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ORIGINAL CONTRIBUTION

Determinants and Consequences of Perceived Risks among Foreign Medical Tourists in Pakistan: An Empirical Investigation

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Abstract— This study aims to examine the factors that impact individuals' Behavioural Intentions towards Medical Health Tourism (BIMT) in Pakistan, focusing specifically on the evaluation of protection motivation appraisals (Coping Appraisal and Threat Appraisal). The protection motivation theory and the Knowledge, Attitude, and Behavior (KAB) model are two foundational models for the major mediating variable which is Perceived Risk in Medical Tourism (PRMT). The data from 238 foreign medical tourists, who were visiting certified Pakistani hospitals such as Agha Khan Karachi, Shifa International Islamabad, and Shaukat Khanam Pakistan, was analyzed using the Smart PLS-SEM (Partial Least Square Structural Equation Modeling) technique 3.0. These tourists were seeking treatment for a specific disease. The study results indicate that coping appraisal has no significant impact on PRMT. Nevertheless, the evaluation of potential threats did result in an elevation in perceived risk and threat, consequently influencing the conduct of those seeking medical treatment abroad. These findings are advantageous for administrators, practitioners, and scholars, as they contribute to a deeper comprehension of medical tourism in Pakistan and its advancement. This study had some limitations, which were subsequently addressed through the inclusion of recommendations for future research.

Index Terms— Behavioral intentions towards medical health tourism, Perceived risk in medical tourism, Protection motivation theory, Threat appraisal, Coping appraisal

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Introduction

Medical tourism, wherein individuals seek medical services from the global healthcare sector, has witnessed a notable surge in recent years (Seow et al., 2022). Medical tourism seeks treatment in another country for cost, specialized care, shorter wait times, or preference for a specific doctor or facility (Ekiyor and Gok, 2022). Common medical tourism procedures include cosmetic surgery, dental work, fertility treatments, cardiac surgeries, and cancer treatments. Popular destinations like Thailand, India, Mexico, Turkey, and Costa Rica offer quality healthcare at lower costs (Wright and Zascerinska, 2022). Over 30 countries provide medical services to travelers. The global market was worth $104.68 billion in 2019 and is expected to reach $273.72 billion by 2027. This industry includes healthcare, tourism, recreation, and more (Javed and Tučková, 2020).

In the 1990s, Pakistan saw a surge in transplant tourism, conducting 2,000 kidney transplants in 2006, with 1,500 for international patients. The healthcare sector, particularly in organ transplantation and fertility therapy, now shows significant potential (Qaisar et al., 2020). Pakistan is well recognized as a prominent tourism destination, mostly because to its abundant array of globally acclaimed tourist

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attractions (Irfan and Ali, 2020). Pakistan is a high-quality international destination for healthcare tourism, known for its quality and cost-effective medical services (Nazir, Yasin and Tat, 2021; Ullah et al., 2021). Pakistan's healthcare sector shows promise for medical tourism due to a skilled workforce, advanced technologies (Sheikh, Shahzad and Ku Ishaq, 2017), and successful public-private collaborations (Ali, 2022). Opting for healthcare services abroad is a significant commitment, involving substantial costs, focused efforts, and time dedication (Wang, Ghasemi, 2023).

When assessing the behavioral intention associated with medical tourism, a prominent component that readily comes to mind is the decision-making process (Chan, 2021). Understand tourists and analyze shifts in attitudes and behavioral strategies (Jabbar, Sheikh and Raza, 2023) that drive their motivation to travel (Ruan, Kang and Song, 2020). However, using smart technologies and communication can enable tourists to interact more quickly to receive their desired services (Sheikh et al., 2018; Rehman Khan et al., 2022). Acquiring medical tourism services can be elucidated by integrating the protection motivation theory with the Knowledge, Attitude, and Behavior (KAB) Model. The perceived risk experienced by individuals engaging in medical tourism is enhanced by various factors (Su et al., 2022). Medical tourism has more perceived risks than buying physical products. There is insufficient research on this subject, especially in Pakistan (Boguszewicz-Kreft, Kuczamer-Kłopotowska and Kozłowski, 2022).

The literature review revealed fourteen scholarly works that specifically examine the concept of perceived risks within medical tourism (Liang et al., 2019). Four publications above exhibited a theoretical orientation, offering conceptual frameworks and engaging in conversations about the subject matter. The remaining 10 publications in the study reported actual research findings, with three of them expressly using the theory of planned behavior (Seow et al., 2017; Liang et al., 2019; Dash, 2020) as the theoretical framework for their studies. Examining electronic databases for scholarly material on "risk perception" in "medical tourism" revealed limited primary research. Past studies primarily surveyed individuals from Western nations, indicating a need for further assessment in this area (Seow et al., 2017; Dash, 2020). The present study addresses this research gap by employing the protection motivation theory and KAB Model in Pakistan's medical tourism context (Chelliah, Khan and Kashi, 2021).

Furthermore, a notable deficiency exists in inter-regional and inter-country studies about medical tourism (Khan et al., 2017). Therefore, the primary objective of this study is to fill a gap in the existing research by examining the behavioral intentions towards medical tourism services and influence of perceived risks in tourists visiting Pakistan, a tourism destination that has not been previously explored in this respect (Lautier, 2014; Rab-Przybyłowicz, 2016).

