18 to 25. 14.1% of the respondents belonged to the 26 to 33 age group while the remaining 5.9% belonged to the 33-40 age group. Female respondents recorded the highest response rate by 52.4%, whereas the male respondents were 47.6%. The sample consisted of 64.7% Students, 27.1% Working professionals, 5.3% Entrepreneurs and 2.9% Unemployed. The convenient sampling technique is used in this study among the Youth population

Reliability Test

Cronbach's Alpha determines the internal consistency of scaled data and signifies the reliability of scale. Ideally the Cronbach's Alpha value ranges from 0 to 1 and the most ideal value should be greater than 0.7. The Cronbach's alpha for "Types of beaches preferred before COVID-19", is 0.745 which is higher than 0.7 indicating that the data is highly reliable and the " Types of beaches that may be preferred post COVID-19" is 0.771, which is also higher than 0.7. Likewise, Cronbach's alpha value for "purpose of visit for beaches and Preference of factors by people for accommodation post COVID-19" is 0.881 and 0.957 respectively. This signifies that the data used in this study are reliable and has an internal consistency.

Normality Test

The Normality test is conducted to determine whether the data are normally distributed or not. Here the "Shapiro-Wilk '' test is executed to figure out the normality. The significant value is found to be 0.05 which indicates the data is not normally distributed.

Limitations of the Study

Due to the challenges paused by the COVID-19 Pandemic the researchers were constrained from conducting a survey among large number of respondents. The intensity of holiday business and tourism activities were at a low profile during the survey period. These limitations might influence the results of this research.

Data Analysis and Interpretations

To analyze the data collected, the study makes effective use of a variety of statistical methods. The basic analysis is carried out using advanced Excel to understand the classification of data based on various inferred populations and demographic factors. The data evaluation is carried out using SPSS in order to test the data and get results for the variables related to each other. The descriptive statistics are used to characterize the fundamental characteristics of the data. For the data analysis various Non-Parametric tests have been carried out. The Wilcoxon test is a nonparametric statistical test that compares two paired groups. The tests basically measure the difference between the types of beaches preferred by sets of pairs of respondents before and after COVID-19 and evaluate these differences to see if they are statistically important. Kruskal Wallis test is applied and analyzes whether the medians of two or more classes vary , in this case the respondents' preference to visit beaches based on the presence of crowds in the beach, post COVID-19 and before COVID-19. It measures a test statistics and compares it to a distribution cut-off point, much like most statistical tests. The H statistic is the test statistic used in this test. If there is a substantial difference between classes, the Kruskal Wallis test reveals it. .The Mann-Whitney U test is used to see whether two independent groups have a difference in the dependent variable. It compares if the dependent variable's distribution is the same for the two classes, implying that they are from the same population.

The study has identified distinct categories of beaches based on their physical characteristics, composition etc. The most predominant classification are Colored sand beaches, Rocky beaches, Seashells beaches, Urban beaches and Private beaches (Carter, n.d.). The survey has analyzed the preference level of respondents in visiting these beaches during the pre and post-pandemic scenario. The findings shows that out of 169 people, 19.5% preferred visiting different colored sand beaches in the pre-pandemic phase while 17.2% opted for visiting these beaches in the post- pandemic period. Seashell beaches show minimal difference in preferences among respondents with 19% and 19.5% each before and after pandemic. On the other hand, Rocky beaches, urban beaches and Private beaches show a major difference at different periods of time. Among the respondents 14.2% preferred visiting rocky beaches before pandemic while 24.9% are willing to visit them in the post phase of pandemic. This implies that the demand and interest to visit Rocky beaches have increased to 10.7% in the post-pandemic phase. Similarly, there is a significant difference in visiting the Private beaches which accounts for 16% before pandemic and 25.4% after pandemic. The willingness to visit Private beaches have increased to 9.4 % in the post-pandemic phase. On the contrary, Urban beaches shows a 7.7% decline of visiting them in the post-pandemic while the preference level varies between 26% and 18.3% in both the phases of pandemic. As a whole, Urban beaches (26%) were highly preferred than any other beaches in the pre-pandemic period while the preferences were altered to Private beaches (25.4%) in the post-pandemic period

