

The Influence of Motivational Factors on Medical Tourists' Intention in Sarawak: The Moderating Effect of Consumption Value

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ABSTRACT

This study explores the changing expectations of medical tourists, addressing issues concerning long wait times, the appeal of cost-effective treatments abroad, and the technological advancements that compel businesses to adapt to remain competitive., and technological advancements that cause businesses' adaptation to client needs for sustained competitiveness. It investigates the relationship between consumption value variables and the factors influencing medical tourists' decisions to visit Kuching, Sarawak, Malaysia. Through comprehensive literature research conducted with 708 medical tourists, the research employs partial least squares analysis and then bootstrapping. The findings make significant contributions to the healthcare services literature by supporting a health service paradigm that connects the government, Organizations, and competitors. As Sarawak seeks to enhance its position in the burgeoning Southeast Asian medical tourism market, this study underscores the region's alignment with National Key Economic Area initiatives. The findings of this study are expected to aid tourism authorities in choosing suitable medical tourism development models for Sarawak.

Keywords: Branding, Consumption value, Price, Medical tourism, Push and Pull factors

INTRODUCTION

Medical tourism entails individuals seeking medical care beyond their localities (Lunt et al., 2016), has become a prominent global phenomenon that creates economic prospects for developing locations such as Sarawak, Malaysia. Since the 1990s, the medical tourism industry has prospered in several Southeast Asian nations, such as Malaysia, Singapore, Thailand, and India, owing to the provision of contemporary and cost-effective healthcare (Chandran et al., 2018; Lee & Tan, 2023; Lunt et al., 2016; Mas'od et al., 2020). Since 2017, Sarawak has witnessed significant expansion in medical tourism, with over one million visitors, predominantly from Indonesia (Purba, 2017; Saragih & Jonathan, 2019). This migration has favorably influenced the economy and offered a variety of economical, high-quality healthcare options. The COVID-19 pandemic has altered the dynamics of healthcare tourism, highlighting health safety, risk perception, and the perceived value among medical tourists. Consequently, comprehending the post-pandemic transformation in motivations and values of medical tourists is crucial for Sarawak to effectively capitalize on its potential in this area.

Problem Statement

Research has examined the variables encouraging medical tourists to pursue care internationally; however, the epidemic has presented additional considerations that affect tourists' intentions and decisions. These alterations provide problems for healthcare professionals and tourism stakeholders, who must now understand the shifting interests of medical tourists, including value judgments and risk evaluations. In Sarawak, a burgeoning market for medical tourism, there is an urgent necessity to ascertain the principal motivational elements influencing travelers' intents in the post-pandemic period. Furthermore, the influence of consumption value—comprising

functional, social, emotional, epistemic, and conditional values—on moderating these motivating elements is yet inadequately examined. In the absence of a thorough comprehension of how consuming values affect visitors' choices, Sarawak jeopardizes vital insights essential for positioning itself as a favored location for medical tourists in the evolving global context. Supplementary motivating variables, including physiological security, love and belonging, self-esteem, self-actualization, and information acquisition, are increasingly influential in medical tourism.

Research Gaps

While current research recognizes push factors such as dissatisfaction with local healthcare, cost, quality of care, and destination allure (Lunt et al., 2016), along with pull factors like technological and economic benefits (Lee & Tan, 2023; Lunt et al., 2016; Mas'od et al., 2020), it insufficiently explores the interplay between these factors and consumption value (Drinkert, 2015). Moreover, whereas prior research has focused on the quality and expense of treatment (Manaf et al., 2015; Cham et al., 2020), it has predominantly neglected the intricate aspects of perceived value and psychological influences on medical tourism choices. The correlation between motivational factors and consumer value in the post-pandemic era has been inadequately explored, and the moderating influence of consumption value on motivational factors and visitation intent remains insufficiently examined, particularly concerning emerging medical tourism destinations such as Sarawak. Addressing this gap is essential for comprehending how Sarawak may strategically position itself to attract medical tourism by aligning its service offers with consumer motives and value perceptions.

Research Objectives

This research seeks to investigate the impact of motivational factors on the intentions of medical tourists to visit Sarawak, particularly emphasizing the moderating effect of consumer value in a post-pandemic context. The research aims are outlined as follows:

1. To investigate the principal motivational determinants affecting medical tourists' inclinations to pursue healthcare services in Sarawak.
2. To examine the multifaceted aspects of consumption value and evaluate their impact on the decision-making of medical tourists.
3. To examine the moderating influence of consumption value on the correlation between motivational factors and the intention of medical tourists to visit Sarawak.
4. To offer guidance to healthcare providers, governments, and tourism stakeholders on improving Sarawak's competitiveness as a medical tourism destination in the post-pandemic era.

This research seeks to elucidate the reasons and value perceptions influencing medical tourists' decisions, thereby aiding Sarawak in formulating a strategic plan to establish itself as a desirable destination in the worldwide medical tourism industry.

LITERATURE REVIEW

Medical tourism, an increasingly burgeoning industry, entails patients pursuing medical treatment overseas in nations such as Costa Rica, Brazil, Germany, Hungary, India, Malaysia, Singapore, South Korea, Taiwan, Thailand, and Turkey, driven by factors including insufficient local healthcare, exorbitant costs, protracted wait times, and advantageous currency exchange rates (Akter et al., 2011; Alnakhi et al., 2019; Capar & Azlan, 2020). Globalization, technical progress, and enhanced internet connectivity have propelled substantial expansion in the sector, but destination competitiveness—encompassing cost and cultural allure—profoundly influences tourists' decisions (Lunt et al., 2016). Comprehending the motivations behind medical tourism is crucial, as Dann's (1977) push-and-pull theory elucidates that discontent with domestic healthcare (push factors) and advantages overseas (pull factors) influence these choices. This insight is essential for improving the medical tourism experience, broadening Malaysia's international patient demographic, and securing sustained revenue development, as study on these critical elements is imperative in influencing patients'

decisions regarding overseas medical treatment.