For objectives as mentioned above, “protection motivation theory”, and “Knowledge, Attitude and Behavior (KAB Model)” are used. This approach contributes significantly to existing literature, addressing research gaps in the Pakistani context (Kabani, 2015; Abbasi et al., 2021; Nazneen et al., 2022). Pakistan is seen as an untapped medical tourism market with great potential. While cities like Islamabad, Karachi, and Lahore have modern hospitals and highly qualified medical professionals, addressing infrastructure and security issues is crucial for further growth (Javed and Ilyas, 2018; Ghasemi et al., 2022).

The Protection Motivation Theory (PMT), which focuses on health-related risk factors, is vital for understanding behavioral intentions in medical tourism. At the same time, threat appraisal and coping appraisal play key roles in addressing the severity of potential health conditions during medical tourism (Seow, Choong, C. K et al., 2022). Threat appraisal initiates action against health issues, followed by coping appraisal, emphasizing self-efficacy in managing and minimizing problems (Mariani and Borghi, 2022). Nevertheless, this study stands out due to its distinctive theoretical foundation and the creation of a study framework rooted in the Protection Motivation Theory and KAB model. This study is the first to elucidate the theoretical linkages outlined in the framework, in conjunction with these theories and models. This study is the first to address the medical tourism concerns of foreign tourists seeking medical assistance from Pakistani hospitals. It examines why these tourists feel insecure when making decisions and selecting Pakistani hospitals, and proposes strategies to mitigate these risks by implementing optimal factors outlined in the study.

Theoretical development

Various theories explore behavioral intentions in medical tourism, with Seow et al. (2021) and Seow et al. (2022) using PMT and the theory of planned behavior without linking behavior and intents. Research on medical tourism in Pakistan is limited, focusing on cultural aspects and some attention to COVID-19 effects. Studies emphasize intellectual capital, innovation, potential, and the promotion of transplantation services (Minas, Saeed and Ali, 2019; Sarfraz et al., 2022). This study fills gaps by proposing using Protection Motivation Theory (PMT) and the KAB model to understand behavioral intentions in medical tourism. Integrating elements like perceived risk enhances the model's novelty. Despite the rising popularity of medical tourism in Southeast Asia due to quality treatments and affordability, gaps persist in understanding how these factors influence practical behavioral intentions (Seow, Choong, C. K et al., 2022).

Protection Motivation Theory (PMT) in medical tourism

The PMT model, as expanded by Seow (2020), triggers behavioral changes by perceiving health threats and integrating threat and coping appraisals. In health tourism, Seow (2021) applies PMT to tourists' responses to perceived health risks, shaping their behavioral intentions through threat and coping appraisals (Ruan, Kang and Song, 2020). The literature supports PMT for predicting threats and coping appraisals, shaping individual health tourist behavior (Seow, et al., 2022).

Knowledge, Attitude, and Behavioral (KAB) model

KAB model (The Knowledge, Attitude, and Behavioral) is used explicitly in health guiding, medical knowledge, and preventive risk studies (Zheng, Wang and Wachenheim, 2018). In this model, individual knowledge development shapes attitudes, influenced by feelings and exposure, ultimately positively influencing behaviors (Teo, Burns and Kawabata, 2023). In the KAB model, knowledge encompasses information, attitudes involve feelings, and behavior is the action, with tourism knowledge focusing on gathering information, creating awareness, and understanding the risks and benefits of health tourism (Zheng, Wang and Wachenheim, 2018).

Literature review and hypothesis development

Coping appraisal, perceived risk, and behavioral intentions towards medical tourism

Traveling for medical tourism to other countries with the help of a coping assessment, tourists perceived risk about travel factors is reduced (Riad et al., 2022). According to the Protection Motivation Theory, coping appraisals reduce perceived uncertainties for medical tourism because they feel capable of dealing with threats and develop behavioral intention for medical tourism (Chan, 2021). Tourists' confidence in coping abilities reduces the perceived risk of infectious diseases who become confident and self-reliant (Prasetyo et al., 2020). Coping appraisal shapes behavioral intentions for international travel. Low coping ability increases uncertainties, leading to avoidance, while high coping ability enhances perceived control, promoting behavioral intentions for medical tourism (Sas et al., 2021). Above in view, following hypotheses have been formulated.

H1: Coping appraisal has an influential impact on perceived risk for medical tourism.

H1a: Perceived risk mediates the relationship between coping appraisal and behavioral intention towards medical tourism.

Threat appraisal, perceived risk, and behavioral intentions towards medical tourism

The rising harmful impact of Covid-19 on tourism and hospitality stems from strong threat appraisals by tourists, creating uncertainties and influencing behavioral intentions for medical tourism (Riad et al., 2022). According to the protective motivation theory, positive threat appraisals resist uncertainties, while negative appraisals hinder international medical travel decisions (Fukuda, Ando and Fukuda, 2021). Perceived uncertainties, influenced by health effects of infections, shape behavioral intentions; protective measures enhance positive intentions (Seow et al., 2022). Attitudes toward travel, influenced by others' experiences and knowledge, can foster positive or negative behavioral intentions for medical tourism (Lange et al., 2021). Considering the above discussions, the following hypotheses have been developed.

H2: Threat Appraisal has an influential impact on perceived risk for medical tourism.

