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## A STUDY ON THE PREFERENCE OF HOTEL BOOKING ATTRIBUTES, POST COVID-19 PANDEMIC

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## **Introduction-**

It is in late 2019 when the government of China announces the cases of a new virus which is then named coronavirus disease 2019 or in short COVID-19. The virus is a new strain of the SARS (SARS-CoV-2) group which later spreads throughout the world and takes the shape of a global pandemic (Davahli et al., 2020). The pandemic has changed the way of leading life of the people unexpectedly due to its' irrepressible contagious nature and no concrete treatment option (Lotfi et al., 2020). Without having any firm treatment in place, the governments and the local authorities have adopted the policies to control the spreading of this novel disease which includes travel restriction, maintaining social distancing, and establishing quarantine centers for isolating suspected patients among the others. Complete lockdown, travel restrictions or bans, and border closures are also experienced by many countries of the world, (Smriti Mallapaty, 2021). The restriction and ban in the travel ecosystem have affected the associated professions heavily among which the hospitality industry is in the forefront to bear the brunt, emanated out of it, (Alan et al., 2020). The extensive media coverage of the pandemic showing the continuous rise in the numbers of infected people and the area it engulfs along with the declaration of a pandemic by WHO creates havoc among the people, (Lee et al., 2020). The impact of the outbreak of this deadly disease is different for different countries and so is the adoption of steps to combat the situation, (Hall, 2010; Lee et al., 2020).

The hospitality industry has always been facing challenges to get the business especially during natural calamities, terrorist attacks, pandemics., etc., (Delafontaine, 2017; Hung & Yuen, 2018; Paraskevas, 2013). The catastrophes of a different kind stimulate the hotel industry for taking measures in combating the challenges arising out of the crisis. Ample of evidence are there when the hoteliers have emerged out of the crisis by taking combative measures. Be it the time when hoteliers in Hong Kong tightens the security and upgrades the CCTV surveillance in the aftermath of the 9/11 attack (Delafontaine, 2017), the Korean industry installs the upgraded hygiene equipment and educates the workforce on the health measures in the aftermath of the SARS outbreak, (Kim et al., 2005) or the hoteliers in Japan provides accommodation to the refugees on the aftermath of the Tsunami (Nguyen et al., 2017) every time hotel industry learns different ways to deal with the cropping issues. The early SARS outbreak has brought about a lot of change in China which includes an increase in hygiene measures, restriction of spitting in public, regulating temperature in different institutions, and improved hospital infrastructure and health services, (Dombey, 2004). Hong Kong has also followed stringent framework proposed by the Pacific Asia Travel Association (PATA) for combating the situation of SARS including the detection of warning signs, creating preparedness against any critical health issues, responding to new kinds of diseases

in collaboration with the health centers, and bringing back the conditions to the normalcy, (Kaushal & Srivastava, 2021). In the context of the COVID-19 pandemic, Alonso et al. (2020) attempts to discover the issues of small hotel owners and suggests an effective theoretical framework for combating the situation. There are nine dimensions in this framework that are related to the actions and reactions of the stakeholders of the hospitality industry for taking action in crisis management. The pandemic affects the travel behaviors of the individuals intensely due to health risks, (Mao et al., 2009). It is very much essential for hotel owners to realize the change in travel behavior, needs, and expectations of the customers in the post-COVID-19 scenario which can ultimately help in restoring and regaining the confidence of the travelers. As the pandemic has put an unprecedented impact on the hotel industry across the globe, it is the responsibility of the researchers to find out the effective ways, which can help the industry players in overcoming the challenges. In this paper, efforts have been made to find out the changes in the customer expectation regarding the hotel attributes or to find out the attributes that can instill confidence in the customers for coming back to the hotels in the Post COVID time.

Currently, the hospitality industry in India is reeling under an unprecedented crisis generated out of the COVID-19 pandemic. After the very first instances of COVID-19, the movement comes to a halt or the movement has declined predominantly amid the lockdown effect, across the country. The flights and trains are getting canceled and there is a temporary suspension in the movement in many places which poses a significant impact on the hospitality & tourism industry. The situation has been replicated several times due to the repeated reinstallation of lockdown attributing to the rise of cases. The government has mandated strict guidelines for controlling the spread of the disease. Maintaining social distancing and taking precautionary measures like wearing of face mask and using hand sanitizers frequently have been mandated and people are asked to follow the guidelines religiously. The hoteliers need to abide by these guidelines and ensure the safety and security of the hotel guests during hotel operation. While there is an involvement of high cost in the restructuring of hotel attributes, they need to find out the survival strategy alongside the capacity building. Proper cleanliness and hygiene standard have to be maintained in agreement with the government guidelines. With the deficiency in the numbers of regular guests, the hotels need to concentrate on collaborating with the hospitals or medical officers and offer quarantine facilities that can help them in sustenance during tough days, (Kaushal & Srivastava, 2021). The industry has to learn from the past when in a similar situation the hotels overcome the hurdles with the adoption of confidence-building measures by diminishing the uncertainty, (M. H. Chen et al., 2007). Amid rising cases of COVID-19 cases in India, the government has adopted multi-layered approaches in which the government has mandated the 'National Disaster

Management Act' & announced state disaster response funds to control the crisis (Kaushal & Srivastava, 2021). This research has been conducted for exploring the change in need and expectation of the attributes from the hotel guest's perspective. Northern India specifically the people of the capital city Delhi and the affluent state of Punjab creates huge numbers of tourists of different kinds and different choices. New Delhi, Gurgaon, and Noida of the Delhi-NCR region are home to top-notch national and international companies, which generate huge numbers of corporate travelers. This study focuses on the choice of hotel attributes of the travelers irrespective of their types of travel. This may give an in-depth knowledge regarding the attributes of greater importance for the travelers while choosing any hotel, during and after the pandemic.