Malaysia has become a significant player in the medical tourism industry since gaining independence (Ormond et al., 2014). The Malaysia Healthcare Travel Council (MHTC) has made the country a cost-effective hub, drawing patients mainly from Indonesia (Bong, 2023; MHTC, 2024). Malaysia was recognized as having the "Best Healthcare in the World" in 2019 (Marita, 2020). Key centers like Penang, Kuala Lumpur, and Malacca have boosted the industry's growth. Government policies and initiatives like the "Visit Malaysia Year" have made travel more accessible. From 2012 to 2022, medical tourism earnings increased from RM 727 million to RM 1.3 billion. The COVID-19 pandemic has led to a decline in medical tourists, but the region's road and air connectivity and proximity to neighboring countries continue to attract visitors (Ramli, 2015). Similarly, Sarawak's healthcare system has seen significant improvements through technological advancements and partnerships between hospitals and hotels. The Sarawak government has actively worked to reopen borders, aiming to attract 1.2 million visitors by April 2022 to boost economic growth. Additionally, recent infrastructural developments by the state government have further increased the influx of medical tourists (Galileo, 2022).

Therefore, understanding perceived worth is crucial for improving the medical tourism experience, boosting revenue growth, and attracting overseas patients (Beatson et al. 2006; Ilyas et al. 2021).

Dann (1997) Push and Pull Theory

Dann's (1977) push-and-pull theory elucidates the reasons individuals opt for medical care overseas. Push reasons encompass inadequate local medical services and discontent with healthcare alternatives in one's own nation. Conversely, pull factors encompass sophisticated medical facilities, financial incentives, and robust infrastructure (Yeoh et al., 2013; Yusuf & Rosnan, 2020). Ilyas et al. (2021) observe that research on perceived value in medical tourism is few, highlighting the necessity to investigate consumer value to elucidate the elements affecting the selection of medical services. Similarly, Lu et al. (2016) and Mas'od et al. (2020) emphasize the necessity of aligning services with the preferences and needs of medical tourists, corroborating Santharen et al. (2019) in affirming the significance of this theory in the examination of medical tourism.

Theory of Consumption Value

The notion of consumer value, frequently neglected in medical tourism studies, encompasses not just cost-related aspects but also wider dimensions (Ko, 2011; Sung & Ozuem, 2015). Sheth et al. (1991) classified consumption value into five dimensions—social, emotional, epistemic, functional, and conditional—each distinctly affecting consumer decisions. Zeithaml (1998) underscored the relationship between perceived sacrifices and gains that influence overall value assessments.

In medical tourism, value judgments greatly influence location selection; nevertheless, research on value perception in this domain is scarce. Studies by Beatson et al. (2006) and Ilyas et al. (2021) emphasized the impact of perceived value on decision-making, whilst Wahyuningsih (2013) and Yap et al. (2024) illustrated the significant effect of consumption value on purchase intentions. Moreover, research by Cohen et al. (2014) and Abdul-Raji (2016) highlights the significance of psychological factors, particularly perceived value, in healthcare client decision-making, while service quality continues to be a primary concern (Cohen et al., 2014; Kim et al., 2019). Sinha and Desabo (1998) characterized value as a synthesis of benefits, costs, pricing, and quality. Due to the myriad options accessible to medical tourists, additional research is important to elucidate the determinants influencing their choices to pursue treatment internationally.

The definition and conceptualisation of variables

Conceptualizing variables and factors for medical tourism in Sarawak involves understanding the unique characteristics and influences specific to the country. Below is the breakdown of the key variables and factors.

Push factors represent internal motivations that drive individuals to seek medical treatment abroad due to dissatisfaction or unavailability of healthcare services in their home country (Lee & Tan, 2023) which include:

1. **Physical Security:** Patients who is concerned about safety and security in their home country may drive individuals to seek medical treatment in Malaysia where they perceive a safer environment (Md-Zain et al., 2022).
2. **Love and Belonging:** Patients' seeking medical treatment in a foreign country may be motivated by the desire to receive care in a supportive and nurturing environment, especially if individuals feel isolated or lack support in their home count (Filep & Matteucci, 2020)
3. **Self-Esteem:** Potential patients may seek medical tourism in Malaysia to improve their self-esteem by accessing high-quality healthcare services and achieving desired medical outcomes (Hollas et al., 2022).
4. **Self-actualization:** Patients pursue their personal growth and fulfillment through medical treatment abroad, seeking opportunities for self-improvement and holistic well-being (Hsu & Tseng, 2017; Rabeth, 2023).
5. **Acquisition of knowledge:** Patients have the desire to gain new medical knowledge or access to specialized treatments not available in their home country (Chow et al., 2017).

Meanwhile, the pull factors are external attractions that draw individuals to seek medical treatment in Malaysia, underscores the country's strengths and advantages in healthcare (Lim & Ng, 2023) which include:

1. **Availability:** Patients would have access to advanced medical technology and specialized treatments in Malaysia that may not be available or easily accessible in the home country (Alnakhi et al., 2019).
2. **Vacation:** Patients would combine medical treatment with leisure travel, allowing patients to recuperate in a tropical setting and enjoy tourism activities during their recovery (Fadda & Sorensen, 2017; Wang et al., 2020).
3. **Price:** Patients would seek the cost-effectiveness of medical procedures in Malaysia compared to other countries, including lower treatment costs, accommodation, and living expenses (Cham et al., 2020).
4. **Branding:** The positive reputation and branding of medical institutions in Malaysia offering quality medical facilities, promoting trust and confidence among international patients seeking treatment in Sarawak (Musa et al., 2012).
5. **Security & privacy:** Patients have assurances of security and privacy during medical treatment, including confidentiality of medical records and personalized care while seeking medical treatment abroad (Zolfagharian et al., 2018; Md-Zain et. al., 2022).
6. **Intention:** In marketing, "intention" refers to a consumer's intended decision to purchase a product or service, serving as a vital indicator of buying behaviour (Tjiptono, 2015). This variable reflects the degree of commitment and likelihood that a person will choose a particular destination for medical treatment based on perceived benefits, trust in services, and personal health goals. Marketers utilise purchase intents to assess the likelihood of consumer acquisitions and their ensuing happiness or discontent.
7. **Consumption value** represents the perceived benefits or utility that individuals derive from consuming goods or services, including medical treatments in Malaysia (Tan & Wong, 2023). This factor would act as a mediator between motivational factors and the decision to engage in medical tourism. In this study, the role of consumption value is used to mediate the relationship between push and pull motivational factors and the decision to seek medical treatment in Malaysia, influencing individuals' perceptions of the benefits and drawbacks associated with medical tourism (Damijanac & Luk, 2017; Cavusoglu & Avcikurt, 2021).