H2a: Perceived risk mediates the relationship between threat appraisal and behavioral intention towards medical tourism.

Furthermore, perceived risk is related to the potential consequences of a behavior or decision, including potential negative long-term effects and the degree of voluntariness or control over the exposure to the risk (Fuchs and Reichel, 2011). One significant factor influencing travel decision-making is the perception of danger or risk (Dholakia, 2001; Kozak et al., 2007), like intentions (Anatolia 2012; Chaulagain et al., 2023). Previous studies have indicated that the risk assessments made by tourists are more significantly impacted by their subjective perceptions of peril rather than the objective hazards and tangible circumstances linked with specific travel destinations (Irvine and Anderson, 2005). Hence, it is posited that;

H3: Perceived risk has an influential impact on behavioral intention to medical health tourism.

Research framework

A comprehensive research framework has been organized based on the above hypotheses, given below in the Figure 1.

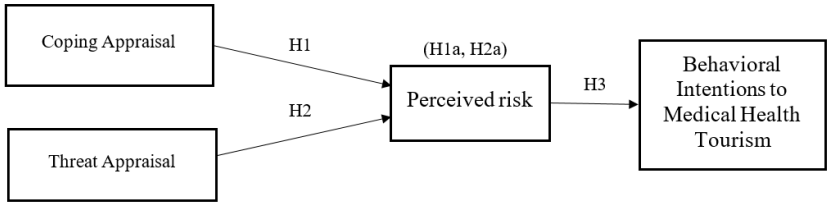

Fig. 1 *Research framework*

Methodology

The researchers employed a quantitative approach. This study uses cross-sectional quantitative data collection to yield generalized outcomes with statistical values, utilizing a survey methodology as the research tool. This study explores the medical tourism intentions of foreign tourists in Pakistan who are well-educated and economically affluent. Data was collected through convenient sampling via airport interactions, hospital visits, and resort stays. The minimum sample size for structural equation modeling is set at 357 by using the thumb rule (Saunders, Lewis and Thornhill, 2007, 2009). The study gathered primary data from foreign medical tourists visiting Pakistan in three ways: 1) by visiting the medical tourists at the tourist spots or hospitals 2) by e-mailing the questionnaires, and 3) by sending questionnaires through courier services 4) the medical tourism management in Pakistan.

Measurements

The scale for Medical tourism behavioral intention was adapted from Anderson and Agarwal's (2010) study by Seow (2021) and the same is used in present study. The scale utilized for perceived risk in this study consisting four items to assess the concept of fundamental risk was derived from the study of Laroche et al. (2004) by (Kim, 2022). The five items each scale for threat appraisal and coping appraisal was adapted from Tapsuwan et al. (2017), which have recently been used in a study by Seow, (2021). A five-point Likert scale is used in the self-administered questionnaires for collecting the data.

Data analysis

Measurement model assessment

The measurement model employed in the study represents the quality of the constructs outlined in the study framework. The assessment of the measurement model involves evaluating several key criteria, including factor loadings, construct validity, and reliability (Weiner et al., 2017). On the other hand, reliability examines consistency and stability (Saunders, Lewis and Thornhill, 2009).

Factor loadings

It is evident that all factor loadings exhibit values above 0.50. This implies a reasonable correlation between the variables' items (Hair et al., 2016). Therefore, based on the findings of this investigation, it was determined that the loadings were appropriate in terms of validity.

Indicator multicollinearity

Table 1, given below, gives values of VIF against items of all study predictors which are significantly below 5 (Hair et al., 2016). Thus, we can conclude that the study has no issues with multicollinearity.

Reliability analysis

The study utilized Cronbach's alpha and composite reliability, both exceeding the 0.7 threshold, indicating satisfactory reliability, and supporting the study's results (Shrestha, 2021) as detailed in Table 1.

Table I
Reliability, AVE, loadings, VIF

Construct	Items	Loadings	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)	VIF
Behavioral Intention to Medical Tourism	BIMT1	0.779	0.866	0.904	0.653	1.841
	BIMT2	0.857				2.346
	BIMT3	0.825				2.217
	BIMT4	0.854				2.428
	BIMT5	0.717				1.547
Coping Appraisal	CA1	0.837	0.889	0.904	0.659	2.811
	CA2	0.600				1.569
	CA3	0.873				3.044
	CA4	0.765				2.199
	CA5	0.940				2.302
Threat Appraisal	TA1	0.630	0.723	0.826	0.545	1.216
	TA2	0.728				1.640
	TA3	0.763				1.282
	TA4	0.818				1.833
Perceived Risk in Medical Tourism	PRMT1	0.804	0.836	0.879	0.518	2.239
	PRMT2	0.864				2.900
	PRMT3	0.773				2.040
	PRMT4	0.825				2.429
	PRMT5	0.621				1.384
	PRMT6	0.530				1.363
	PRMT7	0.534				1.372

The factor loadings also indicate the strength of the relationship between the items and their respective constructs. Value of Cronbach's alpha coefficient of 0.70 or above indicates a satisfactory level of internal consistency dependability. Statistics as mentioned above in Table 1 and their significance have been summarized separately in the following lines.