### **Literature Reviews-**

The rampant rise in the COVID-19 pandemic has crippled the growth in the economy across the world (World Health Organization, 2020b). The hospitality and tourism industry has been suffering extensively due to the uncontrolled growth in COVID cases. The guidelines of "WHO" to control the cases and the strategies laid by the Govt. have resulted in many travel restrictions which include lockdown and social distancing which leads to the temporary closure of the hospitality industry for an unprecedented period. This leads to the sudden decline in demand of this industry, (Bartik et al., 2020). The industry is expecting a substantial change in the operational procedure amid COVID-19 guidelines. The hospitality business has to adopt the changes effectively for ensuring the safety and security of the guests. This can help the industry players to gain the acceptance and patronize of the prospective hotel customers, (Gössling et al., 2020). At the preface of drastic change witnesses by the industry amid COVID-19, the scholars being the stakeholders of this industry need to come up with the solution for the recovery of this industry. The scholars need to study different underlying problems associated with the customer's change in sentiments amid pandemic and during the recovery phase which will help in finding out the prospective ways to make the guests return. Understanding the fact that the hospitality industry is undergoing a very rough phase and the industry players are struggling to manage the operating cost to remain in the business the demand has to be stimulated. In this critical scenario, the researchers have to play a key role in figuring out the ways to regain the customer by understanding the behavioral changes and by assessment of shifts in their needs. From the preliminary findings it is found that the customers expect proper cleaning and sanitization of the surrounding, implementation of social distancing, abiding by the community guidelines, the mandatory wearing of the mask and gloves by the service staff, and effective employee training for the implementation of health and safety protocols if they visit hotels for a reason, (Gursoy & Chi, 2020). However, numbers of researchers need to conduct behavioral and causal research on different focus

groups to understand the effectiveness of these strategies and operational changes before investing heavily in the transformation of hotel attributes at the time of depression and business setback. The findings also indicate the willingness of customers to pay more for a safe and healthy stay abiding with the WHO governed guidelines and precautionary measures, (Gursoy & Chi, 2020). The guidelines suggested by WHO are focused on decreasing personal contact and keeping sufficient physical distance, (World Health Organization, 2020b), understanding the prospective chance of contamination and transmission of disease with the personal touch or physical imminence, (H. Chen et al., 2020).

The potential of technological advantages generated out of the implementation of artificial intelligence (AI) and robotics in hotel operation are considered closely by the industry players (Reis et al., 2020). The impactful implementation of AI and robotics in hotel operations has been studied by several researchers (Tussyadiah, 2020). The implementation of these two technologies can help in the protection of the guests and the service personnel. Some of the early adopters of these technologies are situated in some of the technologically advanced countries like Japan, (Reis et al., 2020). Japan has produced the fully automatic hotel run by robots named Henn-na, (Fusté-Forné & Jamal, 2021; Tung & Law, 2017). The other technologically advanced countries like Taiwan have been intensifying their hotel operations with the help of robotics, (Kuo et al., 2017).

The attributes of any accommodation unit are important for forming an image in the minds of the customer even before they come to stay, (Zeithaml et al., 1993). Amid pandemic, the shift in need and the change in priority of the hotel attributes from the prospective customer's point of view can't be avoided and hence need to be reevaluated.

Some of the previous researchers have put the "value for money" as an attribute in very high regard. The value for money is nothing but the derived utility realized by the usage of product or consumption of services in return for both the short and long-term costs, (Cengiz & Kirkbir, 2007). It is also considered as the predictor of choice for the tourist, (Eid & El-Gohary, 2015). The value for money is a key indicator of hotel selection as the first question is asked by the guest to the hotel reservation is regarding price and the inclusions, (Lockyer, 2002). Price is an important indicator while making hotel booking decisions, (Asaputra, 2019) and it is very normal if the guest chooses the best value for money option, (Pappas, 2017). The accommodation units which set the lower price for the lodging service they provide get more acceptance (Z. Mao & Lyu, 2017). The customer always compares with the reference price before making any purchase. The hotel customer perceives the value for money he gets out of any hotel, based on the comparison with the reference price of other competitors, this ultimately gives satisfaction to

the guest (P. Jiang & Rosenbloom, 2005). The customer always looks for the hotel option with a low price while booking a hotel (Afroditi et al., 2020).

Staff attributes is a key attribute for taking hotel booking decision. The friendliness and responsiveness are the key attributes of staff while interacting with the guest and it is considered as the basic component by the guest, (Sohrabi et al., 2012). The guests look the politeness, friendliness, communication, and comprehending staff as important for any hotel, (Hiransomboon, 2012). The job role of most of the service personnel of a hotel is to interact with the guests, (Teng et al., 2020).

One of the most significant factors of a hotel is cleaning and sanitization which is also the most sought after accommodation need amid the COVID-19 scenario, (World Health Organization, 2020a) as the disease is spread due to contamination, (WHO, 2020; H. Chen et al., 2020). The level of satisfaction of the guest also reciprocated with the level of hygiene an accommodation unit maintains, (OA, 2017). It is the most priority factor among the others when the guest takes accommodation rental decision, (Wilkins et al., 2007). There should be utmost commitment toward hygiene, safety protocol, and housekeeping standards during the pandemic occurred by the flu generated out of SARS variant viruses (Hung & Yuen, 2018). Understanding, the fact that cleaning and sanitization can control the spread of the disease, the hotel consumer demands the hygiene the most which can be adopted by hoteliers as an instrument for selling accommodation both during and post-pandemic time. The customers are ready to pay the extra premium for the extensive cleaning and disinfection, (Zemke Dina Marie V et al., 2015).

The accommodation units with proximity to public transport, restaurant, and city center are preferred options for hotel guests, (Tussyadiah, 2020). The guests also prefer to stay near the tourist attraction having convenience stores and food courts nearby, (Tussyadiah, 2020) as it helps them for purchasing any necessary items without spending on transportation, (Rhee & Yang, 2015). In addition, the selection of a good location saves a lot of time for the guest which he/she can utilize for leisure purposes. This is hence the most crucial attribute besides price, (Martin et al., 2013). A good location also gives a good return on investment to the guests, (Blešić et al., 2014). Location gained the first position among the other factors that influence hotel booking decisions, (Rhee & Yang, 2015). Many researchers have concluded that Location is one of the top priorities while guests select their hotels.

Understanding the guest's preferred amenities in a hotel room is a very complex task, (Pan et al., 2013). The in-room comfort of the hotel is one of the desired attributes for any guest to select any hotel. The desire for room amenities

for different guests is different and hence the type of comfort the guest wants are critical to understanding. Some amenities are widely and most desirable for many types of guests which include large space inside the room, quieter room, complimentary amenities, etc. Ekinçi et al. (2003) identified the major attributes in which the room comfort and amenities were found as important attributes among the others. Business travelers are more concerned about room comfort (Blešić et al., 2014). In the same way, solo travelers are more concerned about sleep quality which is directly linked to room comfort (Yang et al., 2018). Room amenities and comfort are some of the desired attributes that guests want while making hotel booking decisions, (Yang et al., 2018).

