Understanding the behaviour of medical tourists: implications for strategy development

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Abstract

Strategy and policy development for medical tourism largely depends on knowledge and understanding of the behavioral intentions of patients for cross-border travel to seek healthcare services. This study utilizes the Extended Unified Theory of Acceptance and Use of Technology (UTAUT2) and decision tree models to explore the behavioral intentions of medical tourists and identify key factors for predicting medical tourism adoption decisions by patients. Safety expectancy and waiting time are found to be the most influential features for the prediction of behavioral intention and adoption behavior. Though social influence and price-value are found to be very important in predicting behavioral intentions, these features become redundant in predicting medical tourism adoption behavior. This study also reveals that medical tourists rarely consider recreational benefits as a supplementary service besides health services; rather, they decide to pursue medical services based on the primary healthcare service itself. This finding can provide deep knowledge to develop policies and strategies for medical tourism.
Keywords: Medical tourism; patients' behavior; decision tree model; policy for tourists' patients; UTAUT2 model

Introduction

A medical tourism consumer is a patient who travels to health facilities in another country to seek physical and mental support for oneself, family members, or friends (Godovykh et al., 2021; Riestyaningrum et al., 2020). With the global growth in the flow of patients across international borders for medical treatment and healthcare, medical tourism has been gaining popularity as a new trade. This new global market of medical tourism is greatly influenced by the willingness of consumers to travel and receive medical treatment, as a core service, of travel. A growing number of patients, from developed countries, are travelling to less developed countries to avail themselves of low-cost treatment facilities and patients from (resource constraint) less developed countries are traveling to other countries to receive better treatment services (Lunt et al., 2011). Not only the low-cost or high-quality healthcare services but also many other factors affect decision-making process of an individual for any immediate or future travel plan for receiving medical treatment overseas. This study develops a model to explore the effects of different factors in predicting the behavioral intention and adoption behavior of patients seeking medical treatment in overseas hospitals and healthcare service centers.

Understanding these factors will provide insight into developing effective policies and strategies for better understanding the behavior of medical tourists.

Changing healthcare seeking behavior and attitude towards cross-border travel during and after COVID-19 have caused significant pressure on tourism companies which led to the emergence of the behavioral intention of medical tourism as one of the central topics for tourism and healthcare management (Bae & Chang, 2021; Juma & Douglas, 2023; Luong, 2023; Nguyen & Tong, 2022; Riestyaningrum et al., 2020). The medical tourism industry is directly impacted by the COVID-19 pandemic (Godovykh et al., 2021), for example, total sales in these industries in India and Malaysia have decreased by 60% in 2020 (Lew et al., 2020). Cancellation of more than fifty thousand trip reservations has resulted in a 70% reduction in travels compared to the previous year (Kaushal & Srivastava, 2021). Huge reduction in travels and attitude towards planning for travel have placed tourism companies under pressure to understand the behavioral changes of consumers to develop new business strategies to recover the loss incurred during the COVID-19 pandemic (Brouder et al., 2020). Thus, the present study focuses on the behavioral intention of tourists for cross-border travel to seek healthcare service in overseas clinics and hospitals and identifies critical factors that contribute significantly to understanding patients' adoption behavior. This finding can provide deep insight into the development of policy for medical tourism.

Behavioral intention toward medical tourism is conceptualized as the desire of people to perform an expected behavior which is likely to happen with cross-border travel for healthcare utilization (Medhekar & Wong, 2020; Navid et al., 2010; Wang, 2012). Prior studies have focused on discussing conceptual perspectives of determinants of behavioral intention for travelling overseas for healthcare service uptake (Brouder et al., 2020; Godovykh et al., 2021; Gössling et al., 2021). Not only behavioral intentions but also the factors that influence the behavioral intention of an individual have been explored explicitly in some studies (Bae & Chang, 2021; Mamun & Andaleeb, 2013). However, these studies did not include the influence of a broad range of factors on behavioral intention with underlying constructs and counterfactuals that are likely to form many possible latent factors. This sheds light on the importance of the formation of theoretical constructs for a wide range of behavioral intentions for medical tourism. This study introduces the UTAUT2 (Extended Unified Theory of Acceptance and Use of Technology) model for medical tourism, hypothesizes behavioral constructs, develops empirical reasoning of medical tourism, and implements decision tree models for the prediction of behavioral intention and cross-border travel (tourism) decision for receiving healthcare services. Moreover, a much-needed model for behavioral intention towards medical tourism will help healthcare service providers to better understand which behaviors should be considered to develop healthcare management policy and strategy for international health tourists.

To organize the remainder of the paper, the researchers have conducted an in-depth literature review in Section 2. The data collection procedure and methodology adopted in this study are discussed in Section 3, and statistical results are presented in Section 4. The overall findings of this study are discussed in Section 5. Implications of this research

are provided in Section 6. Finally, a conclusion with limitation and future research guideline is stated in Section 7.

Literature review

In their review studies on medical tourism, Sujood and Bano (2021) and Chen et al. (2021) emphasized the importance of conducting a comprehensive study on behavioral intention towards medical tourism. They argue that future researchers should collect data and explore the behavioral intention of medical tourists from social, behavioral, and economic perspectives. The concept of behavioral intention is defined as the likelihood of performing an expected behavior based on personal attitude and others' influence (Fishbein & Ajzen, 1975). This has also been defined in literature as a likelihood or willingness to perform a specific behavior (Meng et al., 2020). *The theory on consumer attitudinal change* conceptualizes behavioral intention as the behavioral outcome influenced by customer attitudes (Ismagilova et al., 2019; Mitchell & Olson, 1981; Shareef et al., 2018). *Self-efficacy theory* proposed by Bandura (1977) argues that people are expected to perform a behavior if they find motivational inspiration. In this study, the researchers have viewed behavioral intention as the intention to perform any desire.

Decision-making process of a health tourist who wants to access health services across international borders is complex, dynamic, and multidimensional (Ali & Medhekar, 2018; Hopkins et al., 2010; Thomas, 2000; Wang, 2012). The quality of a hospital's service generally influences tourists' decision for their trip (Connell, 2013), whereas any barrier whether that is related to the language, culture, or stringency to the trip may undermine the behavioral intention to make any cross-border travel for seeking health services (Zenker & Kock, 2020; Zhang et al., 2020). Various governments have imposed strict measures and barriers on cross-border travel during the COVID-19 pandemic. This has not only impacted planned overseas trips but is also likely to influence an individual's behavioral intention to travel abroad for healthcare services. Therefore, it is important to examine whether medical tourists will decide to travel for health services and strive to revert to their familiar pattern of medical tourism after the COVID-19 pandemic. This will enable industries to understand the key factors that may influence consumer behavioral intentions during a pandemic and the post-pandemic decisionmaking process for seeking better healthcare services overseas (Pan et al., 2021; Thomas & Ormerod, 2017).