- **Behavioral intention to medical tourism:** All factor loadings (BIMT1, BIMT2, BIMT3, BIMT4, BIMT5) are significant. Cronbach's alpha (0.866) and composite reliability (0.904) are above the threshold of 0.7. AVE for BIMT1 (0.653) is above the threshold of 0.5. The VIFs for all factors are within acceptable limits.
- **Coping appraisal:** All factor loadings (CA1, CA2, CA3, CA4, CA5) are significant.
  Cronbach's alpha (0.889) and Composite reliability (0.904) are above the threshold of 0.7. AVE for CA1 (0.659) is above the threshold of 0.5. The VIFs for all factors are within acceptable limits.
- **Perceived risk in medical tourism:** All factor loadings (PRMT1, PRMT2, PRMT3, PRMT4, PRMT5, PRMT6, PRMT7) are significant. Cronbach's Alpha (0.836) and composite reliability (0.879) are above the threshold of 0.7. AVE for PRMT1 (0.518) is below the threshold of 0.5.
- **Threat appraisal:** All factor loadings (TA1, TA2, TA3, TA4) are significant. Cronbach's alpha (0.723) and composite reliability (0.826) are above the threshold of 0.7. AVE for TA1 (0.545) is below the threshold of 0.5. The VIFs for all factors are within acceptable limits.

In conclusion, the study constructs demonstrate strong factor loadings, good internal consistency, acceptable convergent validity, and no significant multicollinearity issues.

Fornell and Larcker criterion

The measures in this study surpass correlations with other constructs, demonstrating distinct aspects (Rönkkö and Cho, 2022). The highest factor loadings support discriminant validity, confirming unique dimensions. The Fornell-Larcker criterion in table 2 illustrates study constructs' discriminant validity based on inter-factor correlations. The results indicate that the study has successfully demonstrated the discriminant validity.

Table II
Fornell-Larcker criterion

	BIMT	CA	PRMT	TA
Behavioral Intention to Medical Tourism (BIMT)	0.808			
Coping Appraisal (CA)	0.076	0.812		
Perceived Risk in Medical Tourism (PRMT)	0.814	0.166	0.719	
Threat Appraisal (TA)	0.537	0.078	0.569	0.738

Heterotrait-Monotrait Ratio (HTMT)

HTMT ratios in Table 3 are significantly below the 0.85-0.90 thresholds, affirming discriminant validity. This indicates low correlations between constructs, reinforcing their distinctiveness.

Table III
Heterotrait-Monotrait Ratios (HTMT)

	BIMT	CA	PRMT	TA
Behavioral Intention to Medical Tourism (BIMT)	0.462			
Coping Appraisal (CA)	0.088			
Perceived Risk in Medical Tourism (PRMT)	0.654	0.157		
Threat Appraisal (TA)	0.650	0.110	0.569	0.739

Hypotheses testing direct relationships

Direct hypotheses

This section employs PLS to test hypotheses, uncovering significant path coefficients

Table IV
Direct hypotheses testing

	Beta	Standard Deviation (STDEV)	*t* Statistics (|O/STDEV|)	*p* Values	Outcomes
CA has a Negative Impact on PRMT	0.054	0.070	0.776	0.219	Not Supported
TA has a Positive Impact on PRMT	0.283	0.080	3.521	0.000	Supported
PRMT has a Negative Impact on BIMT	0.928	0.065	14.319	0.000	Supported

Table 4 indicates a non-significant relationship between coping appraisal (CA) and Perceived Risk in Medical Tourism (PRMT) (t = 0.776, p = 0.219). Thus, H1 is not supported. Furthermore, the relationship between Threat Appraisal (TA) and Perceived Risk in Medical Tourism (PRMT) is statistically significant (t = 3.521, p = 0.000, O = 0.283). Thus, H2 is supported. H3 results indicate a significant relationship between perceived risk in medical tourism (PRMT) and behavioral intentions (BIMT) (t = 14.319, p = 0.000). Higher perceived risk is associated with lower behavioral intentions, implying potential deterrent effects on medical tourism participation.

Mediation analysis

This study has also examined the mediating role of perceived risk in medical tourism (PRMT) between the predictor variables and the dependent variable, behavioral intentions toward medical tourism, as described in Table 5 below.

Table V
Mediation hypotheses results

	Original Sample (O)	Standard Deviation (STDEV)	*t* Statistics	5.0%	95.0%	*p* Values	Results
H1a: PRMT Mediates the Relationship Between CA and BIMT	0.050	0.065	0.774	-0.048	0.157	0.219	Not Accepted
H2a: PRMT Mediates the Relationship Between TA and BIMT	0.263	0.073	3.603	0.153	0.396	0.000	Accepted

For H1a, the mediation effect of Perceived Risk in Medical Tourism (PRMT) between Coping Appraisal (CA) and Behavioral Intention (BIMT) is not statistically significant (t = 0.774, p = 0.219, effect size = 0.050). This suggests incomplete mediation of the relationship between CA and BIMT by PRMT. At the same time, H2a reveals a significant mediation effect of perceived risk in Medical Tourism (PRMT) between Threat Appraisal (TA) and Behavioral Intention (BIMT) (t = 3.603, p = 0.000, effect size = 0.263). Strong evidence suggests that PRMT mediates the TA-BIMT relationship.