The facilities and service need of guests are ubiquitous and varies widely based on the customer segment, (Dwivedi et al., 2021). The facilities and services of a hotel such as rooms, service, desk, lobby, restaurant, and food play a pivotal role for the business travelers as they normally stay in the room and meet their guests at the hotel lobby, (Blešić et al., 2014). They also prioritize the functional criteria which include swift and mechanized check-in/check-out procedures and wake-up call service (Shin Rohani et al., 2017). Dubé & Renaghan (2000) found that the business travelers prefer the smoothness in hotel functionality whereas the tourists on leisure trips prefer comfort. To save time the business travelers prefer to eat at the restaurant of same hotel where they stay, (Blešić et al., 2014). However, the couples on a trip prefer the bar, floor, walk, coffee, and bed for amusement and privacy, (Rhee & Yang, 2015). Food service is an important service in a hotel which should be served in consideration with the religion of your expected customers. Muslim customer expects Halal food whereas the Non-Muslims expect the non-Halal food, (Samori & Sabtu, 2014). Some people don't eat non-veg food due to religious restrictions or willingness, (Henderson, 2016). The needs & preferences of different customer segments of the hotel are complex and diverse. The same also reciprocates during the decision-making process, (Sohrabi et al., 2012). Though the preferences are different, the amenities and services of a hotel influence the hotel booking decision of business and leisure travelers, (Shin Rohani et al., 2017). During the pandemic, free space is preferred while planning for the facilities and services, (Honey-Roses et al., 2020). The change in expectation of the facilities and services need to be assessed and efforts need to be made for their fulfillment, (Mack et al., 2000). The actual identification and fulfillment of the facilities & service needs will hence help attract customers, (Hussain & Khanna, 2019).

Security is one of the top priorities for our daily life which is closely associated with tourism, (Delafontaine, 2017). The events which impact tourism badly and the income generated there to are natural hazards, economic crisis, terrorist attacks, and the last but not the least among those is pandemic due to novel

virus, (Rodríguez-Antón & Alonso-Almeida, 2020). The world has witnessed recently, the brutality and the after-effects of COVID-19 and its impact on tourism. The safety and security concerns of the guests have to be prioritized for the sustenance of tourism. The safety concerns of the hotel include protecting the guests from the death and injuries generated out of accidents occurring inside and outside the hotel premises (M. H. Chen et al., 2007). The security concerns include various components which include protection from theft and burglary, terrorism, legal or political effects, privacy concerns, consumer protection, disaster protection, personal data protection, environmental security, health, and sanitization, getting authentic information, quality assurance, etc., (Kővári & Zimányi, 2011). The hotels have been putting all their efforts to eliminate the safety and security concerns of the guests, which includes but is not limited to the installation of electronic lockers, CCTV, smoke detectors, fire extinguishers, and sprinklers, etc., (Nagaj & Žuromskaitė, 2020). During the time of the COVID-19 pandemic, the industry players have been mandated to go one step further for the prevention of transmission. The protective measures include the adoption of social distancing and usage of masks, gloves, and sanitizers among the others, (WHO, 2020; World Health Organization, 2020b; World Health Organization, 2020a; UNWTO, 2020). The security measures have a greater role than that of price from the traveler's perspective, (Garg, 2009). There are two types of security measures namely “hard & “soft”. The hard measures are not relevant for the hotel as they affect the holiday quality, (Žuromskaitė & Nagaj, 2018). Soft security measures using modern technology have a greater role in terms of providing soft security measures and protecting the tourists, (Žuromskaitė & Nagaj, 2018). Information security is equally important for hotel guests who want the hotels to keep their information secure without any data leak, (Nagaj & Žuromskaitė, 2020).

### **Purpose of the Study:**

The COVID-19 pandemic has brought about changes in the guest mentality which ultimately influences the guest dealing procedure, (Rahimizhian & Irani, 2020). To build the trust regarding the secured hospitality services hotels must use contactless services which include, but are not limited to usage of scannable QR codes during guest check-in, following other contactless checks in procedures, using mobile room keys, online payment and ordering system, etc., (Rahimizhian & Irani, 2020). In the same line Service Robots can be a game-changer in delivering contactless services. Service Robots are very much compatible with mobile phones and are socially interactive, unlike Industrial Robots, (Fusté-Forné & Jamal, 2021). The Service Robots uses AI (Artificial Intelligence) technology to think, behave and interact like human beings, (Fusté-Forné & Jamal, 2021). The usage of these modern technologies can enhance the quantum of service efficiency as far as

contactless service delivery is concerned which ultimately can win the trust of the guest in post-pandemic time, (Rahimizhian & Irani, 2020).

## **Research Methodology-**

### **Instrument Development:**

The descriptive research has been implemented in the current study and the primary data for the research have been collected with the help of survey method using questionnaire tool. The attributes which were enlisted from the literature reviews were taken into consideration while developing the questionnaire. The statements related to marketing, promotion, and customer reviews which were not related to hotel attributes but influence hotel booking decisions have been excluded in the questionnaire, due to their irrelevance with the topic. The dimensions of hotel attributes that are preferred in the post-covid pandemic time were emphasized during instrument building.

The initial questionnaire was formulated with 56 items at the initial stage regarding hotel attributes. Later the questionnaire was validated with the help of an expert's review. The full-length discussion was carried out with 5 academic scholars, 5 travel agents, and 4 hotel owners of some premium hotels, 3 hotel owners of medium-range hotels, and 4 hotel owners of budget class properties from the Delhi-NCR region. The academic scholars with whom the interview was conducted were all from the reputed universities of Punjab, Himachal & Delhi-NCR regions of Northern India and were carrying out their research on hotel bookings.

The initial questionnaire was composed of 7 elements each for "value for money", "staff", "cleaning & sanitization", "location", "in-room amenities", "contactless services" & "security", and 8 elements for "facilities & services".