Therefore, by considering these push and pull motivational factors specific to Sarawak context, researchers and stakeholders can better understand the drivers and barriers of medical tourism and develop targeted strategies

to enhance Sarawak position in the global medical tourism market.

Push and Pull Factors That Influence Travel Intention

Customer switching behavior in medical tourism is influenced by factors such as physiological security, self-esteem, and self-actualization. Dissatisfaction often arises from inadequate security, privacy concerns, long wait times, outdated technology, and poor hospital conditions (Adhikari, 2015; Nielsen et al., 2012). Cheng, (2016), emphasized the one-child policies in policies in China's and Singapore's also encourage patients to seek treatment abroad. Pull factors, including affordable treatments, vacation opportunities, branding, political stability, and service quality, attract tourists to destinations, especially in Asia, which offers cost-effective services and government-backed healthcare clusters (Singh, 2013; Fadda & Sorensen, 2017). Tourists were lure by the aficionado, safety, effective communication, hospital branding, and travel efficiency in choosing medical travel destinations (Wang et al., 2020; Moghavvemi et al., 2017; Santharen et al., 2019).

Medical Tourists' Motivation to Travel

Medical tourists are motivated by both healthcare requirements and recreational pursuits. Kim et al. (2019) characterise motivation as the intrinsic impetus that compels individuals to participate in activities. Nonetheless, individuals seeking healthcare services overseas frequently would also like to experience diverse cultures and engage in recreational activities (Adhikari, 2015; Aljumah et al., 2017). Al-Haj-Mohammad & Mat-Som (2010) observe that numerous studies have investigated the determinants affecting medical tourists' travel choices. Push factors encompass internal requirements such as rehabilitation, social integration, self-actualization, and remuneration, while pull factors pertain to external attractions such accessible healthcare, cultural affiliations, and desirable places (Wang et al., 2020; Jang et al., 2009).

Socio-psychological needs and destination-specific factors significantly influence the motivation of medical tourists. In accordance with the research of Chiang & Jogratnam (2006) and Rageth (2023), psychological and physical factors significantly affect autonomous leisure travel, especially among women. Moreover, epistemic variables in medical tourism, including access to specialised therapies and reduced costs, significantly influence individuals' decisions to pursue healthcare abroad (Sung & Ozuem, 2015). Hence, these dynamics substantially drive medical tourists to pursue treatment abroad (Cham et al., 2020; Widiyastuty et al., 2023).

The Relationship between Push and Pull Factors and Consumption Value

Research in the hospitality sector underscores the crucial influence of consumer emotions on the perceived value of experiences. Lin & Mattila, (2010), Han & Jeong, (2013) and Nejati & Moghaddam, (2012) indicates that perceived value directly influences customer demand, satisfaction, and subsequent behavior. Consumer emotions significantly impact customer satisfaction and subsequent behavior (Han & Jeong, 2013; Maubisson & Riviere, 2020). Emotions facilitate the connection between service fairness and satisfaction (Su & Hsu, 2013), whereas utilitarian value influences satisfaction and behavior (Nejati & Moghaddam, (2012). Therefore, favorable tourist experiences enhance the probability of return visits (Jang et al., 2009).

Research correlates consumer value with variables such as waiting periods, cost-effectiveness, service quality, and the attractiveness of medical treatment overseas (Prebensen et al., 2013; Qomariah, 2018). Consequently, consumer value, shaped by product characteristics and incentives, is crucial for satisfaction and behavioral intentions (Wahyuningsih, 2013; Ha & Jang, 2010). According to Damijanik & Luk, (2017) and Cavusoglu & Avcikurt, (2021), travel motivations and the perceived worth of consumer experiences further connect this value. In the medical tourism industry, service quality and perceived value are therefore crucial for patient satisfaction, with purchasing decisions influenced by cognitive and emotional variables (Sheth et al., 1991; Hallem & Barth, 2011). Furthermore, Anjum et al. (2017) contend that providing superior service or generating value via cost reduction, without compromising quality, improves customer happiness.

The Moderating Role of Consumption Value on Intention to Travel

Recent studies highlight the importance of consumption value as a moderating variable in medical tourism (Nkaabu et al., 2017; Maubisson & Riviere, 2020; Yap et al., 2024). These variable influences patients'

perceptions and reactions to healthcare services, hence affecting their decisions and overall experience. Similarly, Sung & Ozuem (2015) underscore the direct influence of consumer value on the travel decisions of medical tourists. Dissatisfaction with domestic healthcare alternatives frequently prompts individuals to pursue enhanced services overseas. In the post-pandemic period, medical tourists have become increasingly selective, emphasizing safety, high-quality healthcare, and mental well-being (Nkaabu et al., 2017).

Cognitive elements, such as cost-benefit assessment, and emotional factors, like fear of infection and the need for reassurance, additionally influence the perceived value of the medical tourism experience. By comprehending these complex impacts, healthcare professionals and policymakers can more effectively address the changing needs and expectations of medical tourists. Below are recent studies highlighting this moderating role in medical tourism.

Moderating Functional and Social Values: Medical tourists frequently emphasize functional value—such as treatment quality, healthcare proficiency, and state-of-the-art facilities—in selecting their location. Social value, shaped by familial ties, social networks, and community endorsements, is also pivotal. The perceived value of a tourist experience can influence their inclination to return. A tourist may perceive that they acquired significant experiences and knowledge (Cavusoglu & Avcikurt, 2021; Nkaabu et al., 2017; Yousefi & Marzuki, 2015) during a trip to Penang, Malaysia, for tourism, thereby enhancing their intention to comeback.

Emotional and epistemological values in patient contentment: Emotional and epistemic values, including the reassurance provided by a hospitable atmosphere and the prospects for acquiring new health practices, further augment travelers' contentment and loyalty. Research conducted by Han & Jeong (2013) and Maubisson & Riviere (2020) demonstrated that when tourists perceive elevated emotional and epistemic value, they exhibit increased satisfaction and a stronger propensity to revisit or endorse the place. According to the study by Su & Hsu (2013), these values strongly influence the relationship between perceived service fairness and overall happiness, with elevated consumption values augmenting pleasant experiences.

