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Health Insurance Coverage and its Influence on Medical Tourism Decision in Nigeria: An Empirical Investigation from Nigerian Medical Tourists

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Abstract

This study analyzed the relationship between health insurance coverage (HIC) and medical tourism in Nigeria using quantitative methods. Two hypotheses were tested. Regression models were developed with the dependent variables being decisions to pursue medical care abroad (DTPMCA) and healthcare utilization patterns abroad among medical tourists (HUPAMT). The key independent variable was HIC. For hypothesis one, the results showed a moderately strong correlation (R=0.781) between HIC and DTPMCA but this was not statistically significant (p=0.119, α=0.05). The variation in DTPMCA explained by HIC was 48% (adjusted R-squared). Therefore, there was no evidence to reject the null hypothesis that HIC does not impact decisions to become a medical tourist. For hypothesis two, there was a moderate negative correlation (R=-0.531) between HIC and HUPAMT, implying that higher coverage is associated with lower healthcare utilization abroad. However, this relationship was also not statistically significant (p=0.358, α=0.05). The variation in HUPAMT accounted for by HIC was only 4% (adjusted R-squared). Thus, the null hypothesis could not be rejected, suggesting no evidence that HIC impacts medical tourists' healthcare utilization. The study concluded that despite theoretical mechanisms for how health insurance could influence medical tourism, this empirical study did not find statistically significant relationships between coverage and medical tourism decision-making or healthcare utilization at the standard significance level α=0.05. Further studies with larger samples may provide more conclusive evidence regarding these effects in the Nigerian context.

Keywords: Health, insurance, medical tourism, Nigeria, tourism

Introduction

Medical tourism is the phenomenon of people travelling across borders to seek health care services in other countries (Seffah, 2023). Medical tourism has been growing rapidly in recent years, driven by various factors such as the rising cost of health care in developed countries, the availability of affordable and quality health care in developing countries, the advancement of medical technology and innovation, and the emergence of new destinations and services for medical tourism (Padilla-Meléndez and Del-Águila-Obra, 2016). Medical tourism has significant implications for the health systems of both the source and destination countries, as well as for the health outcomes and experiences of the medical tourists themselves (Lunt, Smith, Exworthy, Green, Horsfall & Mannion, 2011). One of the source countries that has witnessed a high demand for medical tourism is Nigeria, a country with a population of over

200 million and a low level of health care provision and access. Nigeria accounts for 20% of the population of Sub-Saharan Africa and is projected to be the third most populous country in the world by 2040 (da Lilly-Tariah and Sule, 2020). However, Nigeria faces many challenges in achieving universal health coverage (UHC), which is defined as the situation where all people have access to the health services they need, of sufficient quality to be effective, while also ensuring that the use of these services does not expose the user to financial hardship (World Health Oorganization, 2010). Some of these challenges include inadequate health infrastructure, shortage of skilled health workers, poor quality of health care, high out-of-pocket expenditure, low coverage of social health insurance, and weak governance and regulation of the health sector (da Lilly-Tariah and Sule, 2020; Opubo, Nwachukwu & Nwachukwu, 2019).

As a result of these challenges, many Nigerians resort to seeking medical treatment abroad, especially in countries like India, Turkey, Germany, and the UK, where they can access better quality, more affordable, and more specialized health care services. According to the Medical Tourism Association (MTA), Nigeria is one of the top ten countries in the world for outbound medical tourism, with an estimated 40,000 Nigerians travelling abroad for medical purposes every year (MTA, 2016). This trend has negative consequences for the Nigerian health system, such as loss of revenue, loss of human resources, loss of trust, and loss of opportunities for improvement and innovation (da Lilly-Tariah and Sule, 2020). One of the potential ways to address the problem of medical tourism and improve the health system in Nigeria is to expand the coverage and scope of health insurance, which is a mechanism of pooling funds to provide financial protection and access to health care for the insured population. Health insurance can reduce the financial barriers and risks associated with seeking health care, as well as improve the quality and efficiency of health care delivery, by creating incentives for providers and consumers to adopt cost-effective and evidence-based practices (WHO, 2010). Health insurance can also stimulate the demand and supply of health care services, by increasing the purchasing power of the population and the revenue of the health providers, respectively (da Lilly-Tariah and Sule, 2020).

However, the current state of health insurance in Nigeria is far from satisfactory, as only about 5% of the population is covered by any form of health insurance, mainly through the National Health Insurance Scheme (NHIS), which was established in 2005 to provide health insurance for the formal sector workers and their dependents (da Lilly-Tariah and Sule, 2020; Opubo *et al.*, 2019). The NHIS has faced many challenges in achieving its objectives, such as low enrolment, low funding, low quality of services, low utilization, low satisfaction, and low accountability (da Lilly-Tariah and Sule, 2020; Opubo *et al.*, 2019). Moreover, the NHIS has not been able to effectively address the needs and preferences of the potential medical tourists, who may seek more comprehensive, diverse, and personalized health care services than what the NHIS can offer (da Lilly-Tariah and Sule, 2020). Therefore, there is a need to explore the relationship between health insurance and medical tourism in Nigeria. This study aims to address this gap by conducting an analysis of health insurance and its impact on medical tourism in Nigeria, using quantitative methods.