Each question was valued from a score of 1 to 5 (1 = not so relevant, 2 = somewhat relevant, 3= relevant, 4= quite relevant, and 5= very much relevant) as per the importance of each item. The statements with an I-CVI score of more than .78 were considered for the final instrument which carried 32 items. The content validity index of the scale was evaluated by taking the average I-CVI of each item into account which obtained .87 as the S-CVI index, which confirms the content validity. As per the discussion with the experts, some statements were modified and the final instrument was formed.

Based on content validity the final instrument was formed by taking 3 elements each for "value for money", "staff", "cleaning & sanitization", "location" 4 elements each for "in-room amenities", "security" & "contactless services" and 8 elements for "facilities & services". The modified questionnaire was formulated with 32 statements and was administered for the data collection to perform the pilot study.

**Pilot Testing:**

Initially, the instrument was distributed to 70 frequent travelers from the hotels of the Delhi-NCR region. The pilot study was conducted physically during the month of Oct-Nov 2020. The travelers are of similar characteristics with the targeted population to check the convenience in reading, understanding, and determining the average time taking for the completion of the questionnaire. The result showed that the hotel guests did not face any challenges in reading, understanding, and filling out the questionnaire within a stipulated time.

**Sample and Procedure:**

The population of the hotel guests is very large. Determining the sample size of such a big population was decided based on the confidence level of 95%, with a confidence interval of  $\pm 5\%$ . A sample size of such a large sample has been calculated by different researchers to be 384 (Krejcie & Morgan, 1970) to 385 (Adam, 2020). In this paper target was set to be quite higher, i.e. 740.

The sample was selected through the judgmental technique to ensure uniform populations from all categories of hotels. The data were collected from the tourists who traveled the North Indian region after the first pandemic lockdown subsided. The collection of the data was made between mid-Nov to mid-Feb 2021. The hotels and travel agents of Delhi, Chandigarh, Manali & Dehradun were approached for assisting in the collection of data. New Delhi, being the capital of India experiences a lot of business-class travelers, and Chandigarh being very close to Punjab & Himachal Pradesh attracts both business class and recreational tourists. The NCR region including Noida and Gurugram is home to many corporates as well. At the same time, Manali and Dehradun are two prominent places situated in North India in the states of Himachal Pradesh and Uttarakhand and attract both leisure and pilgrimage tourists substantially. The questionnaire was made in English and was dispensed to 28 hotel owners and 8 travel agents who in turn filled up the questionnaire through their clients. Out of the mentioned 56 hotels 18 were budget category hotels 20 were mid-range hotels and the remaining 18 were premium class hotels. Though the qualities of attributes are different for different categories of hotels, the standardization criteria, i.e. the attribute parameters are constant. Hence to approach the guests of different hotel categories is justified while studying the important hotel booking attributes from the point of view of the guest. Online tools were used for data collection from the respondents. The questionnaire was formed in English online mode with the help of Google Form. The responses and the data storage were automated by the integration of Google form with Google spreadsheet. Thus the collected data were stored in a single excel sheet automatically. The questionnaire was distributed to 948 respondents by the hotel owners and travel agents out of whom 740 respondents turned up for giving their responses. The hotel owners and the travel agents, in turn, circulated the

questionnaire to their clients with the help of online tools like e-mail, Whatsapp, or social media like Facebook and Instagram as per their convenience. The entire questionnaire was made compulsory to avoid the chances of missing data.

There were three major sections in the final questionnaire. The first section was having eight questions and was intended to collect the demographic data of the respondents, the second part was carrying 6 questions and the questions were intended to collect the data regarding the travel pattern of the respondents. The third section was having 32 questions on the hotel attributes which were finalized upon the validation check. The importance of the attributes was asked from the respondents and the respondents were expected to choose the preferred option based on their personal choice. The answers were expected to collect on a 5 point Likert scale for the third section, where 1 denotes the lowest level of agreement and 5 denotes the higher level of agreement with the statements. After the collection of data, the factors were extracted and validated using EFA & CFA. The data analysis tool SPSS Statistics-23 and AMOS-20 was used to perform the same. The interpretation of the data analysis has been mentioned in the below section.

The attributes have been finalized to include in the questionnaire based on the literature reviews. Some research studies, (Cezar & Ögüt, 2016; Cengiz & Kirkbir, 2007; Rhee & Yang, 2015; Sohrabi et al., 2012) suggested the importance of value for money that plays a key role in influencing hotel booking decisions. The 'value for money is interpreted as 'Price' by some researchers, (Gu & Ryan, 2008; Mack et al., 2000; Rhee & Yang, 2015; Z. Mao & Lyu, 2017). Staffs are responsible for delivering the service to the guest hence is a key determinant of hotel booking decisions, (Sohrabi et al., 2012). The guests prefer the politeness, friendliness, communication, and comprehensiveness of the staff, (Hiransomboon, 2012). 'Cleaning and Sanitization' standard is an underlying attribute for hotel booking decisions in the post-pandemic scenario, (World Health Organization, 2020b; Hung & Yuen, 2018). The standard of sanitization also ensures the level of hygiene, (Gu & Ryan, 2008). The standard of 'Cleaning & Sanitization' determines the hotel booking decision of the travelers, (Wilkins et al., 2007). The location with imminence to the city center or having transport and amusement facilities nearby are considered by travelers while taking hotel booking decisions, (Yang et al., 2018; Cezar & Ögüt, 2016; Garg, 2009; Rhee & Yang, 2015; Sohrabi et al., 2012; Samori & Sabtu, 2014; Tung & Law, 2017). The room comfort is also a priority as the guest stays maximum time at own room, (Sohrabi et al., 2012; Lehto et al., 2015; Afroditi et al., 2020). The facilities and services are one of the key attributes that guest desires (Shin Rohani et al., 2017; Žuromskaitė & Nagaj, 2018; Samori & Sabtu, 2014; Z. Mao & Lyu, 2017; Sohrabi et al., 2012; Blešić et al., 2014; Hussain & Khanna, 2019; Rahimizhian & Irani, 2020; William et al., 2016). Security is one of the desired priorities for tourists, (Gu & Ryan, 2008; Rhee & Yang, 2015; Kim et al., 2005; Delafontaine, 2017; Lehto et al., 2015; Lau, 2020). The contactless

services are mostly emphasized by the prospective guests, post-pandemic, (Rahimzhanian & Irani, 2020; Fusté-Forné & Jamal, 2021; Lau, 2020; Alan et al., 2020; Gursoy & Chi, 2020; Y. Jiang & Wen, 2020).