Resilience theory argues that if an industry cannot exploit a new opportunity in a market effectively, the sector can collapse at a certain point. Recent studies highlight the re-manifestation of connectivity and sociability of medical service seekers based on innovative entrepreneurialism (Lew et al., 2020; Shareef et al., 2019). Neither of these studies, however, has addressed the concrete physical, mental, financial, and medical reasons for the loss of medical tourists, which may impact their motivation and desire to travel for health-related services (Brida et al., 2021). Moreover, psychologists argue that travelers are substantially influenced by two interconnected issues that reflect their psychological mindset when they show an eagerness to seek medical service (Cui et al., 2022; Li et al., 2020): their internal state of consciousness and external surroundings. In

the light of *psychological distance theory* and *construal level theory* (Liberman et al., 2002), researchers argue that perceptions from those two constructs may dictate future travel and motives for behavior in the post-COVID-19 era (Brügger et al., 2016; Navid et al., 2010; Zakaria et al., 2023). In this case, medical tourists' perceptions, and abstraction of risks, such as health risk, financial risk, and national contextual risk, may shape the development of consciousness and understanding of external surroundings (Ruan et al., 2019; Thomas et al., 2011). However, prior research studies that explored travelers' behavioral intention have rarely devoted attention to tourists' mental stress and health crises. Medical tourism adoption decision can be characterized by the human perceptions and behavioral intention that can be placed under the UTAUT model (Dwivedi et al., 2016) by considering individual, social, and economic factors for behavioral intention towards medical tourism.

Behavioral intention and acceptance of medical tourism can be modelled in line with the UTAUT2 model that is commonly used to understand complex human behavior (Williams et al., 2015, Martinez & McAndrews, 2022). Dwivedi et al. (2016) argue that the adoption of any system, such as mobile health applications, should be analyzed from the point of view of human perceptions. Based on the UTAUT2 and m-health models, this study postulates that individual, social, and economic factors may influence both the behavioral intention of medical tourists and their actual behavior toward medical tourism during the pandemic and thereafter. This provides an insight regarding the extension of the UTAUT2 theory for medical tourism research by examining nine factors, namely: social influence (SI), facilitating conditions (FC), price-value (PV), self-concept (SC), waiting time (WT), safety expectancy (SE), performance expectancy (PE), effort expectancy (EE), and hedonic motivation (HM). The adoption behavior refers to a person's decision about whether to adopt healthcare service (Choi et al., 2011) and after an extensive review of adoption behavior models on the aspirational attitude of medical tourists, the authors have found the UTAUT2 model as the most appropriate for this current study. In addition to discussing/applying the UTAUT2 model for behavioral intention (BI) and adoption behavior (AB) in decision-making process, this study has defined different constructs and developed the hypotheses. The definitions of these constructs are provided in Table 1.

Performance expectancy (PE)

PE is an important aspect of behavioral intention. The UTAUT model highlights that the acceptance of health services and facilities mainly depends, to a degree, on consumer perceptions of whether they will achieve specific benefits. Researchers argue that consumers are cognitively deliberate over the reputation and quality of a service provider (Connell, 2013; Hopkins et al., 2010; Luo & Lam, 2020; Navid et al., 2010; Runnels & Carrera, 2012; Wang, 2012). The selection of a health service provider is a voluntary decision that streamlines consumer expectancy of benefits to meet the goal related to health issues (Dwivedi et al., 2016; Shareef et al, 2019). Shedding light on the definition extracted from the m-health model, this study defines PE as the degree to which people seek the desired healthcare service from a foreign country across international borders,

i.e. health tourism will help to attain gains in health performance. Based on the above discussions, this study proposes:

H1: Performance expectancy positively affects the behavioral intention for health tourism.

Effort expectancy (EE)

The UTAUT model highlights the importance of the perceived ease of use and complexity. The key idea of EE is how easy a system is to use and navigate. Researchers consistently cite EE as one of the most critical determinants of behavioral intention (Dwivedi et al., 2016). The degree of easiness to use indicates the user-friendly characteristics of a system (Jang et al., 2022). However, the content and contextual environments, especially the situations created by the COVID-19 pandemic, are potentially different from a traditional system. As a result of the response to the pandemic, countries imposed strict travel restrictions for foreigners and locals (Brouder et al., 2020; Lew et al., 2020). Restrictions, such as lockdown, quarantine, and stay-home-orders, created a behavioral response of 'no movement' among travelers and tourists (Ćosić et al., 2020). EE can be described as the attempt to evaluate the performance of a system in terms of user-friendly characteristics during the pandemic. EE is composed of some dimensions, such as accessibility to the health facility in a foreign country and the type of barriers to entering that country (Yu et al., 2020). In this study, EE refers to the degree of ease associated with accessing the desired functional health facility and the support available from a foreign country across international borders. So, this study proposes the following hypothesis:

H2: Effort expectancy positively affects the behavioral intention for health tourism.

Social influence (SI)

People attempt to evaluate a system and service with a certain belief derived from selfmindset or imposed by surrounding individuals (Ajzen, 1991; Haslam et al., 2018). The belief serves as a perception, by human beings, of the system and service (Shareef et al., 2019). The theory of planned behavior argues that people's behavioral intention depends on their attitudes and subjective norms, resulting in actual behaviors (Ajzen, 1991). The literature on health tourism underscores that the selection of a health facility in a foreign country depends on SI that is associated with the attitude of an opinion

Table 1. Conceptual definition of the constructs and hypotheses.

Construct	Conceptual definition	Hypothesis
Performance expectancy (PE)	The degree to which people seek the desired healthcare service from a foreign country across international borders.	H1: Performance expectancy (PE) affects the behavioral intention (BI) for medical tourism adoption behavior (AB).
Effort expectancy (EE)	The degree of ease associated with accessing the desired functional health facility and the support available from a foreign country across international borders.	H2: Effort expectancy (EE) affects the behavioral intention (BI) for medical tourism adoption behavior (AB).

Social influence (SI)	The degree to which people perceive others as important in the self-decision-making processes while deciding to seek the desired healthcare service from a specific health facility, clinic, or hospital of a specific foreign country across an international border.	H3: Social influence (SI) affects the behavioral intention (BI) for medical tourism adoption behavior (AB).
Facilitating conditions (FC)	The degree to which people believe that organizational and technical infrastructure and tangible and trustworthy resources exist continuously from any healthcare location in any foreign country.	H4: Facilitating conditions (FC) affects the behavioral intention (BI) for medical tourism adoption behavior (AB)
Hedonic motivation (HM)	The degree of perception of recreational benefits and pleasure which can be gained from traveling to the desired health facilities of the specific foreign country while seeking healthcare service.	H5: Hedonic motivation (HM) affects the behavioral intention (BI) for medical tourism adoption behavior (AB)
Price-value (PV)	The cognitive trade-off between the values which can be gained from the travel to the desired health facilities of the specific foreign country to seek healthcare service.	H6: Price-value (PV) affects the behavioral intention (BI) for medical tourism adoption behavior (AB).
Self-concept (SC)	The degree to which people's preference, in the light of self-intrinsic evaluation of their own personality-related traits, is perceived to be congruent with seeking a desired healthcare service from a foreign country across international borders.	H7: Self-concept (SC) affects the behavioral intention (BI) for medical tourism adoption behavior (AB).
Waiting time (WT)	The degree to which people believe that seeking the desired healthcare service from a foreign country across the international borders.	H8: Waiting time (WT) affects the behavioral intention (BI) for medical tourism adoption behavior (AB).
Safety expectancy (SE)	The degree to which people develop beliefs around assurance that their desired health facilities in a specific foreign country take sufficient protective measures that they can protect themselves from any unwanted physical and mental risks.	H9: Safety expectancy (SE) affects the behavioral intention (BI) for medical tourism adoption behavior (AB).
Behavioral intention (BI)	The desire of people to perform an expected behavior which is likely to happen.	-
Adoption behavior (AB)	A person's decision about whether to adopt healthcare service.	-

leader (Davras & Özperçin, 2023; Saiprasert, 2011). This attitude reflects human beings' internal state of mind, which is, as already explained under the theory of planned behavior, influenced by beliefs (North, 1932). The sources and development process of these beliefs are complex and are related to some characteristics, such as a person's personality, knowledge, experience, and emotions (Ajzen, 1991; Bandura, 1986). Based on the mhealth model, the authors have described SI as the degree to which people perceive others as important in the self-decision process while deciding to seek the desired healthcare service in a foreign country. This leads us to the following hypothesis:

H3: Social Influence positively affects the behavioral intention for health tourism.