The study's significance in medical tourism, revealing that while perceived risk in Medical Tourism (PRMT) does not fully mediate the relationship between Coping Appraisal (CA) and Behavioral Intention (BIMT), other factors or mechanisms may contribute to these results (Sonmez and Graefe, 1998). Medical tourists may view the medical tourism destination as a whole. The previous research mentioned that the tourists' coping ability reduces perceived risk as they trust their endurance capabilities and control over circumstances (Prasetyo et al., 2020). This follows the Protection Motivation Theory, and the medical tourist would pursue their behavioral intention for medical tourism by having coping ability (Chan, 2021). On the other hand, if coping appraisal is weak, the medical tourists would have less control, so their behavioral intentions toward medical tourism would also be reduced. A similar impact has been identified in the previous study by (Sas et al., 2021). They have more perceived risks in their decision that ultimately affect their behavioral intentions toward medical tourism, just as identified by (Riad et al., 2022).

The analysis conducted for mediation hypothesis H1a is insignificant, indicating that Perceived Risk in Medical Tourism (PRMT) may not fully mediate the relationship between Coping Appraisal (CA) and Behavioral Intention to Engage in Medical Tourism (BIMT). Hypothesis H2a suggests that perceived risk in Medical Tourism (PRMT) acts as a significant mediator between Threat appraisal (TA) and Behavioral Intention to Engage in Medical Tourism (BIMT). These results highlight the crucial role of individuals' perception of risk in shaping their intentions to participate in medical tourism.

In the extant literature, various scholars reported similar findings that threat appraisal among travelers has proven to develop the perceived risks related to medical tourism as they become further defensive in assessing risks and corresponding resistance and measures against the anticipated threat (Chua et al., 2021). Like the present study, Chua et al. (2021) considered the Protection Motivation as the underpinning theory, concluding that the threat appraisal restrained perceived risks for medical tourism (Fukuda, Ando and Fukuda, 2021). The post Covid-19 research studies also had similar results (Seow, et al., 2022). Therefore, the perceived risk cognized trough the predictor variables of the study, has proven to have impact on consumer behavioral intentions, and these findings are in line with prior studies on consumer decisions related to travel (Mitchell and Vassos, 1998; Reisinger and Mavondo, 2006; Kozak, Crotts and Law, 2007), and their behavioral intentions (Floyd et al., 2004; An, Lee and Noh, 2010; Çetinsöz and Ege, 2013).

Implications

Theoretically, this study enhances the protection motivation theory by introducing components relevant to medical tourism. Perceived risk mediates the relationship between threat appraisal and behavioral intention in medical tourism. Integrating the protection motivation theory and the Knowledge, Attitudes, and Behavior Model has better-explained consumer behaviors related to medical tourism. Threat appraisal has been crucial in motivating medical tourists' behavioral intentions. Practically, this study has vital implications for Pakistan's healthcare industry, offering insights for administrators in navigating medical tourism challenges. The findings apply broadly to similar Asian countries, stressing the importance of informed strategies in this strategically significant sector. To motivate individuals toward medical tourism, the industry must proactively address perceived risks, considering individual factors like coping appraisal and threat appraisal. Adapting information and services to address these factors and provide support can help manage concerns and motivations.

Limitations of the study and future recommendations

The study's cross-sectional design makes it hard to follow changes over time and identify sector differentiation across related industries. Future research may use longitudinal studies to understand dynamic attitudes in both public and private healthcare. Recommendations include employing qualitative methods, larger sample sizes, and multi-country studies for deeper insights and applicability. Implementing these suggestions can enhance strategies for the sustainable growth of the medical tourism industry. However, it is the government's corporate social responsibility to bring friendly and smart technologies into the country to enhance the interconnectivity among the hospitals and to bring international patients on one platform (Sheikh, Shahzad and Ishak, 2016; Khan, Sheikh and Tahir, 2023). Therefore, this study suggests identifying the antecedents like smart technologies, CSR, digital marketing, Artificical intelligence enabled technologies to reduce the perceived risk of tourism and make the decision process more accessible for the patients (Hassan et al., 2023).

Conclusion

The study involved foreign visitors who were afflicted with a certain sickness and were seeking treatment at the prestigious hospitals in Pakistan. The study employed a cross-sectional design and gathered data through a survey questionnaire. The collected data was then analyzed using smart PLS-SEM. This study has significant significance for Pakistan's healthcare business, providing valuable insights for administrators in effectively addressing difficulties related to medical tourism. In conclusion, this study enriches the protection motivation theory and KAB model by incorporating components that are pertinent to the field of medical tourism. The link between threat evaluation and behavioral intention in medical tourism is influenced by the perception of risk. The amalgamation of the protection motivation theory and the KAB Model has provided a more comprehensive elucidation of consumer behaviors pertaining to medical tourism. The assessment of potential dangers has been essential in stimulating the behavioral intentions of medical tourists.

REFERENCES

Abbasi, G. A. et al. (2021). Understanding the intention to revisit a destination by expanding the Theory of Planned Behaviour (TPB). *Spanish Journal of Marketing. 25*(2), 282–311. doi:10.1108/SJME-12-2019-0109.

Ali, S. (2022). Analysis on barriers to development of the Public-Private Partnership (PPP) in health sector of Pakistan: Analytic hierarchy process approach (Master's thesis). Yonsei University, Incheon, South Korea.

An, M., Lee, C. and Noh, Y. (2010). Risk factors at the travel destination: Their impact on air travel satisfaction and repurchase intention. *Service Business, 4*(2), 155–166. doi:10.1007/s11628-010-0094-2.