### **The important hotel attributes selection criteria:**

The important hotel attributes were selected from 32 statements with the help of Factor Analysis. The statements which are otherwise considered as items of hotel booking decisions were used as the input variables for Factor Analysis and the major factors were extracted thereon. The Exploratory Factor Analysis (EFA) was used for the extraction of factors followed by Confirmatory Factor Analysis (CFA). The reliability and validity check was performed on the measurement model which is otherwise called as CFA model.

### **Fitness Test:**

It is very much essential to check the sampling adequacy and the strength of the relationship between the variables before performing Factor Analysis, (Pallant, 2011). At the outset, the fitness test was performed for EFA. The KMO test and Bartlett's test confirmed the data as fit for the Exploratory Factor Analysis KMO test confirms the sampling adequacy of the data, (Kaiser, 1974; Kaiser, 1970), and the strength of the variables are confirmed with the help of Bartlett's test of sphericity (Bartlett, 1954).

### **Factor Analysis:**

Exploratory Factor Analysis was performed to extract the important factors of hotel attributes that were important for the customers to make a hotel booking decision. The Exploratory Factor Analysis (EFA) extracted the important factors from the list of 32 variables. A sample size of 740 was used for the same. After the EFA analysis, the CFA (Confirmatory Factor Analysis) was performed. CFA (Confirmatory Factor Analysis) confirms the factors extracted by EFA (Exploratory Factor Analysis).

### **Reliability and Validity:**

The application of EFA produced the factors of hotel booking decision followed by which a confirmatory model was prepared to identify the correlation between the latent variables. The reliability test was performed on the model using composite reliability and Cronbach Alpha. The validity test was performed using the construct validity test. The construct validity of a scale comprises both convergent and discriminant validity. The convergent validity shows how effectively the measured

variables are correlated with the latent constructs, (Wang et al., 2015) when discriminant validity shows how the different latent constructs are uncorrelated with each other, (Wang et al., 2015). The values of convergent and discriminant validity of a scale were found satisfactory.

## **Results & Discussion-**

In this section, the results of the primary data collection have been reported. In this section, the important findings from the research have been put forth which includes the reports of descriptive statistics and exploratory and confirmatory factor analysis with performing the validity and reliability of the scale.

### **Descriptive Statistics:**

The questionnaires were distributed to 945 travelers of which 740 respondents completed the questionnaire with a 73% of response rate. The demographic data of the respondents have been displayed in Table-1.

### **Individual characteristics:**

As reported in Table-1, 466 respondents were male which is 63% of the total respondents and 274 were female which 37% of the total respondents are. Most of the respondents were in the age group of 26 to 35 (59.5%) followed by the age group of 36 to 45 which is 22.7%, from 46 to 55 (10%), below 25 (22.7%), and above 55 (1.6%). Out of the total respondents, 164 respondents (20.5%) were unmarried and 636 (79.5%) were married. Out of the total respondents, the majority had chosen P.G. (51.7%) as their higher qualification followed by UG (21.9%), M.Phil. /Ph.D. (19.8%), Up to 12th (3.4%) and other qualifications (3.2%). This indicates that the maximum respondents were highly qualified and have completed their post-graduation or higher degree. While asking regarding occupation, the majority of the respondents had chosen employee (48.9%) followed by Businesspersons (35.9%), students (12.4%), and Unemployed (2.7%). This indicates that the maximum number of respondents were working who stayed in hotels and responded to the questionnaire. While asking about the income level of respondents 31.9% rated the income group above 80,000.00, 26.5% within the range 20,001 to 40,000, 25.7% within the range 60,001 to 80,000, 12.4% within the range 40,001 to 60,000 and 3.4% respondents were below 20,000. This indicates that maximum respondents use to stay in mid-range to high-value hotels.

**Table-1: Demographic Data**

<b>Variables</b>	<b>Frequency</b>	<b>Percent</b>	<b>Cumulative Percent</b>
<b>Gender of the Respondents</b>			
<b>Male</b>	466	63	63
<b>Female</b>	274	37	100.0
<b>Age of the Respondents</b>			
<b>Below 25</b>	46	6.2	6.2
<b>From 26 to 35</b>	440	59.5	65.7
<b>From 36 to 45</b>	168	22.7	88.4
<b>From 46 to 55</b>	74	10	98.4
<b>Above 55</b>	12	1.6	100.0
<b>Marital Status of the Respondents</b>			
<b>Unmarried</b>	164	20.5	20.5
<b>Married</b>	636	79.5	100.0
<b>Educational Qualification</b>			
<b>Up to 12th</b>	25	3.4	3.4
<b>UG</b>	162	21.9	25.3
<b>PG</b>	383	51.7	77.0
<b>M.Phil./Ph.D.</b>	146	19.8	96.8
<b>Other</b>	24	3.2	100.0
<b>Occupation</b>			
<b>Student</b>	92	12.4	12.4
<b>Employee</b>	362	48.9	61.4
<b>Businessperson</b>	266	35.9	97.3
<b>Unemployed</b>	20	2.7	100.0
<b>Monthly Income</b>			
<b>Up to Rs.20,000</b>	26	3.5	3.5
<b>Rs.20,001 to Rs. 40,000</b>	196	26.5	30.0
<b>Rs.40,001 to Rs. 60,000</b>	92	12.4	42.4
<b>Rs.60,001 to Rs. 80,000</b>	190	25.7	68.1
<b>Above 80,000</b>	236	31.9	100.0

(Source: Authors' Calculations)

**Table-2: Major Purpose of Travel**

<b>PURPOSE</b>	<b>NO</b>	<b>PERCENTAGE</b>
Study	55	7.4
Leisure	448	60.5
Business	375	50.7
Medical	28	3.8
Pilgrimage	325	44
Others	15	2.0

(Source: Authors' Calculations)

**Table-3: Travel Companions**

<b>PURPOSE</b>	<b>NO</b>	<b>PERCENTAGE</b>
Friends	212	28.6
Family & Relatives	338	45.7
Coworker	202	27.3
No One	228	30.8
Others	10	1.4

(Source: Authors' Calculations)

**Table-4: Type of Accommodation Booking by Travellers**

<b>PURPOSE</b>	<b>NO</b>	<b>PERCENTAGE</b>
Bed & Breakfast (B&B)	168	22.7
Budget	256	34.6
Mid Segment	372	50.27
High Tariff	344	46.5