Facilitating conditions (FC)

Healthcare service is based on certain tangible facilities, such as organizational and technical infrastructure support (Turner, 2007; York, 2008). It includes, but is not limited to, the medical equipment, physician, nurse, medical staff, and availability of various treatments (Schroth & Khawaja, 2007). People who seek healthcare service in foreign countries also tend to search for the proximity of language, geography, and culture (Connell, 2013; Godovykh et al., 2021). FC is likely to affect the decision for the medical tour because people tend to evaluate the availability of and accessibility to a medical facility (Runnels & Carrera, 2012; Wang, 2012). During the pandemic, people were exposed to the scarcity of medical facilities and technical infrastructure, and the unreliability of different governments (Gössling et al., 2021). Moreover, consumers evaluate the availability of infrastructural supports while selecting hospitals in which to receive healthcare service (Ağazade, 2021; Brida et al., 2021; Navid et al., 2010). From this perspective, this study defines FC as the degree to which people believe that organizational infrastructure and tangible resources continually exist in a healthcare facility, in a foreign country. This takes us to the following hypothesis:

H4: Facilitating conditions positively affect the behavioral intention for health tourism.

Hedonic motivation (HM)

Hedonic motivation plays a pivotal role in shaping the decision-making process of medical tourists, encompassing not only their pursuit of healthcare services but also their desire for recreation and leisure activities (Connell, 2013; Hopkins et al., 2010). Particularly during the pandemic, people tend to travel for recreation, which alleviates the mental stress caused by the pandemic (Luo & Lam, 2020). As a result of depression, frustration, and traumatic behavior due to the subversive effect of severe acute respiratory syndrome (SARS) and Middle East respiratory syndrome (MERS) outbreak, researchers anticipated serious consequences for mental health due to the prolonged pandemic (Benedek et al., 2007; Yu et al., 2020). HM is a critical dimension of developing a theoretical argument in the health tourism sector during the pandemic (Kock et al., 2020; Wachyuni & Kusumaningrum, 2020). Without considering the HM, managers may not be able to develop a long-term plan for sustainable health tourism and the hospitality business (Li et al., 2020). Based on sociocultural theory (Vygotsky, 1962), HM is an external motive of human beings to pursue mental enjoyment to adjust to ecological changes. It is also expected that the perception of recreational benefits may contribute to the decision for health tourism. HM refers to the degree of perception of recreational benefits and pleasure which can be gained from traveling to the desired health facilities of the specific foreign country while seeking healthcare service. So, our next hypothesis is:

H5: Hedonic motivation positively affects the behavioral intention for health tourism.

Price-value (PV)

A natural disaster and man-made tragedy during a pandemic can affect the human mind and body, which results in a permanent transformation of emotional status and condition (Andrade et al., 2014). The impacts of the pandemic include the slowdown of the global and national economy, the crisis in the job market, and the shortage of disposable income (Kaushal and Srivastava, 2021). People tend to be scared about future essential expenditures due to the unemployment rate, the economic turmoil, and the increased prices of essential commodities. Financial hardship can force people to save more precautionary money and reduce budget allocation for international travel. The sense of saving money from non-essential activities raises the concern of avoiding any travel, even for health, in any foreign country (Gössling et al., 2021). Medical tourists' perceptions of financial hardship are evident and affect their decision how to conserve money (Karim et al., 2020). Interestingly, although people face economic crisis, they tend to search for an alternative cheap source to access comparative healthcare services locally (Schroth & Khawaja, 2007; Wang, 2012). This means that during a pandemic, people are likely to be more concerned about the value they gain in the exchange between a medical service and expenditures (Kumar & Nayar, 2021). As a result, PV is an important construct for understanding patients' attitude and behavioral intention toward health tourism. Social exchange theory affirms that it is a general trend of human beings to compare and evaluate the benefits they can receive in the exchange of any physical, mental, or financial interaction in a social context (Turner, 1982). PV refers to the cognitive trade-off between the values gained from the travel to a desired health facility in a foreign country. This study proposes the following hypothesis:

H6: Price-value positively affects the behavioral intention for health tourism.

Self-concept (SC)

SC is a term to express an individual's status and reflect multidimensional traits derived from prior experience or from their unique personality (Dwivedi et al., 2016). Although people are quite reluctant to travel for health across international borders, those people with prior experience of foreign healthcare services form a certain habit related to health tourism (Connell, 2013; Hopkins et al., 2010). The habit is likely to influence the decision for health tourism. For this study, the idea of self-concept, instead of habit, was included in the theoretical model in the context of health tourism. Dwivedi et al. (2016) used the term self-concept, instead of habit, which limits the decision-making to the prior experience people have had. Moreover, as Elias (1977) argues, human beings tend to stimulate their inner mind to come back to normal life, which enables them to avoid any deviations that may cause permanent damage to the mind. SC refers to the degree to which people's preference, in the light of self-intrinsic evaluation of their own personality-related traits, is perceived to be congruent with seeking a desired healthcare service from a foreign country. The adoption of remote technology is a new pattern and

practice in healthcare services which is not dependent on people's habits (Dwivedi et al., 2016). This study postulates the following:

H7: Self-concept positively affects the behavioral intention for health tourism.

Waiting time (WT)

WT is a critical component in health tourism and is a strong predictor of people's behavioral intention to travel for medical service (Connell, 2013; Hopkins et al., 2010). Accessibility to healthcare services is an essential concern for patients because healthcare professionals and resources are often costly and insufficient (York, 2008). A pandemic creates the anxiety of time requirements to receive medical service (Runnels & Carrera, 2012; York, 2008). In other words, patients expect that healthcare service may not be provided in a timely manner during a pandemic. In addition, some countries maintain healthcare facilities managed solely or predominantly by the government, free of cost (Navid et al., 2010). For example, the availability of and accessibility to medical service are an issue in Canada, and some European countries (Navid et al., 2010). To reduce WT, people in these countries tend to seek healthcare services from other countries, such as Singapore, India, and Malaysia (Runnels & Carrera, 2012). WT is the most crucial issue – to the patients – who have a severe disease and need treatment promptly. Based on the m-health model, the authors have defined WT as follows: the degree to which people believe that seeking the desired healthcare service, from a foreign country, can save irrevocable time in receiving the service and fulfilling the time bound requirements. This study proposes the following hypothesis:

H8: Waiting time positively affects the behavioral intention for health tourism.