Price and consumption value in decision-making: Pricing sensitivity is a vital element in medical tourism, and the perceived value of consumption might alter tourists' pricing perceptions. The latest meta-analysis by Barari et al. (2021) corroborates this, illustrating a moderating influence of the business sector on customer engagement development. Customers exhibit a greater propensity to pay elevated costs when they recognize substantial overall value, encompassing both functional and emotional advantages. This research indicates that locations with high consumption value can warrant premium cost by providing exceptional experiences.

Holistic Packages and Patient Satisfaction: The move towards integrated healthcare and wellness services has resulted in the creation of holistic packages that enhance consumption value and patient satisfaction. In an article in Medical Tourism Magazine 2023, Anderson (2023) emphasised that packages integrating medical treatments with wellness tourism components, such as spa therapies and sustainable accommodations, substantially augment tourists' perceived consumption value, thereby affecting both decision-making and satisfaction. This study demonstrates that when patients recognise greater value, their contentment and loyalty enhance, despite cultural or practical obstacles.

This study underscores the moderating effect of consumption value across various dimensions, showing that the perceived value tourists attach to their experience can strengthen or weaken their decision to choose a particular medical destination. They collectively highlight the critical role of consumption value in enhancing patient satisfaction, loyalty, and the willingness to pay for quality healthcare abroad

Research Framework and Hypothesis Development

Based on the above discussion, This study provides a pertinent framework that amalgamates push and pull motivational theory with consumer value theory as a moderating variable, as illustrated in Figure 1.0, “Conceptual Framework of Intention to Travel for Medical Treatment”. The conceptual model is structured to correspond with the preferences of medical tourists, thereby offering a customized basis for comprehending and improving the dynamics of medical tourism.

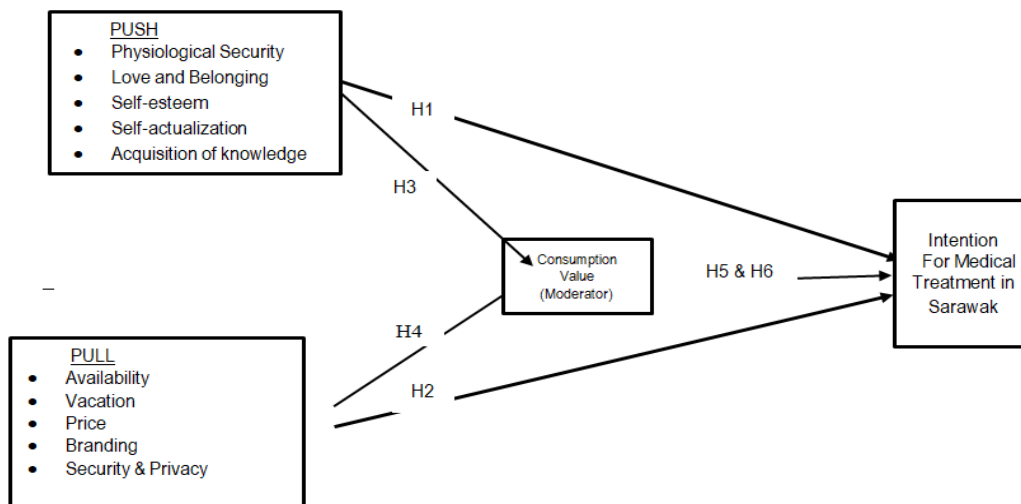


Figure 1.0: Conceptual Framework of Intention to Travel for Medical Treatment

Patients pursue medical treatment overseas for several reasons, such as restricted options in their home countries, prolonged wait times, and the pursuit of expedited solutions available internationally (Corte et al., 2015; Hsu & Tseng, 2017). Many travel with companions for emotional support (Moynihan et al., 2015), and medical tourists typically exhibit a positive disposition that can enhance their self-confidence (Ginting et al., 2019; Xu & Wang, 2015). Moreover, people appreciate the chance to explore new areas and enhance their experiences, attaining personal development and an improved self-image through engagement with esteemed healthcare facilities (Musa et al., 2012; Hallem & Barth, 2011). According to (Md-Zain et al., 2022), privacy concerns also play a role in this decision, leading to the formulation of the below hypotheses.

H1a: Physiological security positively influenced medical tourists' intentions to seek treatment in Kuching, Sarawak.

H1b: Love and belonging positively influenced medical tourists' intentions to seek treatment in Kuching, Sarawak.

H1c: Self-esteem positively influenced medical tourists' intentions to seek treatment in Kuching, Sarawak.

H1d: Self-actualization positively influenced medical tourists' intentions to seek treatment in Kuching, Sarawak.

H1e: Knowledge acquisition positively influenced medical tourists' intentions to seek treatment in Kuching, Sarawak.

H3a: Physiological security positively influenced the perceived consumption value among medical tourists.

H3b: Love and belonging positively influenced the perceived consumption value among medical tourists.

H3c: Self-esteem positively influenced the perceived consumption value among medical tourists.

H3d: Self-actualization positively influenced the perceived consumption value among medical tourists.

H3e: Knowledge acquisition positively influenced the perceived consumption value among medical tourists

Overseas healthcare appeals to medical tourists from high-income countries like the US, UK, Australia, and Europe, driven by cost-effective, high-quality care, long wait times, and restricted access in their home systems (Corte et al., 2015). Countries such as Malaysia and Thailand attract these patients with advanced medical facilities, stable politics, bilingual staff, and accessible transport (Rozee & Rochebrochard, 2013; Galileo, 2022; Chen & Flood, 2023). The chance to combine treatment with tourism adds to their appeal, as does affordability, privacy, and confidentiality (Corte et al., 2015; Chandran et al., 2018; Alnakhi et al., 2019;

Md-Zain et al., 2022). Perceptions of safety abroad further boost medical tourism, with reliability and validity of these findings leading to the formulation of the below hypotheses.

H2a: Availability of treatment security positively influenced medical tourists' intentions to seek treatment in Kuching, Sarawak.

H2b: Vacation option positively influenced medical tourists' intentions to seek treatment in Kuching, Sarawak.