(Source: Authors' Calculations)

**Trip-related factors:**

If we check table-2, we can get, out of total respondents majority had chosen Leisure (60.5%) as their one of the prime purposes of the hotel stay followed by Business (50.7%), Pilgrimage (44%), study (7.4%), medical (3.8%) and others (2%). The respondents were allowed to choose more than 1 option as an answer to this question. While asking about the travel companions (displayed on table-3), out of total respondents 45.7% had chosen that they travel with family and relatives which is followed by no one (30.8%), friends (28.6%), co-workers (27.3%), and others (1.4%). The respondents were allowed to choose more than 1 option as an answer to this question. While asking regarding the type of accommodation, as per the budget (displayed on table-3), 50.27% had chosen mid-segment as their type of stay according to the budget which is followed by a high tariff (46.5%), budget (34.6%), and Bed & Breakfast (22.7 %). The respondents were allowed to choose more than 1 option as an answer to this question as well.

**Result of Exploratory Factor Analysis:**

There were 32 statements in the questionnaire based on which the responses were collected from 740 respondents. After applying factor analysis on the collected data, few statements could not rise to the qualifying standard for which those were separated from the original data to apply further Factor Analysis. The statements were qualified based on the criteria communalities score greater than .5, (Samuels, 2016). Out of 32 statements, 5 statements were deleted due to a communality score less than .5 and having a very low factor loading score, (Samuels, 2016). Hence in total 5 statements were barred from the final list of statements to conduct EFA. Finally, 27 statements were left for conducting factor analysis. The adequacy test was performed again on the remaining statements and the results have been presented as below.

**Table-5: Kaiser Meyer Olkin (KMO) & Bartlett test of Sphericity**

<b>KMO and Bartlett's Test</b>		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.777
Bartlett's Test of Sphericity	Approx. Chi-Square	9724.240
	df	351
	Sig.	0

(Source: Authors' Calculations)

The KMO and Bartlett's test results were found from the data analysis with the help of SPSS (Ref: Table-5). As per the index value suggested by Kaiser Mayer, the bare minimum value of KMO should be 0.5 to qualify the data for conducting research. In the current study, the KMO value was found as 0.777 which indicates the sample is great for conducting EFA as per the KMO index. Similarly, the multivariate normality of the data set is measured with the help of the Bartlett Test. In the current study, the significance value of Bartlett's test of sphericity was found as .00 which is significant and adequate for further study as the capping of the significance level is 0.05 for the data to be adequate for further study, (Pallant, 2011).

Factor analysis is conducted to explain the relationship between the variables with the data reduction technique. The factors are formed as the result of correlation among the variables of similar nature, (Ul Hadia et al., 2016). The Exploratory Factor Analysis was conducted to extract the major factors of the hotel booking decision from 27 variables. The techniques of Factor Analysis are as below:

- Kaiser's criterion (M. H. Chen et al., 2007)
- Scree test (Ledesma et al., 2015)
- Parallel Analysis (Horn, John, 1965)

The most accepted technique by the researchers is Kaiser's criterion which follows the principle of Eigen Value. For the components with Eigen Value, more than one is considered during Principal Component Analysis (PCA). To achieve the objective of current research, Principal Component Analysis (PCA) has been used.

During the application of Principal Component Analysis (PCA) the varimax rotation method is used. The varimax rotation method is used to solve the issue of cross-loading. Cross loading is a major issue by which the variables are loaded with more than one factor. This study applies Varimax Rotation with Kaiser Normalization Method. The variable with a Loading value of more than 0.5 qualifies for further analysis. The loading value of variables of Hotel attributes that influence Hotel Booking decisions has been explained below. The table reports all the loading values of variables of hotel attributes that influence hotel booking decisions.

**Table-6: Total Variance Explained after Varimax Rotation**

Component	Rotation Sums of Squared Loadings		
	Eigen Values	% of Variance	Cumulative %
1	3.765	13.945	13.945
2	2.430	8.998	22.944
3	2.370	8.779	31.722
4	2.360	8.740	40.462
5	2.339	8.663	49.126
6	2.241	8.300	57.426
7	2.225	8.240	65.665
8	2.051	7.595	73.260

(Source: Authors' Calculations)

From the varimax rotation, the presence of strong loadings between the variables of hotel attributes and the factors was obtained. The poorly loading items and cross-loading items were eliminated as well with the help of varimax rotation. The result of factor analysis was explained with the help of Principal Component Analysis and Varimax Rotation method and the output table has been reported as above. After Varimax Rotation, eight components were extracted based on the loading value of the items. The items which were highly correlated formed the component. The components with an Eigenvalue of more than 1 have been considered as factors and the statements with higher factor loading value with the factors have been considered for further study. Eight components were found with Eigen Value more than one and hence are considered as factors. The Eigenvalues of the components have been found as 3.765, 2.430, 2.370, 2.360, 2.339, 2.241, 2.225, and 2.051 respectively (Ref: Table- 6). The extracted components cumulatively explained 73.260% of the total variance of hotel booking decisions.

**Table-7: Naming of the factors affecting Hotel Booking Decision**

Factor	Factor Name	loading	Statement of variables
1	Hotel Facility & Services (13.945 %)	.822	I will consider hotels that offer early check-in/late checkout options.
		.772	The hotel is having different facilities for making payment which includes on arrival or online.
		.771	Hotel having facilities for easy cancellation and refund is important.
		.770	The hotel facilitates early check-in or late check-out options for normal bookings.
		.746	The hotel facilitates a flexible cancellation policy.
		.702	Different facilities and services cater to the different needs of the guest.
2	Value for Money (8.998%)	.908	Guests choose the hotel as per the value for money the hotel offers.
		.901	Hotel-stay should be value for the money normally I pay.
		.849	Dirty damaged noisy old furniture is simply not value for money.
3	Location (8.779%)	.916	The location of the hotel is near to a major attraction.
		.895	The hotel location is easily accessible.
		.798	The location of the hotel is close to the airport/railway station.
4	Safety & Security (8.740)	.882	The COVID-19 specific safety & security concerns of the hotels are taken care of properly during a pandemic.
		.862	The safety & security of the hotels is maintained with CCTV surveillance.
		.853	The hotel takes precautionary measures for maintaining the safety and security of different outlets.
5	Automation &	.880	The hotel provides facilities for express check-in and checks out using an automation & intelligence system