Safety expectancy (SE)

One of the emerging topics in evolutionary psychology is the attitude of human beings toward health tourism (Kock et al., 2020; Wachyuni & Kusumaningrum, 2020). Studies on the behavior of medical tourists argue that the nature of medical tourists is generally to avoid the vulnerability of diseases during travel (Jonas et al., 2011; Reisinger & Mavondo, 2005). While people travel for medical reasons, they tend to be more cautious about the uncertainty of the contextual situation of an apparently unknown and unfamiliar place (Chien et al., 2017; Wang et al., 2019). For instance, SARS and swine flu resulted in travelers' self-protective behaviors, such as deferring travel and limiting mobility (Tybur & Lieberman, 2016). Travel anxiety may offset the inspiration for behavioral intention to embrace health travel with frequent mobility (Wachyuni & Kusumaningrum, 2020). The sources of anxiety include physical protection, psychological distortion, and mental panic (McIntyre & Roggenbuck, 1998). Furthermore, psychologists revealed that behavioral intention is spontaneously influenced by responses with an eternal need for safety, security, and survivability (Gössling et al., 2021). Reflecting the arguments, the authors have defined SE as the degree to which people develop beliefs around assurance that

their desired health facilities, in a foreign country, take sufficient protective measures that they can protect themselves from any unwanted physical and mental risks. This study proposes the following hypothesis:

H9: Safety expectancy positively affects the behavioral intention for health tourism.

Data and methods

Data collection from the actual and experienced medical tourists is the most important criterion of this study. The selection of survey samples is a critical part of the methodology to ensure the variability and population representation of this study. Following Wu et al. (2017), this study has collected survey data from Bangladesh. This study has selected this country for a few reasons. About 1.12 percent of people in Bangladesh are used to visiting Asian, European, and North American countries to seek healthcare services in recent years for multidimensional reasons (Mohiuddin, 2020). Medical tourism in Bangladesh has been characterized as exhibiting the following features: absence of specific expertise in providing medical treatments, lack of quality medical services, shortage of resources in a highly populated country, expensive private medical service sector, and the existence of questionable reliability and trustworthiness of medical services (Andaleeb et al., 2007). So, medical tourism is very common in Bangladesh and receiving basic healthcare services (regular health checkup) in foreign countries has become a part of leisure trip for many people in Bangladesh (Ali & Medhekar, 2016).

Study design and data collection

The survey has been designed to capture tourists' perceptions about medical tourism in the post-COVID-19 era. The authors have obtained the names, addresses, and telephone numbers of medical tourists from the following three leading organizations in the tourism sector: the Association of Travel Agents of Bangladesh (ATAB), Tour Operators Association of Bangladesh (TOAB), and Bangladesh International Hotel Association (BIHA). Medical tourists in Bangladesh are generally required to register with the three organizations and submit a registration form, including information, such as a medical facility, location, and country to travel. According to these tourism organizations, 80 percent of prospective medical tourists live in eight large cities in Bangladesh. The data was collected from medical tourists living in these eight cities. Based on the consumer lists of the three organizations, a target sample of 1000 medical tourists was randomly selected and contacted by telephone to acquire their consent before sending a questionnaire. After receiving their consent, the questionnaire was sent to 512 medical tourists by email. Three weeks after the initial emailing, a follow-up reminder letter with the questionnaire and a pre-paid postage return envelope were sent. Only 217 respondents yielded a response with a response rate of 42.38%. After removing three responses, with insufficient data, a sample of size 214 was obtained for further analysis. Table 2 shows

the results of demographic analysis in terms of age, income level, gender, and some other parameters.

Measurement items

The scale items for SE have been developed/adapted after reviewing and extracting a list of safety measures from existing literature (Sarwar et al., 2012; Shareef et al., 2021; Yoo & Managi, 2020). The measurement items for eight other independent variables (PE, EE, SI, FC, HM, PV, SC, WT) and two dependent variables (BI and AB) are adopted from the mhealth model of Dwivedi et al. (2016) with the required revisions and modifications so that the questions can appropriately conceive the prospective travelers' real perceptions without any ambiguities.

Responses to 45 questions about the independent and dependent constructs are recorded by using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Previous studies on consumer attitudes have acknowledged that the 5-point Likert scale is adequate and suitable to capture respondents' perception of consumption behavior

Table 2. Response profile.

Dimension	Sample average
Gender	56% (male); 44% (female)
Age	51 years
Average education	College degree
Income per year	USD33,300 (average: upper middle class)
Experience of any travel and leisure tours in abroad (yes or no)	72% (male); 28% (female)
Past experience of medical tourism (yes or no)	39% (male); 71% (female)

and attitude (Chyung et al., 2017; Weber et al., 2014). A focus group consisting of two university professors of marketing and four professionals engaged in health tourism in Bangladesh helped in adding clarity and revising the order of questions. The experienced members of the focused group addressed and investigated the detailed classification, comparison, categorization, and integration of the generic characteristics and finalized the measuring tools and their reflective and formative constructs. In the light of the expert comments, the questionnaire was revised. For further clarification and examination, the questionnaire was distributed among ten known health tourists who took healthcare service from Thailand, Singapore, Malaysia, and India in the last two years. They were asked to fill out the questionnaire with their specific comments about the measuring items and their scope to measure the intended meaning. They provided some minor suggestions about the wording of a few questions. Accordingly, the questionnaire was refined. For the nine independent constructs, the final questionnaire has 41 measuring items. For the two dependent constructs, there are 4 measuring items.

Analytic methods

Since all the constructs and their measuring items were selected from the published literature (except for SE) and examined and verified by a strong focus group with a pilot

test among actual health tourists, exploratory factor analysis (EFA) seemed redundant for this study and thus, EFA was not conducted on the data received from the empirical study. Following Anderson and Gerbing (1988) as well as Chou and Huh (2012), the authors adopted a two-step approach of structural equation modeling (SEM) to analyze the data. In this connection, the measurement model and the structural model were evaluated through SEM analysis using LISREL with maximum likelihood estimation. Firstly, confirmatory factor analysis (CFA) was performed to assess the validity and reliability of the measurement models. Secondly, the structural equation model (SEM) was used to evaluate causal relationships in the model. This enabled inferential learning of constructs and latent features (independent variables) that either supports or nullifies hypotheses. Since all features did not necessarily affect the BI and AB equally, the decision-tree model that computes variable importance (VIMP) scores and ranks features based on the VIMP score (Kuhn, 2008) was employed. A feature that is highly important for BI may get redundant or become less important in predicting the AB for medical tourism. A set of features that are stable for the prediction of both BI and AB was identified. Moreover, the features that are important for either BI or AB, but not for both BI and AB were also found out. Finally, a decision tree model was developed by using the statistical software R for the prediction of medical tourism adoption behavior of consumers.

Statistical results

A measurement model that consists of nine independent constructs with 41 measuring items and the dependent construct BI with three measuring items through CFA (AB is measured by only one item, so it does not need any CFA) was evaluated. Two items (EE5 and PE2) from the nine independent constructs had been dropped because of low factor loadings below a cut-off value of 0.50 (Kline, 2015) (Shown in Table 3). After removing these two items, a total of 39 measurement items were retained. The constructs were assessed by computing average variance extracted (AVE) and composite reliability scores (CRS). Computed AVE and CRS values for convergent validity and reliability assessment of constructs have been provided in Table 3. All the items had AVE values greater than 0.50 supporting the convergent validity of the constructs. The analysis also revealed that the CRS of all the nine independent variables and the variable BI exceeded the minimum cut-off value of 0.70 (Hair et al., 2013). This finding provided evidence of the reliability consistency of all the constructs.

Structural model analysis was performed to evaluate causal relationships among latent variables. Goodness-of-fit test was performed to tune up a model with respect to fit index and RMSEA values recommended in literatures (Hair et al., 2013; Hoyle, 2011; Kline, 2015). A trial-and-error approach was adopted to find a model that satisfies the goodness-of-fit test criteria. Goodness-of-fit test results from the best tuned model have been provided in Table 4.