H2c: Price positively influenced medical tourists' intentions to seek treatment in Kuching, Sarawak.

H2d: Branding positively influenced medical tourists' intentions to seek treatment in Kuching, Sarawak.

H2e: Security and privacy positively influenced medical tourists' intentions to seek treatment in Kuching, Sarawak.

H4a: Availability of treatment positively influenced the overall consumption value perceived by medical tourists

H4b: Vacation option positively influenced the overall consumption value perceived by medical tourists

H4c: Price positively influenced the overall consumption value perceived by medical tourists

H4d: Branding positively influenced the overall consumption value perceived by medical tourists

H4e: Security and privacy significantly influence the overall consumption value perceived by medical tourists

Similarly, the research by Corte et al. (2015) underscored the substantial impact of travel motives on consumer value dimensions, accentuating the essential role of consumption value in decision-making. Comprehending the interaction of push and pull variables, along with the influence of consumer value, it is therefore essential for medical tourists' travel choices to Sarawak, Malaysia. Based on these insights, the following hypotheses have been formulated:

H5: There is a moderating role of consumption value linking the push factors with medical tourists who have the intention to seek treatment in Sarawak.

H6: There is a moderating role of consumption value linking the pull factors with medical tourists who have the intention to seek treatment in Sarawak.

In today's competitive landscape, understanding consumer desires is vital. This study combines Dann's push and pull motivational theory with Sheth et al.'s consumption value theory to create a framework analyzing medical tourism intentions in Sarawak. This approach aims to provide practical insights for the medical tourism sector, with hypotheses designed to achieve the research objectives.

METHODOLOGY

For this research, the survey methods employed were physical questionnaires distributed to medical tourists. To ensure replies that are fair and trustworthy, the researcher implemented the below screening criteria:

1. The respondent must have the intention to seek medical services in Sarawak or those who had previously frequented clinics or hospitals in Sarawak
2. The respondent must travel to Malaysia for medical assistance.
3. During their trip, the respondent must participate in tourism activities such as transportation services, lodging services, shopping, sightseeing, vacationing, etc...).

4. and those aged 17 and above who had specifically pursued treatment in Kuching.

The researcher performs a non-probability sampling technique to collect data from a group of prospective medical tourists who intend or have seek medical treatment at Sarawak. Self-administrative questionnaires in English and Malay were disseminated to medical tourists from January to March 2024 at four private prominent hospitals, clinics, and critical sites such as Kuching International Airport, concentrating on accessible areas like lobbies and waiting rooms to reduce disruptions. Furthermore, gender and citizenship were not criterion for inclusion, and participants were unacquainted with the researcher.

The researchers employed the IBM Statistical Package for the Social Sciences (SPSS) version 27 to examine the characteristics, frequency, trends, and categories of medical tourists seeking treatment in Sarawak. Descriptive analysis of the respondent profile was done while validity and reliability were also conduct to evaluate the quality of the research. Similarly, Correlation Coefficient analysis was conducted to identify interdependent variables so that a change in one variable or factor can provide insight into how it influences the other factor. We evaluated the data utilizing Cronbach's alpha and composite reliability and performed HTMT assessment to assess discriminant validity. We utilized the Sobel test (Z test) and bootstrap approach via SPSS to analyze the moderating effect of consumption value on the travel intentions of medical tourists (Mason et al., 2023).

RESULTS

The results for respondents participating in the medical tourists' study are described and discussed below.

Out of 781 distributed questionnaires, 708 (91%) were completed, exceeding the 50% response rate deemed acceptable by Mellahi & Harris (2016).

Table 1.0: Respondent Profile

Information	Items	Total	Percentage
Gender	Male	426	60.19
	Female	282	39.81
Age	Less than 17	82	11.5
	17-26	136	19.28
	26-35	225	31.81
	36-45	140	19.76
	46-55	106	14.94
	Above 55	19	2.65
Location	Outside Kuching	131	18.67
	Pontinanak, Indonesi	421	58.95
	Singkawan, Indonesia	65	9.26
	Jakarta	2	0.31
	Other Proviences Indonesia	85	12.19
	West Malaysia	2	0.3
	Foreign Countries	2	0.3

Respondents Participation in Medical Tourism Study

Refer to Table 1.0 below, out of the 708 respondents, 426 (60.19%) were male while 282 (39.81%) were female. For respondents' age group, 82 (11.57%) were 17 years and below, 136 (19.28%) were aged between 17-25 years old, 225 (31.81%) were age between 26-35 years old, 140 (19.76%) were aged between 36-45, 106 (14.94%) were aged between 46-55, and 19 (2.65%) were above 55 years old.

The largest group of respondents was from Pontianak, Indonesia (58.95%), followed by other Indonesian provinces (21.76%), and respondents from Sarawak (18.67%). A small number came from West Malaysia (0.31%), and other foreign countries (0.31%).

Referring to Table 2 below, 40.68% of respondents made 2-6 visits per year, 32.77% made at least one annual visit, and 26.55% intended to seek treatment. The most common treatments were medical check-ups or follow-ups (47.46%), general treatments (22.60%), bone-related treatments (15.96%), ENT treatments (8.33%), and kidney-related treatments (5.65%).

Table 2.0: Respondent Visit Per Year and Type of treatment Sought

Informations	Items	Total	Percentage
No Visits	Intention to visit	188	26.55
	I visit per year	232	32.77
	2-6 visits per year	288	40.68
Treatment type	Medical Checkup	336	47.46
	General treatment	160	22.60
	Bone related treatment	113	15.96
	Ear nose and throat related	59	8.33
	Kidney related	40	5.65

Outer Model Fit Test

In tourism studies, the outer model fit (or measurement model fit) test is essential for evaluating how well the observed variables (indicators) represent their underlying latent constructs in a structural model. Here are the primary tests and criteria commonly used to assess outer model fit in tourism research:

Convergent Validity and Reliability Analysis:

Convergent Validity is used to verify that a construct's indicators are related and measure the same underlying concept, enhancing the accuracy and interpretability of the study's results.