Wilcoxon Signed Ranks Test

Table 1: Types of Beaches Preferred (Pre & Post COVID-19)

Ranks				
		N	Mean Rank	Sum of Ranks
Post COVID-19 [Beaches with different sand colours] - Before COVID-19 [Beaches with different sand colours]	Negative Ranks	33[a]	30.64	1011.00
	Positive Ranks	29[b]	32.48	942.00
	Ties	107[c]		
	Total	169		
Post COVID-19 [Beaches with Seashells] - Before COVID-19 [Beaches with Seashells]	Negative Ranks	32[d]	33.16	1061.00
	Positive Ranks	33[e]	32.85	1084.00
	Ties	104[f]		
	Total	169		
Post COVID-19 [Rocky Beaches] - Before COVID-19 [Rocky Beaches]	Negative Ranks	24[g]	34.46	827.00
	Positive Ranks	42[h]	32.95	1384.00
	Ties	103[i]		
	Total	169		
Post COVID-19 [Urban Beaches] - Before COVID-19 [Urban Beaches]	Negative Ranks	44[j]	40.75	1793.00
	Positive Ranks	31[k]	34.10	1057.00
	Ties	94[l]		
	Total	169		
Post COVID-19 [Private Beaches] - Before COVID-19 [Private Beaches]	Negative Ranks	27[m]	36.13	975.50
	Positive Ranks	43[n]	35.10	1509.50
	Ties	99[o]		
	Total	169		

Source: Survey by Authors.

Test Statistics

	Post COVID-19 [Beaches with different sand colours] - Before COVID-19 [Beaches with different sand colours]	Post COVID-19 [Beaches with Seashells] - Before COVID-19 [Beaches with Seashells]	Post COVID-19 [Rocky Beaches] - Before COVID-19 [Rocky Beaches]	Post COVID-19 [Urban Beaches] - Before COVID-19 [Urban Beaches]	Post COVID-19 [Private Beaches] - Before COVID-19 [Private Beaches]
Z	-.255[b]	-.079[c]	-1.847[c]	-1.997[b]	-1.610[c]
Asymp. Sig. (2-tailed)	.799	.937	.065	.046	.107

a. Wilcoxon Signed Ranks Test.

b. Based on positive ranks.

c. Based on negative ranks.

From the Wilcoxon Signed Rank test, it is observed that there is no significant difference in the median between pairs of observations. (i.e.) There is no significant difference in the preference level of beaches in the pre and post-pandemic phases of time except Urban beaches.

Table 2: Preference of Beaches based on Crowd (Pre & Post COVID-19)

Ranks				
		N	Mean Rank	Sum of Ranks
Preference of beaches post COVID-19 (crowd) - Preference of beaches before COVID-19(crowd)	Negative Ranks	48[a]	28.07	1347.50
	Positive Ranks	7[b]	27.50	192.50
	Ties	114[c]		
	Total	169		

The analyses of the results were used to identify whether crowd is one of the influential factor in preferring beach destinations in the pre and post COVID period. Among 169 respondents 28.4% agreed that they prefer beach destinations based on the level of crowding before pandemic and 4.1% agreed after pandemic while the opinion remains unaltered for the remaining 67.5% respondents.

Test Statistics

	Preference of beaches post COVID-19 (crowd) - Preference of beaches before COVID-19(crowd)
Z	-5.515[b]
Asymp. Sig. (2-tailed)	.000

a. Wilcoxon Signed Ranks Test.

b. Based on positive ranks.

From the test statistics, it is identified there is no significant difference between the mean rank of pairs (i.e.) the preference of choosing beach destinations based on crowd factor remains unaltered for majority of the respondents before and after pandemic.

Hypothesis - 1

H0 – There is no significant difference in the scores across different categories of people based on Occupation.

H1- There is significant difference in the scores across different categories of people based on Occupation.