The SEM paths that demonstrated hypothesis testing of the final model with satisfactory goodness-of-fit test criteria have been shown in Figure 1. The analysis of the structural model revealed that the proposed hypotheses of H3, H4, H6, H8, H7, and H9 were supported. The six variables SI, WT, SE, SC, PV, and FC had significant relationships

with behavioral intention (BI), which led to medical tourists' actual behavior (AB) at the 0.05 significance level. By contrast, H1, H2, and H5 were not supported at the 0.05 significance level which indicated that EE, PE, and HM did not affect BI toward medical tourism. The relationship between SC and AB was found statistically significant at the significance level of 0.05. It was also found that SC demonstrated a direct effect on AB although SC indirectly impacted AB through BI.

The SEM paths showed significant effects of six factors to explain the behavioral intention of respondent for medical tourism adoption. To explore the relative contribution of these factors in predicting the BI and AB, a decision tree model was utilized and relative variable importance scores in predicting BI and AB were computed as shown in Figure 2. The WT and SE were the two most dominant factors in predicting both the BI and AB. Though SI was found to be highly important in predicting BI, it did not show any importance in predicting AB. On the other hand, SC was not deemed to be important for BI, but it was a highly important factor in predicting AB. Thus, SI and PV for BI, and EE and SC for AB seemed to demonstrate differential effects between BI and AB. Moreover, there was more focus on the prediction of adoption behavior (original decision by respondent) and applied the decision tree model for data-driven decision-making.

A decision-tree model for AB shown in Figure 3 demonstrated that a higher level of SC predicted strong support for AB. Each leaf node showed different types of values: predicted response class is shown in the first row, four predicted probabilities shown in the second row were probabilities for response classes 2, 3, 4, and 5 (strongly agree)

Table 3. Measurement items used in the survey.

Construct	Item	Loadings	AVE (CRS)
Performance expectancy (PE)	(i) I find the healthcare service of the desired health facility, hospital, clinic of the foreign country that I seek for my health is useful.	0.705	0.9508
	(ii) Using the healthcare service of the desired health facility, hospital, and clinic of the foreign country that I seek for my health can increase my chances of achieving benefits that are important to me. **(Dropped)**	0.415	(0.974)
	(iii) Using the healthcare service of the desired health facility, hospital, and clinic of the foreign country that I seek for my health can help me accomplish my desired purposes in a better way.	0.771	
	(iv) Using the healthcare service of the desired health facility, hospital, clinic of the foreign country that I seek for my health can increase my health performance.	0.692	
Effort expectancy (EE)	(i) Getting required information about the desired health facility, hospital, clinic to go to that country crossing the border to seek their healthcare support for my health is easy for me.	0.648	0.9525 (0.979)
	(ii) Access to the desired health facility, hospital, and clinic of the foreign country crossing the border is easy for me.	0.808	
	(iii) Availing the healthcare support for my health from the desired health facility, hospital, clinic of the country crossing the border is easy for me.	0.802	
	(iv) My interaction with the desired health facility, hospital, and clinic of the country crossing the border is clear and understandable.	0.800	
	(v) It is easy for me to become skillful at receiving, monitoring and interpreting healthcare service of the desired health facility, hospital, and clinic of the foreign country. **(Dropped)**	0.442	
Social influence (SI)	(i) People who are important to me think that I should go to abroad to seek healthcare service for my health.	0.675	0.9178 (0.939)
	(ii) People who influence my behavior think that I should go to abroad to seek healthcare service for my health.	0.866	
	(iii) People whose opinions that I value prefer that I should go to abroad to seek healthcare service for my health.	0.530	
Facilitating conditions (FC)	(i) Healthcare service of the desired health facility, hospital, and clinic of the foreign country that I seek has trusted resources necessary to provide health support.	0.579	0.9413 (0.973)
	(ii) Health facility, hospital, clinic of the foreign country from where I seek healthcare service has reliable organizational structure necessary to provide health support.	0.798	
	(iii) Health facility, hospital, clinic of the foreign country from where I seek healthcare service has reliable technical structure necessary to provide health support.	0.769	
	(iv) Health facility, hospital, clinic of the foreign country from where I seek healthcare service has skillful communication necessary to reach out health support.	0.710	

	(v) I can get reliable health support from the health facility, hospital, and clinic of the foreign country from where I seek healthcare service when I have difficulties. (Dropped)	0.365	
Hedonic motivation (HM)	(i) Going to the foreign country of the desired health facility, hospital, and clinic that I seek for my healthcare service is fun.	0.726	0.9557
	(ii) Using the healthcare service of the desired health facility, hospital, and clinic of the foreign country that I seek for my health is fun.	0.775	(0.984)
	(iii) Going to the foreign country of the desired health facility, hospital, and clinic that I seek for my healthcare service is enjoyable.	0.675	
	(iv) Using the healthcare service of the desired health facility, hospital, and clinic of the foreign country that I seek for my health is enjoyable.	0.726	
	(v) Going to the foreign country of the desired health facility, hospital, and clinic that I seek for my healthcare service is entertaining.	0.684	
	(vi) Using the healthcare service of the desired health facility, hospital, and clinic of the foreign country that I seek for my health is entertaining.	0.593	
Price-value (PV)	(i) Healthcare service of the desired health facility, hospital, and clinic of the foreign country that I seek for my health is reasonably priced.	0.557	0.8938
	(ii) Healthcare service of the desired health facility, hospital, and clinic of the foreign country that I seek for my health can provide good value for the money I spend.	0.579	(0.922)
	(iii) In terms of price, healthcare service of the desired health facility, hospital, and clinic of the foreign country that I seek for my health can provide good value.	0.725	
Self-concept (SC)	(i) I like to go to abroad to seek healthcare support for my health.	0.730	0.9456
	(ii) I prefer to travel to health facility, hospital, and clinic of any foreign countries to seek healthcare service for my health.	0.690	(0.971)
	(iii) I think it is better to get healthcare service from a health facility, hospital, and clinic of any foreign countries.	0.788	
	(iv) As per my attitude, I find it reasonable to get healthcare service from a health facility, hospital, and clinic of any foreign countries.	0.671	
Waiting time (WT)	(i) Healthcare service of the desired health facility, hospital, and clinic of the foreign country that I seek for my health can save my waiting time to get adequate information.	0.733	0.9553 (0.981)
	(ii) Healthcare service of the desired health facility, hospital, and clinic of the foreign country that I seek for my health can save my waiting time to get access to the service.	0.770	
	(iii) Healthcare service of the desired health facility, hospital, and clinic of the foreign country that I seek for my health can save my waiting time to complete my desired task.	0.804	
	(iv) Healthcare service of the desired health facility, hospital, and clinic of the foreign country that I seek for my health can save my time for 0.757 continuous use.		