Convergent Validity Test - Average Variance Extracted

The average variance extracted (AVE) was employed to assess convergent validity. The Fornell-Larcker criterion was employed to compare AVE values with squared correlations among components. The research investigated the correlations between push elements (such as physical security, love and belonging, self-esteem, and information acquisition) and pull ones (including accessibility, cost, and safety) within the framework of medical tourism in Sarawak. In our investigation for this study, the result of all AVE values for this study's items are as follows:

Variables

1. Physiological Security (AVE=0.810)

2. Love and Belonging (AVE=0.838)
3. Self-esteem (AVE=0.815)
4. Self-actualization (AVE=0.845)
5. Acquisition of Knowledge (AVE=0.851)
6. Availability (AVE=0.648)
7. Vacation (AVE=0.672)
8. Price (AVE=0.558)
9. Branding (AVE=0.815)
10. Security & Privacy (AVE=0.747)
11. Consumption Value for Push Factors (AVE=0.643)
12. Consumption Value for Pull Factors (AVE=0.661)
13. Intention (AVE=0.610)

Where all their values exceeded the 0.50 threshold (Hair et al., (2010) and exhibited correlations with other variables, so affirming robust relationships between constructs and their respective underlying variables. Therefore, it demonstrates that the model met the statistical requirements for both convergent and discriminant validity.

Reliability Analysis - Composite Reliability Analysis

The Composite Reliability (CR) test is a measurement used to assess the internal consistency of a set of indicators (observed variables) that represent a latent construct (unobserved variable) in structural equation modelling particularly useful in fields like tourism, psychology, and social sciences where latent constructs are common. As per Taber, (2018), the recommended principal measures of internal consistency employed in the study were composite reliability (CR) by Hair et al. (2010). The result of (CR) values for this study's items are as follows:

1. Physiological Security (CR = 0.676)
2. Love and Belonging (CR = 0.939)
3. Self-esteem (CR = 0.929)
4. Self-actualization (CR = 0.942)
5. Acquisition of Knowledge (CR = 0.945)
6. Availability (CR = 0.845)
7. Vacation (CR = 0.809)
8. Price (CR = 0.780)
9. Branding (, CR = 0.929)
10. Security & Privacy (CR = 0.895)
11. Consumption Value for Push Factors (CR = 0.740)
12. Consumption Value for Pull Factors (CR = 0.708)
13. Intention (CR = 0.679)

All variables satisfied the necessary reliability levels, with values surpassing 0.60, indicating that the indicators consistently represent the construct.

Discriminant Validity:

Discriminant Validity is used to *confirm that constructs* in the model are distinct and measure unique aspects of the theoretical framework. Since we run this test using SPSS ver 27, we run Fornell-Larcker tests to assess discriminant validity and bootstrapping. We are not able to run HTMT with bootstrapping as SPSS version 27 do not support HTMT bootstrapping. In Fornell-Larcker Criterion, the square root of the AVE of each construct should be greater than its correlations with other constructs, suggesting that the construct is distinct from others.

Heterotrait-Monotrait Ratio of Sorrelations (HTMT) Test

Although the Fornell-Larcker analysis is an antiquated way for evaluating discriminant validity, Henseler, Ringle, and Sarstedt (2015) proved via a simulation study that these techniques fail to consistently identify the absence of discriminant validity in typical research contexts. The novel approach employs the heterotrait-monotrait ratio of correlations (HTMT) for analysis. The methodology proposed by Henseler, Ringle, and Sarstedt (2015) validates the superior efficacy of this strategy through a Monte Carlo simulation study. Discriminant validity is demonstrated between two reflectively measured constructs if the HTMT score is below 0.90. The outcome of HTMT is presented below.

$$HTMT(Y_1Y_2) = \frac{mean(R_{Y_1Y_2})}{\sqrt{mean(R_{Y_1Y_1}) \cdot mean(R_{Y_2Y_2})}}$$

$$HTMT(Y_1Y_2) = \frac{0.27}{\sqrt{0.170 * 0.506}} = 0.9254$$

Base on the HTMT result, the discriminant valid is not active as the value is greater that 0.90.

Correlation Coefficient Analysis For Push Factors, and Pull Factors and Intention

Table 3.0 Correlation Coefficient Analysis for Push Factors, and Pull Factors and Intention

Variables (x)	Coefficient (β)	Std. Error	t- value	p-value	Result (Intention, y) (x – y)
PUSH					
PHYS	0.222**	0.040	10.806	<0.001 (3.883E-25)	Supported
LOVE	0.523**	0.048	1.330	0.184	No relationship
ESTEEM	0.437**	0.045	2.287	0.023	No relationship
SEA	0.411**	0.045	1.952	0.051	No relationship
ACQ	0.392**	0.048	-0.882	0.378	No relationship
PULL					
AVA	0.458**	0.044	4.000	<0.001 (0.000071)	Supported
VAC	0.339**	0.043	-0.897	0.370	No relationship
PRI	0.324**	0.046	-0.104	0.917	No relationship
BRD	0.351**	0.043	-1.054	0.292	No relationship
SEC	0.359**	0.043	-0.959	0.338	No relationship
Consumption Value					
CV-PUSH	0.563	0.034	2.471	0.014	No relationship
CV-PULL	0.470	0.045	-0.209	0.835	No relationship

Pearson's correlation was used to examine the linear relationships between various factors and medical tourists' intentions to seek treatment in Sarawak. Specifically, coefficient tests were conducted to assess the intensity and causal relationships between:

1. PUSH factors and medical tourists' intentions,
2. PULL factors and medical tourists' intentions,
3. PUSH factors with consumption value affecting intentions,
4. and (4) PULL factors with consumption value affecting intentions.

The result of the analysis as shown in Table 3.0 above.

Inner Model Test

The assessment of the structural model analyzes the interrelations among latent variables. Subsequently, we evaluate the inner model following the validation and confirmation of the outer model's reliability. This evaluation encompasses a model appropriateness examination grounded in the Goodness of Fit (GoF) criteria. We assess the goodness of fit of the inner model by utilizing the R-square value of the dependent latent variable, interpreting it in a manner analogous to regression analysis.