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of Proper sanitisation is the same across categories of Occupation.	Independent-Samples Kruskal-Wallis Test	.132	Retain the null hypothesis.
2	The distribution of Nearest to beach is the same across categories of Occupation.	Independent-Samples Kruskal-Wallis Test	.138	Retain the null hypothesis.
3	The distribution of Cheap Accommodation is the same across categories of Occupation.	Independent-Samples Kruskal-Wallis Test	.091	Retain the null hypothesis.
4	The distribution of Quality Services is the same across categories of Occupation.	Independent-Samples Kruskal-Wallis Test	.454	Retain the null hypothesis.
5	The distribution of Sustainable Practices is the same across categories of Occupation.	Independent-Samples Kruskal-Wallis Test	.360	Retain the null hypothesis.
6	The distribution of Social Distancing is the same across categories of Occupation.	Independent-Samples Kruskal-Wallis Test	.030	Reject the null hypothesis.
7	The distribution of Contactless Services is the same across categories of Occupation.	Independent-Samples Kruskal-Wallis Test	.041	Reject the null hypothesis.
8	The distribution of High Rating Accommodation is the same across categories of Occupation.	Independent-Samples Kruskal-Wallis Test	.009	Reject the null hypothesis.
9	The distribution of Well Checked Staff is the same across categories of Occupation.	Independent-Samples Kruskal-Wallis Test	.143	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

The scores on various travel related parameters across different categories of people based on their Occupation is tested using Kruskal Wallis Test. The null hypothesis is that there is no significant difference in the scores across different categories of people based on their Occupation. A significance level of 5% is set to reject the null hypothesis.

Hypothesis - 2

H0- There is no significant difference in the scores across different categories of people based on their Travel Preference Post COVID-19.

H1- - There is significant difference in the scores across different categories of people based on their Travel Preference Post COVID-19.

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of Adventure Activity is the same across categories of Travel preference post Covid-19.	Independent-Samples Kruskal-Wallis Test	.073	Retain the null hypothesis.
2	The distribution of Luxurious Stay is the same across categories of Travel preference post Covid-19.	Independent-Samples Kruskal-Wallis Test	.010	Reject the null hypothesis.
3	The distribution of Explore Offbeat places is the same across categories of Travel preference post Covid-19.	Independent-Samples Kruskal-Wallis Test	.094	Retain the null hypothesis.
4	The distribution of Beaches/Ocean water is the same across categories of Travel preference post Covid-19.	Independent-Samples Kruskal-Wallis Test	.019	Reject the null hypothesis.
5	The distribution of Weather/Atmosphere is the same across categories of Travel preference post Covid-19.	Independent-Samples Kruskal-Wallis Test	.071	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

The scores on various travel related parameters across different categories of people based on their Travel Preference is tested using Kruskal Wallis Test. The null hypothesis is that there is no significant difference in the scores across different categories of people based on their Travel Preference Post COVID-19. A significance level of 5% is set to reject the null hypothesis.

Hypothesis - 3

H0- There is no significant difference in the scores across different categories of people based on Accommodation Preferences Post COVID-19.

H1- There is significant difference in the scores across different categories of people based on Accommodation Preferences Post COVID-19.

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of Customer rating of the accommodation is the same across categories of Accommodation preferences post Covid-19.	Independent-Samples Kruskal-Wallis Test	.641	Retain the null hypothesis.
2	The distribution of Rating [2 Star hotel or Resort] is the same across categories of Accommodation preferences post Covid-19.	Independent-Samples Kruskal-Wallis Test	.087	Retain the null hypothesis.
3	The distribution of Rating [3 Star hotel or Resort] is the same across categories of Accommodation preferences post Covid-19.	Independent-Samples Kruskal-Wallis Test	.141	Retain the null hypothesis.
4	The distribution of Rating [4 Star hotel or Resort] is the same across categories of Accommodation preferences post Covid-19.	Independent-Samples Kruskal-Wallis Test	.027	Reject the null hypothesis.
5	The distribution of Rating [5 & above Star hotel or resort] is the same across categories of Accommodation preferences post Covid-19.	Independent-Samples Kruskal-Wallis Test	.000	Reject the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

The scores on various travel related parameters across different categories of people based on their occupation is tested using Kruskal Wallis Test. The null hypothesis is that there is no significant difference in the scores across different categories of people based on their occupation. A significance level of 5% is set to reject the null hypothesis.