	(v) Using the healthcare service of the desired health facility, hospital, clinic of the foreign country that I seek for my health is less time-consuming.	0.559	
Safety expectancy (SE)	(i) I find the healthcare service of the desired health facility, hospital, clinic of the foreign country that I seek for my health is safe.	0.630	0.9436
	(ii) Travelling to the healthcare service of the desired health facility, hospital, clinic of the foreign country that I seek for my health is safe	0.697	(0.979)
	(iii) The health facility, hospital, clinic of the foreign country from where I seek healthcare service for my health maintains safety precautions to protect from any kind of contagious disease like the present pandemic.	0.783	
	(iv) The accommodation of the desired health facility, hospital, clinic of the foreign country from where I seek for my health maintains adequate safety measures to protect from any kind of contagious disease like the present pandemic.	0.658	
	(v) The health facility, hospital, clinic of the foreign country from where I seek healthcare service for my health has adequate safety policy to protect from any kind of contagious disease like the present pandemic.	0.515	
	(vi) The country of the desired health facility, hospital, and clinic of the foreign country from where I seek healthcare service for my health has adequate safety policy to protect from any kind of contagious disease like the present pandemic.	0.523	
Behavioral intention (BI)	(i) I intend to go to abroad to seek the healthcare service for my health in future.	0.754	
	(ii) I will always try to seek the healthcare service for my health from the desired health facility, hospital, and clinic of any foreign countries when I need.	0.833	
	(iii) I plan to inform my friends and relatives to seek the healthcare service for their health from the desired health facility, hospital, and clinic of any foreign countries when they need.	0.500	
Adoption behavior (AB)	I am adopting the healthcare service for my health from the desired health facility, hospital, and clinic of the foreign country.	Not included	

(**Source of the Scale Items:** The measurement items of the independent variables PE, EE, SI, FC, HM, PV, SC, WT and two dependent variables (BI and AB) are selected from the m-health model of Dwivedi et al. (2016) with the required revisions and modifications. The modifications were done by the focus group and the pilot test. The scale items for SE were taken from literature review (Sarwar et al., 2012; Shareef et al., 2021; Yoo & Managi, 2020). All scales were used on five-point Likert scales (1 = strongly disagree to 5 = strongly agree).

* AVE: the square root of the average variance extracted (AVE).

* CRS: Composite reliability score.

Table 4. Fit measures from analyses.

Fit measure	Recommended value*	SEM model
χ^2/Degree of freedom (df)	≤ 3.00	16.41/8 = 2.051
Normed Fit Index (NFI)	≥ 0.90	0.993
Comparative Fit Index (CFI)	≥ 0.90	0.996
Goodness of Fit Index (GFI)	≥ 0.90	0.987
Adjusted Goodness of Fit Index (AGFI)	≥ 0.80	0.891
Relative Fit Index (RFI)		0.952
Incremental Fit Index (IFI)		0.996
RMSEA	≤ 0.06	0.070

*Churchill (1979); Segars and Grover (1993); Chau (1997); Kline (2015).

as the dataset did not contain any response for the response class 1 (strongly disagree), and the third value in the node was the percentage of responses falling under this node. The right most node in Figure 3 showed that the predicted probability for the response class 5 (strongly agree) for AB is 0.75 and this leaf contained 17% of total responses. Thus, in the presence of higher WT and higher SC, there was a strong consensus regarding the medical tourism AB. Given that a low WT, high SE, high EE, and low HM were observed, a good consensus (level 4) for AB was predicted with a probability 0.91. Thus, not only the SE and PV as explored in the SEM dominated the BI and AB, but a combination of WT, SE, SC, HM, and PV seemed to better predict the adoption behavior by making SI and FC redundant. Though SI influenced respondent for behavioral intention, that influence did not persist up to the adoption behavior.
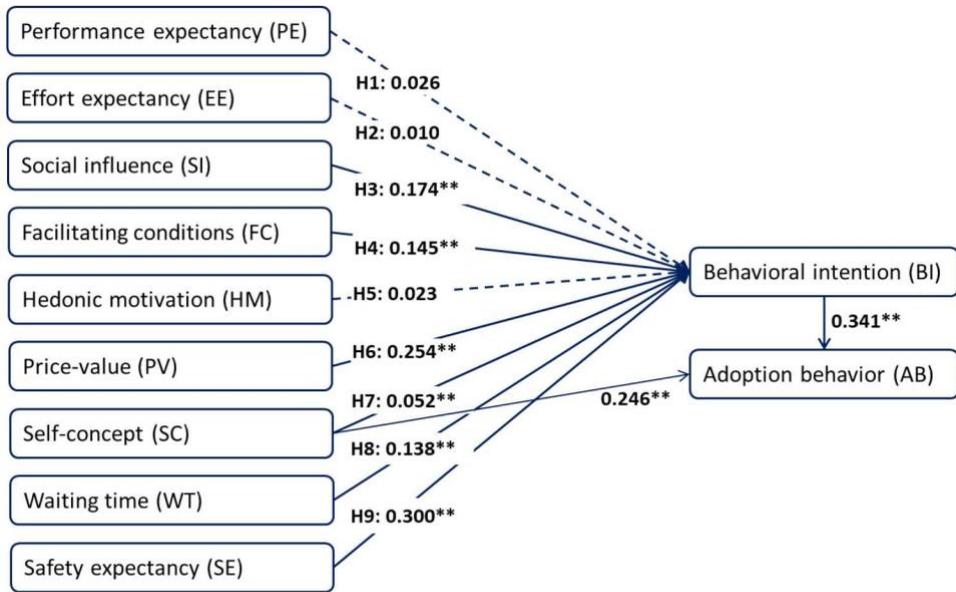
Here ** indicates *p-value* < 0.05 and the values displayed here are standardized factor loadings.

Figure 1. Statistical results for the behavioral intention and medical tourism adoption behavior of consumers.
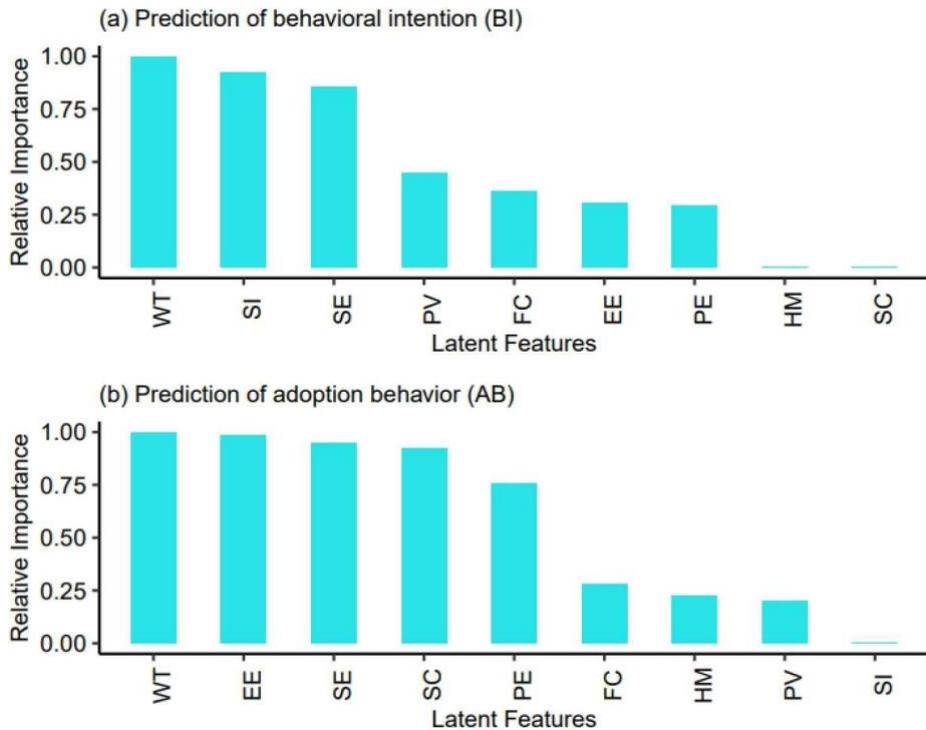