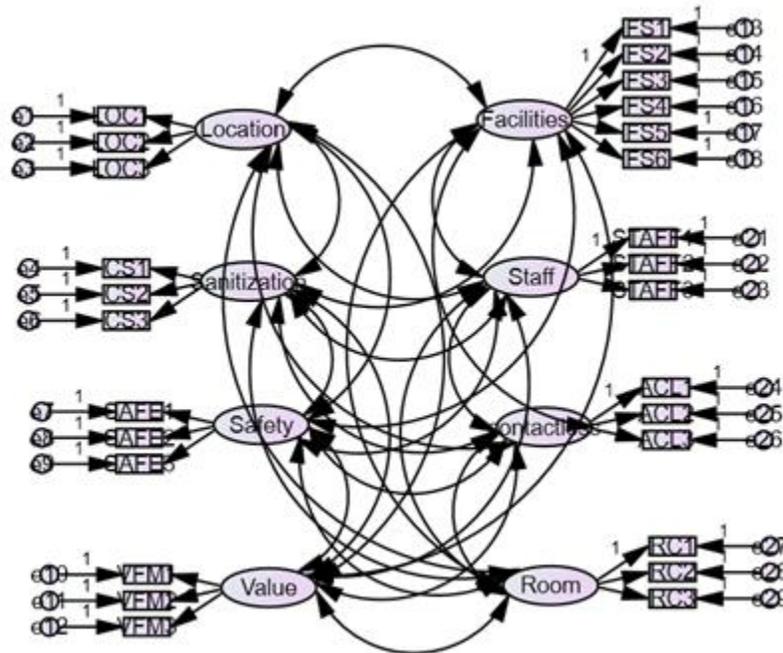
	Contactless Service (8.663%)	.867	The automation and contactless service systems attract me for booking post-pandemic
		.825	The hotel adopts technologies for contactless service delivery system
6	Staff (8.300%)	.865	Staffs of the hotel are friendly, sympathetic, and good in interpersonal skills & show a sincere interest in solving guest problems.
		.855	The staff of the hotel wear gloves, masks, and take precautionary measures.
		.831	The staff of the hotel understands and facilitate the special service requirements of the guest.
7	Cleaning & Sanitization (8.240%)	.866	The design & decoration of the hotel is clean & sanitized.
		.849	The hotel rooms, private areas & public areas are clean & sanitized.
		.835	The guests can see the cleaning & sanitization standard of the hotel through a 360 ° video view.
8	In-Room Comfort (7.595%)	.848	I prefer the comforts of the room.
		.799	A hot/Coldwater facility is important in a hotel room.
		.769	I like the free space in the room.

(Source: Authors' Calculations)

As a result of the varimax rotation method, the factors have been extracted and are named as above. The naming of the factors was based on the representation of the variables towards the factors extracted based on the factor loading (Ref: Table-7). The factors have been named as Hotel Facility & Services, Value for Money, Location, Safety & Security, Automation & Contactless Services, Staff, Cleaning & Sanitization & In-Room Comfort. The factor "Hotel Facility & Services" has been loaded with 6 items that are related to Hotel Facility & Services and explained 13.945% of the total variance. In the same way Value for Money, Location, Safety & Security, Automation & Contactless Services, Staff, Cleaning & Sanitization & In-Room Comfort have been loaded with 3 items each and explained 8.998%, 8.779%, 8.740%, 8.663%, 8.300%, 8.240% and 7.595% of the

total variance respectively. Cumulatively the components explained 73.260% of the total variance.

**Fig-1: Measurement Model**



(Source: Authors' Model)

The CFA was performed to reassess and reconfirm the factors obtained with the help of EFA. The reliability & validity of the extracted construct needs to be established with CFA model validation which ratifies and complements the performance of EFA. The latent variables in the CFA model were represented by the circle. The observed variables are represented by squares. The influence between the measured variables and their latent construct was represented by an arrow. As in the CFA model diagram (Ref: Figure-1), the arrows are directed towards the latent constructs from the measured variables it represents the latent constructs as the representation of measured variables which makes it a reflective scale. The double-headed arrows between the eight constructs represent covariance between the two latent constructs. The CMIN score or chi-square ( $\chi^2$ ) value was found as 743.122 for the default model with  $p = .000$  is statistically significant (Ref: Table-8). The CMIN/DF value was found as 2.511 which is less than 3 and hence is satisfactory, (Maat et al., 2015). The chi-square value seems to be sensitive to the sample size, hence further adjustment indices were thought to use for showing

model fitness. The goodness of fit scores was measured in terms of GFI. The GFI score was found as .925 which is above .9 and hence is satisfactory, (Miles & Shevlin, 1998). The badness of the fit index was measured in terms of RMSEA. In the current study RMSEA index was found as 0.04 which is less than 0.08 and is satisfactory, (Steiger, 1990). The Incremental fit index was measured in terms of TLI which is more than .9 and is very close to .95 which is satisfying the ideal measurement, (Byrne, 2020). Finally, the parsimonious fit index was measured in terms of PNFI which is the higher the better, (Mishra, 2016). The PNFI value was found as .780 which is satisfactory as well.

**Table-8: Fit indices of Measurement Model**

Fit index	CMIN/DF	GFI	PNFI	TLI	RMSEA
Acceptable value	<5	>0.8	Higher is Better	>0.9	<0.08
Model fit score	2.511	0.929	0.780	0.944	0.045

(Source: Authors' Calculations)

The composite reliability is performed while applying CFA analysis. The composite reliability (CR) is used to measure internal consistency in scale items, similar to Cronbach's alpha (Ab Hamid et al., 2017). The acceptable value of CR should be greater than or equal to .07. Construct validity was measured for the scale. Construct validity includes the performance of both Convergent and Discriminant Validity. The Convergent validity shows how better the measurement model measures the theoretical concept or in the case of EFA application it measures how effectively it supports the factors extracted with EFA. In other words, it shows the itemized correlation of the construct. However Discriminant validity explains how effectively the constructs are distinct or covary with each other, (Carmines & Zeller, 1979). The discriminant validity is measured with the average variance extracted (AVE). The AVE is the measurement of total true score variance relative to the total score variance (Brunner, 2005).