The Composite Reliability (CR) test is a measurement used to assess the internal consistency of a set of indicators (observed variables) that represent a latent construct (unobserved variable) in structural equation modelling particularly useful in fields like tourism, psychology, and social sciences where latent constructs are common. As per Taber, (2018), the recommended principal measures of internal consistency employed in the study were Cronbach's alpha (α) by Hair et al. (2010) stipulate that a variable is deemed reliable if its Cronbach's alpha value is inside the acceptable range of 0.6 to 0.8. The result of (α) values for this study's items are as follows:

1. Physiological Security ($\alpha = 0.927$)
2. Love and Belonging ($\alpha = 0.795$)
3. Self-esteem ($\alpha = 0.796$)
4. Self-actualization ($\alpha = 0.613$)
5. Acquisition of Knowledge ($\alpha = 0.759$)
6. Availability ($\alpha = 0.737$)
7. Vacation ($\alpha = 0.859$)
8. Price ($\alpha = 0.778$)
9. Branding ($\alpha = 0.848$)
10. Security & Privacy ($\alpha = 0.817$)
11. Consumption Value for Push Factors ($\alpha = 0.812$)
12. Consumption Value for Pull Factors ($\alpha = 0.849$)
13. Intention ($\alpha = 0.821$)

All variables satisfied the necessary reliability levels, with values surpassing 0.60, indicating that the indicators consistently represent the construct.

Model Fit Indices (for Confirmatory Factor Analysis - CFA):

The assessment of the structural model evaluated its explanatory and predictive capacities by the Chi-square (X^2) goodness-of-fit test. For this study, the Goodness of Fit (GoF) test yielded a value of 0.492, signifying a robust model fit. Consequently, the model exhibited reliability along with convergent and discriminant validity, affirming its overall robustness. Moreover, Cronbach's alpha and composite reliability scores for all variables

were within the acceptable range of 0.6 to 0.7, signifying satisfactory internal consistency.

The chi-square (X²) goodness of fit test is an alternative formulation of Pearson's chi-square metric. When comparing predicted outcomes to actual results or determining whether two variables are associated, the chi-square test is a statistical method utilized. The objective of this test is to determine whether the categorical variable's observed distribution deviates from your anticipated distribution. According to IBM SPSS Statistic Ver 27, if the significance level is low (less than 0.05), the model does not provide a good fit for the data. Its value in this instance is higher than 0.10, indicating that the data are in line with the model's presumptions (IBMSPPS, 2021). Support by Akter et al., (2011), recommends the baseline value of Goodness of Fit (GoF) as three categories by which the value of 0.1 where is regarded as (GoF_{small}), 0.25 as (GoF_{medium}) and 0.36 (GoF_{large})

Table 3.0: R² for Push Factors

R Square			
Construct	R Square	R Square Adjust	Adjusted R ²
R ² for Push Factors	0.587	0.345	0.340

Table 4.0 Goodness of Fit Result for Research Model_

<u>Variables</u>	<u>AVE</u>	$\begin{aligned} \text{GoF} &= \sqrt{\text{AVE} \times R^2} \\ &= \sqrt{0.912 \times 0.345} \\ &= 0.492 \end{aligned}$
PUSH	0.831	
PULL	0.688	
CV-PUSH	0.643	
CV-PULL	0.661	
Intention	0.610	
Mean AVE	0.702	

Refer to Table 3.0 above, for this study, the R² value for this study is 0.345. Similarly, refer to Table 4.0 above, the mean AVE is 0.702.

The calculation of GoF is as below:

$$= \frac{\sqrt{(0.831+0.688+0.643+0.661+0.610)}}{5} \times R^2$$

$$= \sqrt{0.702 \times 0.345} = 0.492$$

[(Average AVE = (0.831 + 0.688 + 0.643 + 0.661 + 0.610) / 5 = 0.702]. Therefore, the GoF value is 0.492 does indicate a valid model. Based on the findings, it can be said that the model attained reliability, convergent validity, discriminant validity, and a large global fit for the Goodness of Fit study. As shown in the table above, this indicates that the model is ready for the following step. Therefore, it is appropriate to move on to testing the hypothesis and establishing the research model.

Moderation Analysis, Regression Analysis and Bootstrap

The research utilized moderating analysis via the Sobel test to elucidate the intermediary mechanisms (moderator) that convey impacts between independent and dependent variables (Lu et al., 2016). It examined the moderating roles of pull and consumption value, together with push and consumption value, in the

relationship between push and pull variables and patients' intents, as suggested by Lu et al., 2016). Regression analysis was performed using SPSS and a macro script from Hayes (2019) and employed bootstrapping with 5,000 samples to evaluate the following hypotheses. Result of analysis as shown in Table 1, Appendix A below. (2023).

1. H1: While push factors did not markedly influence treatment-seeking intentions overall, the Physiological Security (PHY) factor exhibited a strong correlation (t-value = 10.806, p-value < 0.001).
2. H2: Although pull factors had minimal overall impact, the availability (AVA) factor was significant (t-value = 4.000, p-value < 0.001).
3. H3: Consumption value was established as a moderator between push factors and intention, exhibiting substantial impacts for love and belonging (t-value = 8.983), self-esteem (t-value = 6.552), self-actualization (t-value = 6.308), and knowledge acquisition (t-value = 5.768). The physiological security component did not demonstrate significant moderation (t-value = 3.728).
4. H4: Consumption value moderate the relationship between pull factors and intention, with significant moderation noted for all pull factors: availability (t-value = 6.836), vacation (t-value = 5.267), price (t-value = 4.880), branding (t-value = 5.322), and security & privacy (t-value = 5.461).
5. In conclusion, consumption value was recognized as a crucial moderator in the intentions of medical tourists pursuing treatment in Kuching, Sarawak, consistent with previous studies by Ha & Jang (2010), Wahyuningsih (2013), and Lee & Tan (2023).

Importance of the Conceptual Model

The proposed conceptual framework in Figure 2 above was designed to create a practical medical tourism framework that is both relevant and applicable to medical tourism studies, addressing the research objectives. This framework provides a theoretically robust and intuitively attractive method for establishing and accomplishing objectives in medical tourism. This framework can also be use by other states in Malaysia to enhance their medical tourism industry.

Significance of Study

This study clarifies the dynamics of medical tourism by examining the push and pull factors influencing consumer behavior and emphasizing customer value, enabling the healthcare industry to create targeted marketing strategies to attract more tourists (Kumar et al., 2014; Louis, 2022). By connecting motivational factors with perceived value, it offers valuable insights for healthcare professionals, regulators, and stakeholders, thereby promoting sustainable growth in medical tourism and deepening understanding of patient decision-making.