Figure 2. Importance scores of latent features in decision tree model for prediction of behavioral intention (BI) and adoption behavior (AB).
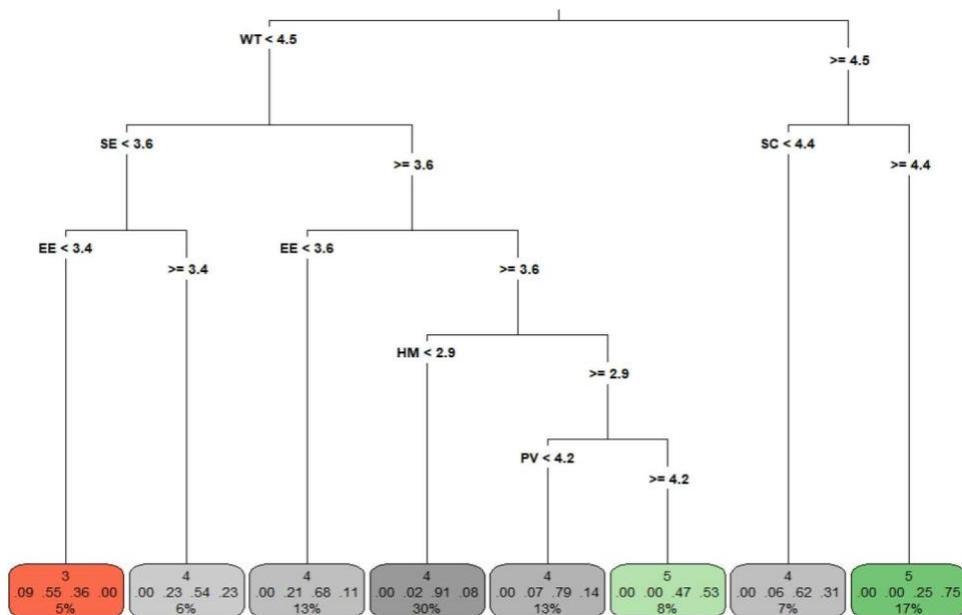
Figure 3. Decision tree model for adoption behavior of consumers for medical tourism.

Discussion

This study highlights the importance of six factors – social influence, facilitating conditions, price-value, self-concept, waiting time, and safety expectancy in deciding whether a person is inclined toward adopting medical tourism. Thus, the hypotheses related to these six factors have been proved significant. Safety expectancy is the most important determinant that influences medical tourists' decision related to whether they will avail themselves of healthcare services. The variable has a standardized factor loading of 0.30 which indicates that a one-unit change in SE is related to a 30 percent increase in behavioral intention toward medical tourism. It was also found that the variable of price-value is the second most important factor, with a standardized factor loading of 0.254. It appears that tourists have different beliefs related to anxiety and risk and tend to consider the expense and time required to receive medical service during a pandemic. The expectation of safety significantly influences the tourists' decision to travel toward medical services across borders. This finding is consistent with the theoretical concept of the situational crisis communication theory (Coombs, 2016), which claims that people tend to rely on their previous experience of safety and become alert to protect themselves from any consequences of risk when dealing with a crisis moment and making decisions.

For cross-border medical tourism, individuals express heigh concerns about the safety of both the healthcare facility and the host country. This type of behavioral reaction finds substantial support in the works of behavioral theorists such as Foucault (1977), Spina (2012), and Trope and Liberman (2000). As such, safety expectancy emerges as a novel dimension within the UTAUT2 model, aimed at capturing the attitudinal behavior of medical tourists. In the pursuit of obtaining healthcare support from overseas and

selecting a medical destination, potential patients are deeply influenced by their perception of the safety of the environment. Considering the inherent intricacies of crossborder healthcare, often involving critical and potentially life-threatening medical conditions, factors such as the overall quality of service, available features, and the time needed to receive medical attention play a pivotal role in shaping their behavioral attitudes.

The study identified social influence, facilitating conditions, and waiting time as significant factors influencing positive behavioral intentions in the selection of a venue. These findings are substantiated by researchers in the field of medical tourism and consumer behavior, as indicated by Coombs (2016) and Dwivedi et al. (2016). The positive impact of price-value is observed on the behavioral intention of patients engaging in cross-border medical tourism. Traveling to foreign clinics is inherently associated with the evaluation of cost and its corresponding return. Therefore, the significance of price-value becomes evident in the decision-making process for medical tourists when selecting a cross-border medical facility, as emphasized by Karim et al. (2020). The results of this study provide substantial support for the significant influence of self-concept. This finding aligns with prior literature, where Runnels and Carrera (2012) observed that the decision to seek medical services from a foreign country or locally is a serious debate for many individuals. Consequently, the overall mentality and personality are identified as influential factors shaping attitudes in this context.

Some prior studies argue that behavioral intention or behavior is mainly influenced by performance expectancy, effort expectancy, and hedonic motivation, and these variables have been considered as core contributors of adoption behavior in the UTAUT2 model (Venkatesh et al., 2012; Dwivedi et al., 2016). Results of this study, however, have demonstrated that this argument may not always be accurate in the context of medical tourism. The three variables performance expectancy, effort expectancy, and hedonic motivation have no influence on tourists' adoption behavior toward medical tourism, according to our findings. The reasons might be explained by considering human behavior during crisis. Since many patients are new seeking cross-border healthcare, they do not have prior experiences with the performance of a facility (Isaac, 2021; Luo & Lam, 2020). Nowadays, getting professional and commercial services is not an issue of complexity (Brouder et al., 2020; Kumar, 2020). Moreover, medical tours are not an issue of enjoyment (Connell, 2013) as these incur a high cost. Thus, hedonic motivation which is a component of affective attitude is not a critical issue for behavioral attitude of medical tourists. Therefore, the three hypotheses related to performance expectancy, effort expectancy, and hedonic motivation were identified as non-significant. Instead, the variable denoted by the expectation of safety, included in this theoretical model, has a significant effect on behavioral intention.

It was hypothesized that the cognitive component of medical tourism can be formed by the understanding of a substantive belief or expectation of safety. This is the most critical outcome of this study. Typically, both the UTAUT2 model and previous research on the complex adoption behavior of consumers affirm that the benefits in terms of

usefulness (represented by the construct of PE) and easy access to a system (represented by the construct of EE) are closely related to the expectancies of people who decide to adopt a product or service. The findings, however, indicate that while people pursue medical services during a crisis, they still consider physical and emotional protection against risky factors (represented by the construct of SE). Researchers on human psychology emphasize that a risk-free environment and personal survivability overrule the usefulness of the product or service and the effort required to use it (Bandura, 1986; Wang, 2012; Yu et al., 2020). Based on fundamental human psychology and crisis behavior, Kock et al. (2020) contributed to the theory of human behavior by demonstrating that behavioral intention has a positive relationship with a decision for medical tourism. They argued that human behavior is influenced by people's willingness and effort to protect themselves from unsafe conditions. Similarly, Kock et al. (2020) and Shahabi Sorman Abadi et al. (2023) claim that tourists are more concerned about safety issues than any other facilitating parameters during the pandemic. Construal level theory supports the premise that human behavioral intention is significantly influenced by perceived health or environmental hazards (Restrepo et al., 2021; Trope & Liberman, 2010). It is in keeping with existing theory and research that this study has shown that SE matters to medical tourists.