Hypothesis – 4

H0- There is no significant difference in the distribution preference of beaches before COVID -19 of people based on Crowd.

H1- There is significant difference in the distribution preference of beaches before COVID -19 of People based on Crowd.

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of Preference of beaches before Covid-19(crowd) is the same across categories of State.	Independent-Samples Kruskal-Wallis Test	.216	Retain the null hypothesis.
2	The distribution of Preference of beaches post Covid-19 (crowd) is the same across categories of State.	Independent-Samples Kruskal-Wallis Test	.026	Reject the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

The scores on various travel related parameters across different categories of people based on their Travel Preference is tested using Kruskal Wallis Test. The null hypothesis is that there is no significant difference in the distribution preference of beaches before COVID -19 of people based on Crowd A significance level of 5% is set to reject the null hypothesis

DISCUSSION

The study reflects many significant factors that came out as a new way to charter out beach tourism in India in various coastal parts of the country. Since COVID-19 affected tourism completely, it has shaped the way of thinking and also the requirements of tourists considered for visiting coastal destinations. It has just not changed the preferences but also the size of tourists they prefer going with, choice of stay, preferences of tourist places with reference to crowd, preference of ratings over accommodation, preference with reference to beach texture and the places they are located in. The study also shows that the factors like occupation and age are a deciding factor for a tourist to choose beaches for holidaying.

Since the outbreak of COVID-19, it shows that people have changed their preferences with crowded destinations to least populated ones. The change can also be reflected in their choice of stay as they prefer to stay in resorts or homestays rather than hotels in terms of precaution and social distancing norms. The research shows that the youngsters are more interested in moving and exploring places of beach destinations than families and preferring raw travel over luxurious ones. This doesn't restrict to a single state but selection of visiting beach destinations differs from one state to another. Even if one chooses to stay with hotels, they prefer the ones with high ratings to ensure the safety protocols. Since people have modified their choices to new ones, in upcoming years resorts and homestays have the capability to flourish more in terms of business in coastal areas. Also, the least populated places are the new favorites for tourists so the unexplored places; backpacking, solo travelers have the capability to grow in these coming years.

Many innovative ideas from various stakeholders have also been noted through the literature reviews that are trying to innovate the spaces in order to serve a group of travelers separately. Many state tourism organizations are promoting their destinations through various advertisements and providing assurance of tours by exploring those offbeat destinations which can keep tourists engaged as well as will allow inflow of tourists to the destinations. Travel agencies are trying to attract tourists by offering various coupons and discounts for travel. They also have promoted themselves through various webinars and advertisements where they are trying to attract travelers highlighting all necessary protocols the agency is following and what they are doing to keep the travelers safe from COVID-19.

According to the data collected, study shows that the accommodation preferences are linked to visitors choosing the star ratings accommodation for stay which further notifies that even if they prefer resorts or homestays for stay they would be preferring the ones with highest star ratings in order to make their travel safer. So customer ratings and official ratings do matter a lot to the visitors now to book their next travel. When comparing the responses for preferences before and post pandemic for various factors of beach tourism essentials, a new interest has also been shown to visit rocky and private beaches post pandemic which was not a choice of selection before.

CONCLUSION

Looking at different perspectives of beach tourism on environmental factors, there has been a change in the

surrounding beaches, quality of water and marine life. According to literature survey, experts and local residents states that due to less human interaction there has been a change in the quality of water and the surrounding of the beaches as it is cleaner and clearer than before. Marine life has also started rejuvenating by noticeable changes in the ecological community as the bio indicators have started improving and because of less noise and visits to beaches marine life is returning. Due to the lockdown the water is less polluted and marine life is improvising which is good for the environment and can be kept improvising by restricting visitors in a certain numbers to nearby beaches and keeping close the destinations especially in breeding periods. Backpackers, solo travelers and the bunch of friends group have impacted the tour operator's business for safe and secure travel. Tour operators that arrange small group travels are preferred for guiding to unexplored areas and activities such as trekking. The age group of customers, individual travel preferences, crowding at destinations, adoption of health and safety protocols and government policies will influence the beach tourism in the days to come.

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