Anatolia, C. L.- and 2012, undefined (2012). Tourism, trade, and income: Evidence from Singapore. *Taylor & Francis, 23*(3), 348–358. doi:10.1080/13032917.2012.701596.

Boguszewicz-Kreft, M., Kuczamer-Kłopotowska, S. and Kozłowski, A. (2022). The role and importance of perceived risk in medical tourism. Applying the theory of planned behaviour. Plos One, 17(1), e0262137. doi: 10.1371/journal.pone.0262137.

Çetinsöz, B. C. and Ege, Z. (2013). Impacts of perceived risks on tourists revisit intentions. *Anatolia, 24*(2),173–187. doi:10.1080/13032917.2012.743921.

Chan, C. S. (2021). Developing a conceptual model for the post-COVID-19 pandemic changing tourism risk perception. *International Journal of Environmental Research and Public Health, 18*(18), 9824. doi:10.3390/ijerph18189824.

Chaulagain, S. et al. (2023). Understanding the determinants of intention to stay at medical hotels: A customer value perspective. *International Journal of Hospitality Management, 112*,103464. doi:10.1016/j.ijhm.2023.103464.

Chelliah, S., Khan, M. J. and Atabakhshi Kashi, A. B. (2021). Antecedents of perceived beneficial destination image: A study on Middle-Eastern medical tourists visit Iran. *International Journal of Pharmaceutical and Healthcare Marketing, 15*(1), 43–63. doi:10.1108/IJPHM-07-2018-0039.

Chua, B. L. et al. (2021). Impact of health risk perception on avoidance of international travel in the wake of a pandemic. *Current Issues in Tourism, 24*(7), 985–1002. doi:10.1080/13683500.2020.1829570.

Dash, A. (2020). Exploring visit intention to India for medical tourism using an extended theory of planned behaviour. *Journal of Hospitality and Tourism Insights, 4*(4), 418–436. doi:10.1108/JHTI-03-2020-0037.

Dholakia, U. M. (2001). A motivational process model of product involvement and consumer risk perception. *European Journal of Marketing, 35*(11/12), 1340–1362. doi:10.1108/eum0000000006479.

EKİYOR, A., & Gülhan, G. Ö. K. (2022). Niche markets in medical tourism. *International Journal of Health Management and Tourism, 7*(1), 1-22.

Floyd, M. F., Gibson, H., Pennington-Gray, L., & Thapa, B. (2004). The effect of risk perceptions on intentions to travel in the aftermath of September 11, 2001. *Journal of Travel & Tourism Marketing, 15*(2-3), 19-38. doi:10.1300/J073v15n02_02.

Fuchs, G., & Reichel, A. (2011). An exploratory inquiry into destination risk perceptions and risk reduction strategies of first time vs. repeat visitors to a highly volatile destination. *Tourism management, 32*(2), 266-276. doi:10.1016/j.tourman.2010.01.012.

Fukuda, Y., Ando, S., & Fukuda, K. (2021). Knowledge and preventive actions toward COVID-19, vaccination intent, and health literacy among educators in Japan: An online survey. *Plos One, 16*(9), e0257552. doi:10.1371/journal.pone.0257552.

Ghasemi, M., Sahranavard, S. A., Alola, U. V., & Hassanpoor, E. (2023). Can cost and quality management-oriented innovation enhance patient satisfaction in medical tourist destination?. *Journal of Quality Assurance in Hospitality & Tourism, 24*(6), 806-835. doi:10.1080/1528008X.2022.2089438.

Hassan, N. M., Khan, S. A. R., Ashraf, M. U., & Sheikh, A. A. (2023). Interconnection between the role of blockchain technologies, supply chain integration, and circular economy: A case of small and medium-sized enterprises in Pakistan. *Science Progress, 106*(3), 00368504231186527. doi:10.1177/00368504231186527.

Irfan, E., & Ali, Y. (2020, November). Religious tourism in Pakistan: Scope, obstacles & strategies. Journal of Convention & Event Tourism, 22,(2), 134-154. doi:10.1080/15470148.2020.1852990.

Irvine, W., & Anderson, A. R. (2006). The effect of disaster on peripheral tourism places and the disaffection of prospective visitors. *Tourism, security & safety: From Theory to Practice, 54*, 169-186. doi:10.4324/9780080458335.

Jabbar, A., Sheikh, A. A., & Raza, S. H. (2023). Examining the role of masstige value between celebrity endorsement and consumer engagement of fashion brands: An empirical study. *International Journal of Business and Economic Affairs, 8*(3), 103-111. doi:10.24088/ijbea-2023-83008.

Javed, M., & Tučková, Z. (2020). The role of government in tourism competitiveness and tourism area life cycle model. *Asia Pacific Journal of Tourism Research, 25*(9), 997-1011. doi:10.1080/10941665.2020.1819836.

Javed, S. A., & Ilyas, F. (2018). Service quality and satisfaction in healthcare sector of Pakistan—the patients' expectations. *International journal of Health Care Quality Assurance, 31*(6), 489-501. doi:10.1108/IJHCQA-08-2016-0110.

Kabani, O. (2015). Pakistan as a medical tourism destination: Just wishful thinking?. *Zdrowie Publiczne i Zarządzanie, 13*(1), 109-114.