As a “rule of thumb”, the correlation between the items should be greater than .50 which supports the condition of convergent validity, (Sarstedt et al., 2020). In other words, the factor loading between the items should be greater than .50 under convergent validity (Kline, 2015). For the measurement of the discriminant validity, AVE is used. AVE should be greater than .5 ( $AVE > .5$ ) and composite reliability should be more than 0.7 (Anderson et al., 2010). Average variant explained (AVE) should be more than maximum shared variance (MSV) under discriminant validity. In this study, all the values were found satisfactory as per the criteria. The CR & AVE values of each construct are displayed in the table. The

square root of AVE for the constructs is displayed diagonally. The CR values are greater than .7 and the AVE values are greater than .5. The AVE values of the constructs are more than their corresponding MSV values. The validity statistics of the variables have been represented in **Table-9**.

**Table 9: Validity Statistics of variables**

**Table 9: Convergent Validity Statistics of variables**

	<b>CR</b>	<b>AVE</b>	<b>MSV</b>	<b>MaxR (H)</b>
<b>Value</b>	0.886	0.722	0.067	0.901
<b>Location</b>	0.876	0.707	0.068	0.917
<b>Facilities</b>	0.873	0.535	0.159	0.886
<b>Room</b>	0.770	0.532	0.202	0.808
<b>Contactless</b>	0.860	0.676	0.159	0.900
<b>Staff</b>	0.818	0.600	0.010	0.823
<b>Safety</b>	0.861	0.674	0.202	0.863
<b>Sanitization</b>	0.823	0.608	0.055	0.835

Note: Validity master was used to analyzing the validity which was fully established

**Table 10: Discriminant Validity Statistics of variables**

	<b>V</b>	<b>L</b>	<b>F</b>	<b>R</b>	<b>C</b>	<b>St.</b>	<b>Sf.</b>	<b>S</b>
<b>Value</b>	<b>.850</b>							
<b>Location</b>	.259	<b>.841</b>						
<b>Facilities</b>	.247	.260	<b>.732</b>					
<b>Room</b>	-.008	-.050	-.044	<b>.729</b>				
<b>Contactless</b>	.041	.119	.399	.004	<b>.822</b>			
<b>Staff</b>	-.020	-.019	.099	.075	.015	<b>.774</b>		
<b>Safety</b>	-.048	-.102	-.032	.449	.034	.069	<b>.821</b>	
<b>Sanitization</b>	-.014	.058	.235	-.043	.143	-.096	-.058	<b>.780</b>

Note: 1. Validity master was used to analyzing the validity which was fully established

2. V=Value, L=Location, F= Facilities, R= Room, C= Contactless, St.= Staff, Sf.=Safety, S= Sanitization

## Conclusion-

The research was carried out to identify the important hotel attributes, post COVID-19 pandemic, from the traveler's point of view. To achieve the objective, the literature reviews on hotel attributes influencing hotel booking decisions have been conducted. Most of the researches were carried out, way before the pandemic. However, Jiang & Wen (2020), emphasized the introduction of new technologies and attributes in hotel industries, post COVID-19 pandemic, which includes the

introduction of contactless service with AI & Robotics, Hygiene, and Healthcare. Based on the literature reviews the possible ideal hotel attributes were enlisted and were finalized based upon the discussion with industry experts and academicians. Based on the finalized attributes, upon expert consultation and validation check, the final questionnaire was framed with 27 variables and the survey was conducted from 740 respondents after which the data were analyzed with the help of the SPSS tool. To identify the ideal hotel booking attributes exploratory factor analysis was applied which gave rise to 8 important factors that were loaded with 27 items related to hotel attributes. It resulted in the elimination of 5 items due to poor factor loading. The final extracted factors were found as Hotel Facility & Services, Value for Money, Location, Safety & Security, Automation & Contactless Services, Staff, Cleaning & Sanitization & In-Room Comfort. Finally, the factors were confirmed with the help of the CFA model. The model fitness was checked and the construct validity was performed. The conditions for both fitness test and construct validity were found satisfactory. The current study was focused on finding out the new dimensions in the hotel booking attributes requirement due to the post-COVID-19 impact. For that, the questionnaire was framed in consideration of that. The hotel service automation and contactless service were prioritized. The cleaning standard was redefined with the term cleaning & sanitization standard. The statements related to contactless services like express check-in and check-out and other automation were included in the questionnaire. The statements related to the persuasion of the guest on the measures taken for maintaining a sanitized hotel with the help of showing 360 ° video presentation were focused on the questionnaire as well. These were later ratified during factor analysis. Similarly, the statement with the precautionary measures taken and maintained by the hotel staff in terms of wearing masks and gloves were included in the questionnaire which was finally confirmed with factor analysis as well. The COVID-19 specific safety security concern was also emphasized predominantly by the respondents. The guests were concerned with assessing and ensuring the safety and security maintenance standards of the hotel. They are more concerned with the hotel's approach to ensure the same. Thus, the CCTV surveillance was endorsed the most which have a major contribution towards the formation of the construct "Safety & Security".

### **Scope & Limitations-**

The current study will be helpful for the managers/owners of the hotels in developing and implementing the strategies based on the standards of hotel booking attributes suggested as important, post COVID-19 pandemic. This will help the hotels in matching the expectation of the travelers with regards to the fulfillment of the attributes in the post-COVID-19 scenario. Hence, the managers can eliminate or minimize the knowledge gap of the SERVQUAL model and can enhance the

guest experience with the proper understanding of the guest's expectations and taking action for fulfillment.

The ideal hotel booking attributes, post-COVID-19 pandemic have been extracted and confirmed in this study but the relationship between them has not been taken into consideration. Further research on the relationship between the constructs can help understand the strength of influence of a single or a set of constructs on the hotel booking decision. The fulfillment of desired hotel attributes will help the hotel owners in offering safe and secure stay assurance to the guest. In the current research, the sample size of 740 was taken from Northern India and judgmental sampling was applied which can be improved. The analysis with bigger sample size and the selection of wider or diverse geographic locations may give some better results for this objective.

As the attributes are standard parameters, the hotel categories or the difference in attribute standards are not considered as a matter of concern and justifies the study irrespective of the hotel categories. We can expect the desire of these hotel attributes from all categories of hotel guests. However, the standard of these hotel attributes or the numbers of included attributes under any hotel category may differ.

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