Shifting focus from macro-level concerns like economic impacts and healthcare infrastructure to demand-side analysis, it explores psychological, economic, and experiential factors motivating international patients to choose Sarawak, offering a thorough perspective on medical tourism drivers. Addressing a significant gap in Southeast Asian consumer behavior research, it introduces an analytical model positioning consumer value between push and pull factors, guiding future research. Key findings highlight self-worth (ESTEEM), therapy availability (AVA), and the quality of medical personnel ("LOVE") as primary motivators for tourists.

The study stresses that improving service quality through better technical and multicultural staff training is critical for enhancing customer value and satisfaction. By emphasizing patient feedback in long-term planning, it provides critical insights for healthcare and tourism policies, encouraging collaboration among the relevant parties to improve global marketing and examine potential tax incentives to boost international medical tourism.

Developing a framework for increasing perceived value with relationship marketing, the study notes limitations like a predominantly older demographic and lack of qualitative data, suggesting future studies

broaden demographics and apply both qualitative and quantitative approaches. Findings reveal consumer value as a moderating factor in medical tourism, aligning with prior studies by Aljumah et al. (2017), Sapheri et al. (2018), and Angela et al. (2020), showing that motivational factors combined with consumer value elevate tourists' willingness to travel.

DISCUSSION

The COVID-19 pandemic has altered consumer behaviors and health-related travel motivations, rendering the examination of motivational factors, modulated by consumption value, that affect medical tourists' intentions to pursue treatment in Sarawak especially pertinent in the post-pandemic environment. Malaysia serves as a significant hub; including consumer value into medical care packages may attract patients from adjacent countries such as Indonesia, Brunei, and the Philippines.

This study highlights the need for a deeper understanding of the factors influencing contemporary medical tourism choices. Factors may encompass objectives such as enhanced healthcare options, cost-effectiveness, diminished wait times, and superior healthcare facilities, in addition to the aspiration for a unique destination experience. The consumption value, encompassing functional, social, emotional, and epistemic dimensions, moderates the impact of motivational factors on the intention to get medical treatment in Sarawak. Functional value, akin to cost and quality, draws budget-conscious or quality-oriented tourists, whilst social and emotional values provide Sarawak an enticing destination for those seeking cultural enrichment and support. The pandemic has heightened focus on healthcare quality, safety, and trustworthiness, amplifying both push and pull aspects in medical tourism. In the post-pandemic era, the moderating influence of consumer value is increasingly evident, as tourists weigh health risks against perceived advantages in overseas medical travel.

Emphasizing the economic influence of medical tourism in Sarawak, it advocates for a deeper investigation into tourist expenditures on lodging, transportation, and healthcare services (Seow et al., 2016; 2017) while identifying critical elements for sector expansion. Previous studies concentrated on healthcare quality, however recent research highlights consumer value and cultural effects (Cavusoglu & Avcikurt, 2021; Widiyastuty et al., 2023). Moreover, the use of the Push-Pull Motivation Theory in medical tourism research will yield novel insights into patient motives and decision-making, shifting the emphasis from infrastructure and policy to consumer value, in contrast to the narrower focus of existing theories and models. Moreover, emphasising consumption values such as safety, cultural experience, and cost may alleviate post-pandemic apprehensions, appealing to a new demographic of health-conscious, value-oriented medical tourists.

CONCLUSION

In conclusion, this study highlights the importance of incorporating motivational factors and consumption value in medical tourism strategies (Nkaabu et al., 2017; Maubisson & Riviere, 2020), especially as tourist expectations evolve in the post-pandemic era. Research underscores that perceived consumption value drives purchase intentions (Yap et al., 2024). While Furthermore, Sung & Ozuem, (2015) indicates that consumer value significantly shapes perceptions of products and services, Similarly, Lu et al., (2016) and Mason et al., (2023) indicating a need to enhance both the functional and emotional aspects of healthcare services. Additionally, stakeholders should utilize digital innovation and respond to the demand for authentic experiences to revitalize medical tourism. By aligning services with tourists' preferences, Sarawak can strengthen its competitiveness in the global market.

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APPENDIX A

Table 1: Summary of Regression Analysis and Hypothesis Testing Result with Consumption Value as Moderating Role and The Intention of Medical Tourists to Seek Treatment in Sarawak in this study.

Hypotheses	Correlation with CV(X → M)	Moderation (X – M - Y)	Correlation with INT (X → Y)
<i>Push Factors</i>			
H1a: Physiological security significantly influences medical tourists' intentions	Rejected	Positively Influenced	Rejected
H1b: Love and belonging significantly influence medical tourists' intentions	Positively Influenced	Rejected	Positively Influenced
H1c: Self-esteem significantly influences medical tourists' intentions	Positively Influenced	Rejected	Positively Influenced
H1d: Self-actualization significantly influences medical tourists' intentions	Positively Influenced	Rejected	Positively Influenced
H1e: Knowledge acquisition significantly influences medical tourists' intentions	Positively Influenced	Rejected	Positively Influenced
<i>Pull Factors</i>			
H2a: Availability of treatment security significantly influences medical tourists' intentions	Rejected	Rejected	Rejected
H2b: Vacation option significantly influences medical tourists' intentions	Positively Influenced	Reject Null Hypothesis	Positively Influenced
H2c: Price influences medical tourists' intentions	Positively Influenced	Reject Null Hypothesis	Positively Influenced
H2d: Branding significantly influences medical tourists' intentions	Positively Influenced	Reject Null Hypothesis	Positively Influenced
H2e: Security and privacy significantly influence medical tourists' intentions	Positively Influenced	Reject Null Hypothesis	Positively Influenced
Continue			
Moderator			
H5: There is a moderating role of consumption value linking the push factors with medical tourists' travel intention	-	-	Positively Influenced
H6: There is a moderating role of consumption value linking the pull factors with medical tourists' travel intention	-	-	Positively Influenced

** Correlation is significant at the 0.01 level (1-tailed)

Notes:

- a) (t-value >1.96)*; (p-value <0.005)**
- b) Bootstrapping = 5000, Confident level = 95%
- d) X = Push or Pull factors, M = Mediator (Consumption Value, CV), Y=Intention (Int)