This study expands the understanding of the effect of hedonic motivation on behavioral intention. The literature has addressed the issue of recreational benefits available as an additional source of motivation when people decide to travel to receive medical services in foreign hospitals or clinics (Schroth & Khawaja, 2007; Turner, 2007). As such, the researchers have postulated that hedonic motivation has a positive relationship with adoption behavior. Our research, however, reveals that there is no impact of hedonic urge or intrinsic motivation on the adoption behavior, suggesting that if tourists need health services, they rarely consider recreational benefits as a supplementary service rather they decide to pursue medical service after considering the primary healthcare service itself. This finding is strongly supported by the work of several social behavior sociologists and psychologists. Spina (2012), as well as Trope and Liberman (2000) have found that people are not concerned about hedonic enjoyment as an additional benefit during a pandemic. Other social and behavioral psychologists have pointed out that while people adjust to any devastating social situation, they search for a service which can help them to survive, not for any mental recreation (Shareef et al., 2016). Interestingly, in this study, the impact of hedonic enjoyment has appeared null and void.

Theoretical and managerial implications

This study has significant contributions to the contemporary literature of health tourism research, human behavior during crisis, sociology, and psychology. It has provided with the potential thinking to analyze the UTAUT2 model during crisis moments. In this regard, it should be noted that the implications of this study must be evaluated focusing on the quality of treatment, cost of healthcare facilities, and waiting time to avail healthcare

which are potentially different from regular tourists' behavior (Schroth & Khawaja, 2007). Therefore, the merit of this study should be evaluated based on its contributions to tourists' behavior who are seeking cross-border healthcare service. Tourists' behavior in the current pandemic should be conceptualized in conjunction with the eternal urge for self-existence. In this regard, this study has unfolded many directions which are substantially important for the practitioners who are responsible for developing future sustainable strategies for medical tourism.

The results of this study suggest that any future business strategies, while creating competitive advantage based on distinctive competencies, should consider the basic expectancy of medical tourists, i.e. risk-free environment with proper adjustment of value gained in exchange for expenditure. As such, it helps in the process of planning, organizing, and launching future business counterbalancing the devastating and prolonged impact and consequences of the current global pandemic.

It is interesting to note that with respect to the urge for easy availability of and accessibility to the health resources of a foreign country, th urge for a safe environment fundamentally and importantly has a more profound impact on the development process of behavioral intention of medical tourists. Expectations of safety while selecting any country and healthcare facility are the most important issue for medical tourists. This is the most exciting outcome of this study. This finding has potential contributions to the literature of medical tourism and human psychology.

Practitioners of medical tourism should get deep insight from the findings of this study while evaluating the contributions of the construct 'waiting time'. For medical tourists, health crisis, even life-expectancy is substantially dependent on the availability of service on time (Luo & Lam, 2020). In this aspect, this behavior is potentially different from regular tourists' behavior. The finding of this study has provided strong support to this general belief of practitioners as well as academicians. Thus, this study has a significant contribution to the existing literature of health tourism.

Medical tourists' decision-making process during crisis moments is substantially impacted by the foremost requirement of personal existence. Marketing researchers, who are formulating general consumer behavior and decision-making process during a crisis and specifically, during this current pandemic situation, should realize that the traditional impact of usefulness and ease of use are less important for consumers with respect to its reliable and trustworthy design which can ensure safety and certainty. This research has revealed that the impact of hedonic urge or intrinsic motivation for recreation in connection to regular health services, at any crisis moment, is not significant. It means, tourists, if they have an essential need for health service, do not consider any kind of recreational benefits as the supplementary service; rather they solely consider the primary or core service, i.e. healthcare.

The impact of the pandemic, caused by the extremely contagious virus COVID-19, has been devastating in the form of unsafe, insecurity, and uncertainty, and financial hardship at the micro level. It has also adverse impact at the macro level in the form of scattered organizational structure, shortage of technical skills, shrinkage of health facilities, and

prolonged waiting time to receive essential medical services. In addition, people are panicked and mentally distressed which has caused losing self-confidence. Consequently, practitioners should emphasize to confirm adequate safety policies and provide with surplus value. Pragmatically, for health tourism, the best cost provider strategy can be an excellent effort from the medical facilitators who are eager to attract foreign health tourists. It is also very important for governments that substantially rely on earnings from health tourists to contribute to national GDP. Organizations who promote health tourism should consider influencing associative reference groups who can change the motive and intentions of health tourists. Therefore, social and behavioral psychologists and academics from the marketing field can get ideas about human motive that auto-controlling attitude of people has an enduring effect on their prevailing nature to come back to eternal normal behavior (Zhang et al., 2020). Since cognitive attitude is the fundamental barriers, researchers working on health tourism should get the future research directions that deliberating over actual facility design (confirming safety and balanced cost with high quality) is pivotal for the success of the future health tourism sector.

This pandemic has partially paralyzed the affective component of attitude while taking decision to seek service which has serious importance for their health service. Health tourists are mostly influenced by their cognition and sudden response to behavior. This is a fertile area for the academics and practitioners working in the health tourism and hospitality industry specifically, crisis behavior as a general trend. They should be positive and optimistic. Still, there is hope to survive and return to the original position. They need to motivate health tourists to break their emotional negativity. They can attract health tourists with an excellent package which must ensure cost-effectiveness, safety, security, and relief from pain. This finding has potential contributions to the research of policy and strategy development for medical tourism.

Conclusion and limitations and future research guideline

This study, as the objective, addressed and revealed the physical, financial, and mental reasons which may have an impact on health tourists' attitude in seeking for the health service from any foreign health facilities across the borders. In this regard, considering both affective and cognitive components of attitude, it has identified nine physical, financial, and mental reasons which may shape the behavioral intention during any pandemic.

Interestingly, health tourists' analytical and logical inference about this pandemic situation has a direct impact on pursuing behavioral intention toward health tourism where some parameters related to self-existence during the current pandemic are playing the most crucial role in shaping their behavioral intention. It is also noteworthy to mention that tourists are not that much interested in recreation, and the paradigm of tourism is shifting from the traditional concept. Therefore, the health tourism and hospitality sector still have opportunities and scopes to boost up their business through promotional marketing reflecting aspects related to psychological and social motivation

which are directly related to safety and value. Academics and practitioners should gather deep insight from this significant finding.

While this research has made a substantial contribution to literature, it does have certain limitations that could be addressed and overcome by future researchers. It has figured out a systematic approach for future researchers to conduct research to understand human behavior considering all the components of attitude; however, this research captured its findings from the responses of health tourists of a single country. Future researchers can replicate this exact theoretical model to find the differences, if any, based on the differences in culture, society, and country. Some patients might be interested in selecting a medical facility based on their accreditation with the Joint Commission International (JCI). Since many patients are not familiar with this accreditation requirement, it is not considered as an independent variable. This is a limitation of the theoretical framework used in this study. Future researchers can consider this accreditation quality in their theoretical framework. Future researchers can test the moderating role of some demographic variables, for instance, gender, income, education level, family composition, and experience. The pandemic/COVID-19 is still running, and, to some extent, is becoming severe. If it prolongs, human perceptions might be changed or modified. So, further research or vertical research can advance our findings. This study had collected data only from three registered organizations making it a limitation of this study. There are many medical tourists who are not registered with these three organizations. So, future researchers can collect data randomly from the patients who want to avail themselves of foreign medical support.

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