Khan, M. J., Chelliah, S., Haron, M. S., & Ahmed, S. (2017). Role of travel motivations, perceived risks and travel constraints on destination image and visit intention in medical tourism: Theoretical model. *Sultan Qaboos University Medical Journal, 17*(1), e11. doi:10 .18295/squmj.2016.17.01.003.

Khan, S. A. R., Sheikh, A. A., & Tahir, M. S. (2024). Corporate social responsibility—an antidote for sustainable business performance: Interconnecting role of digital technologies, employee eco-behavior, and tax avoidance. *Environmental Science and Pollution Research, 31*(3), 4365-4383.doi:10.1007/s11356-023-31377-9.

KIM, M. (2022). A multi-level approach to perceived risks of medical tourism service and purchase intention: An empirical study from Korea. *The Journal of Asian Finance, Economics and Business, 9*(1), 373-385. doi:10.13106/jafeb.2022.vol9.no1.0373.

KIM, M. (2022). A multi-level approach to perceived risks of medical tourism service and purchase intention: An empirical study from Korea. *The Journal of Asian Finance, Economics and Business, 9*(1), 373-385. doi:10.1002/jtr.607.

Kozak, M., Crotts, J. C., & Law, R. (2007). The impact of the perception of risk on international travellers. *International Journal of Tourism Research, 9*(4), 233-242. doi:10.1002/jtr.607.

Lange, M., Löwe, A., Stassen, G., & Schaller, A. (2021). Health literacy, health status and health behaviors of German students–study protocol for the "Healthy Habits" cohort study. *BMC Public Health, 21*(1), 1-10. doi:10.1186/s12889-021-11542-w.

Lautier, M. (2014). International trade of health services: Global trends and local impact. *Health Policy, 118*(1), 105-113. doi:10.1016/j.healthpol.2014.07.004.

Liang, L. J., Choi, H. C., Joppe, M., & Lee, W. (2019). Examining medical tourists' intention to visit a tourist destination: Application of an extended MEDTOUR scale in a cosmetic tourism context. *International Journal of Tourism Research, 21*(6), 772-784. doi:10.1002/jtr.2303.

Minas, A. S., & Chishty, K. A. (2019). Medical tourism in Pakistan: Current status, opportunities and challenges to its growth. *International Journal of Scientific and Engineering Research, 10*(5), 68-93.

Mitchell, V. W., & Vassos, V. (1998). Perceived risk and risk reduction in holiday purchases: A cross-cultural and gender analysis. *Journal of Euromarketing, 6*(3), 47-79. doi:10.1300/j037v06n03_03.

Nazir, M. U., Yasin, I., & Tat, H. H. (2021). Destination image's mediating role between perceived risks, perceived constraints, and behavioral intention. *Heliyon, 7*(7), 1-11. doi:10.1016/j.heliyon.2021.e07613.

Nazneen, S., Xu, H., Din, N. U., & Karim, R. (2021). Perceived COVID-19 impacts and travel avoidance: Application of protection motivation theory. *Tourism Review, 77*(2), 471-483. doi:10.1108/TR-03-2021-0165.

Prasetyo, Y. T., Castillo, A. M., Salonga, L. J., Sia, J. A., & Seneta, J. A. (2020). Factors affecting perceived effectiveness of COVID-19 prevention measures among Filipinos during enhanced community quarantine in Luzon, Philippines: Integrating protection motivation theory and extended theory of planned behavior. *International journal of infectious diseases, 99*, 312-323. doi:10.1016/j.ijid.2020.07.074.

Qaisar, I., Manzoor, S., & Hashmi, M. (2020). Legal and ethical issues of organ transplantation in Pakistan a critical appraisal in Sharī 'ah's perspective. *Ma'ārif-e-Islāmī, 19*(1), 35-57.

Rab-Przybyłowicz, J. (2016). Trends and socio-economic aspects of medical tourism development in Poland. *Studia Periegetica, 16*(2), 99-118.

Rehman Khan, S. A., Ahmad, Z., Sheikh, A. A., & Yu, Z. (2022). Digital transformation, smart technologies, and eco-innovation are paving the way toward sustainable supply chain performance. *Science Progress, 105*(4), 00368504221145648. doi:10.1177/00368504221145648 .

Reisinger, Y., & Mavondo, F. (2006). Cultural differences in travel risk perception. *Journal of Travel & Tourism Marketing, 20*(1), 13-31. doi:10.1300/J073v20n01_02.

Riad, A., Buchbender, M., Howaldt, H. P., Klugar, M., Krsek, M., & Attia, S. (2022). Oral health Knowledge, Attitudes, and Behaviors (KAB) of German dental students: Descriptive cross-sectional study. *Frontiers in medicine, 9*, 852660. doi:10.3389/fmed.2022.852660.

Rönkkö, M., & Cho, E. (2022). An updated guideline for assessing discriminant validity. *Organizational Research Methods, 25*(1), 6-14. doi:10.1177/1094428120968614.

Ruan, W., Kang, S., & Song, H. (2020). Applying protection motivation theory to understand international tourists' behavioural intentions under the threat of air pollution: A case of Beijing, China. *Current Issues in Tourism, 23*(16), 2027-2041. doi:10.1080/13683500 .2020.1743242.

Sarfraz, M., Raza, M., Khalid, R., Ivascu, L., Albasher, G., & Ozturk, I. (2022). Coronavirus disease 2019 safety measures for sustainable tourism: The mediating effect of tourist trust. *Frontiers in Psychology, 13*, 784773. doi:10.3389/fpsyg.2022.784773.

Sas, M., Reniers, G., Ponnet, K., & Hardyns, W. (2021). The impact of training sessions on physical security awareness: Measuring employees' knowledge, attitude and self-reported behaviour. *Safety science, 144*, 105447. doi:10.1016/j.ssci.2021.105447.

Saunders, M., Lewis, P., & Thornhill, A. (2003). *Research methods forbusiness students*. Hoboken, NJ: Prentice Hall.

Saunders, M. N., Lewis, P., Thornhill, A., & Bristow, A. (2015). Understanding research philosophy and approaches to theory development. In: Saunders, Mark N. K.; Lewis, Philip and Thornhill, Adrian eds. *Research methods for business students.* London, England:Pearson Education.

Seow, A. N., Choong, Y. O., Moorthy, K., & Chan, L. M. (2017). Intention to visit Malaysia for medical tourism using the antecedents of theory of planned behaviour: A predictive model. *International Journal of Tourism Research, 19*(3), 383-393. doi:10.1002/jtr.2120.

Seow, A. N., Choong, Y. O., Moorthy, K., & Choong, C. K. (2021). Predicting medical tourism behavioural intention using social cognition models. *Tourism Review, 76*(2), 374-391.

Seow, A. N., Choong, C. K., Chen, I. C., & Choong, Y. O. (2022). Can protection motivation theory explain the perception of international tourists' on medical tourism?. *Journal of Hospitality and Tourism Insights, 5*(2), 394-412. doi:10.1108/JHTI-10-2020-0189.

Seow, A. N., Choong, Y. O., Choong, C. K., & Moorthy, K. (2022). Health tourism: behavioural intention and protection motivation theory. *Tourism Review, 77*(2), 376-393. doi:10.1108/TR-11-2020-0546.

Sheikh, A. A., Rana, N. A., Inam, A., Shahzad, A., & Awan, H. M. (2018). Is e-marketing a source of sustainable business performance? Predicting the role of top management support with various interaction factors. *Cogent Business & Management, 5*(1), 1516487. doi:10.1080/23311975.2018.1516487.

Sheikh, A. A., Shahzad, A., & Ishak, A. K. (2016). The mediating impact of e-marketing adoption on export performance of firms: A conceptual study. *Journal of Technology and Operations Management, 11*(1), 48-58.

Sheikh, A. A., Shahzad, A., & Ku Ishaq, A. (2017). The growth of e-marketing in business-to-business industry and its effect on the performance of businesses in Pakistan: Marketing success. *International and Multidisciplinary Journal of Social Sciences, 6*(2), 178-214. doi:10.17583/rimcis.2017.2704.

Shrestha, N. (2021). Factor analysis as a tool for survey analysis. *American Journal of Applied Mathematics and Statistics, 9*(1), 4-11. doi:10.12691/ajams-9-1-2.

Sönmez, S. F., & Graefe, A. R. (1998). Determining future travel behavior from past travel experience and perceptions of risk and safety. *Journal of Travel Research, 37*(2), 171-177. doi:10.1177/004728759803700209.

Su, D. N., Tran, K. P. T., Nguyen, L. N. T., Thai, T. H. T., Doan, T. H. T., & Tran, V. T. (2022). Modeling behavioral intention toward traveling in times of a health-related crisis. *Journal of Vacation Marketing, 28*(2), 135-151. doi:10.1177/13567667211024703.

Teo, C. J. H., Burns, S. F., & Kawabata, M. (2023). Developing nutrition knowledge and attitude measures for athletes with the knowledge–attitude–behavior model. *Research Quarterly for Exercise and Sport, 94*(1), 110-117. doi:10.1080/02701367.2021.1942771.

Ullah, N., Zada, S., Siddique, M. A., Hu, Y., Han, H., Vega-Muñoz, A., & Salazar-Sepúlveda, G. (2021). Driving factors of the health and wellness tourism industry: A sharing economy perspective evidence from KPK Pakistan. *Sustainability, 13*(23), 13344. doi:10.3390/su132313344.

Wang, H., Ghasemi, M., Ghadiri Nejad, M., & Khandan, A. S. (2023). Assessing the potential growth of Iran's hospitals with regard to the sustainable management of medical tourism. *Health & Social Care in the Community, 2023*, 1-12.

Weiner, B. J., Lewis, C. C., Stanick, C., Powell, B. J., Dorsey, C. N., Clary, A. S., ... & Halko, H. (2017). Psychometric assessment of three newly developed implementation outcome measures. *Implementation science, 12*, 1-12. doi:10.1186/s13012-017-0635-3.

Wright, D. W. M., & Zascerinska, S. (2023). Becoming immortal: Future wellness and medical tourism markets. *Journal of Tourism Futures, 9*(2), 168-195. doi:10.1108/JTF-05-2021-0119.

Zheng, S., Wang, Z., & Wachenheim, C. (2018). Risk perceptions and risk attitudes among Chinese consumers: The toxic capsule crisis. *Journal of Risk Research, 21*(10), 1184-1196. doi:10.1080/13669877.2017.1281337.