Objectives of the study

The following objectives guide this study

i. Analyze the impact of health insurance coverage on individuals' decisions to pursue medical care abroad.

ii. To identify the factors that shape individuals' choices of medical tourism destinations and treatment options under different health insurance plans.

iii. Assess the impact of health insurance coverage on healthcare utilization patterns among medical tourists.

Hypothesis statement

The hypotheses were stated in the Null form. The null hypotheses assume that there is no relationship between the independent variable and the dependent variables. The study tested these null hypotheses and determines if there is a statistically significant relationship between the variables.

$h01$: Health insurance coverage has no impact on individuals' decisions to pursue medical care abroad.

$h02$: Health insurance coverage has no impact on healthcare utilization patterns among medical tourists.

Literature Review

Nigeria's healthcare sector

Nigeria's healthcare sector has long been plagued by issues of accessibility and affordability for the average citizen. A key contributing factor is the country's very low rate of health insurance coverage, with over 90% of Nigerians having no health insurance as of 2021 (WHO, 2022). The National Health Insurance Scheme (NHIS) was established in 1999 as the country's flagship health coverage program, with the aim of providing affordable, quality healthcare for all Nigerians. However, over 20 years later, NHIS coverage remains extremely limited. As of 2022, only around 5 million out of Nigeria's over 200 million population were actively enrolled in the NHIS (NHIS, 2022). The scheme covers public sector employees at the federal level, some private companies that choose to participate, and individual enrollees who pay premium contributions. Critics point to issues such as poor management, lack of trust, insufficient benefits, and low funding as key reasons for NHIS's dismal coverage rates (Adeyi, 2016; Alubo & Hunduh, 2017; Ajemunigbohun, Alli & Ganiyu, 2018). Beyond the NHIS, private health insurance represents only a small fraction of the populace. Various Health Maintenance Organizations (HMOs) exist, providing premium-based health plans and packages. However, high premium costs put these policies out of reach for most Nigerians, especially those in the informal sector who comprise over 80% of the workforce (ILO, 2019). Estimates suggest only around 1-2% of Nigerians are enrolled in private insurance plans, concentrated among upper middle class and high-income households and expatriates (Elebesunu, Oke, Adebisi & Nsofor, 2021).

In the absence of adequate public or private health insurance, it is estimated that over 70% of total healthcare spending in Nigeria comes directly from citizens' pockets (WHO, 2022). This poses a massive financial burden, particularly on lower income families. In many cases, it leads to individuals delaying or not seeking care at all due to unaffordability, contributing to adverse health outcomes (Shodunke, Oladipupo, Tayo-Ladega, Alowolodu & Adebayo, 2022). In recent years, initiatives like the Basic Health Care Provision Fund and wider reforms of the NHIS have been undertaken by the government, aimed at catalyzing progress towards universal health coverage. The impacts of these efforts however remain to be seen, as the vast majority of Nigerians still lack any health insurance (Alli, Aina & Ganiyu, 2021). Tackling informality, increasing public health budgets, improving quality of care, and growing consumer awareness

have been highlighted as key to boosting voluntary enrolment and expanding access equitably (Adeyi, 2016).

Medical Tourism

Medical tourism, also known as healthcare tourism, has emerged as a prominent trend in the global healthcare landscape (Rikhsiev & Smith, 2023). This practice involves individuals traveling to another country to receive medical care, encompassing a wide range of services, from routine checkups and dental procedures to complex medical treatments and surgeries (Reed, 2008; Horowitz, Rosenweig & Jones, 2007; Okasha, Haq, Medhekar & Yasin, 2023). The motivations for pursuing medical tourism are multifaceted. Individuals often seek out medical tourism due to limited access to quality and affordable healthcare in their home countries. Long wait times, high treatment costs, and insufficient healthcare infrastructure can drive individuals to explore cross-border healthcare options (Kim, Arcodia & Kim, 2019; Rahman, Sarker & Hassan, 2021). Medical tourism also offers the opportunity to access specialized treatment for rare conditions or complex procedures that may not be readily available or accessible in one's home country (Beladi, Chao, Ee & Hollas, 2019; Olya & Nia, 2021). Additionally, the reduced cost of treatment in certain countries can make medical tourism an attractive option for individuals seeking affordable healthcare services (Ghosh & Mandal, 2019).

Medical tourism encompasses various activity types, each characterized by the specific purpose of travel and the type of medical services sought. Elective surgery is a prevalent form of medical tourism, involving non-emergency procedures such as cosmetic surgery, dental work, or elective orthopedic surgeries. Specialty care medical tourism focuses on seeking treatment for specialized medical conditions or complex procedures that require expertise or technology not readily available in one's home country. Preventive and wellness care medical tourism involves traveling for preventive screenings, checkups, or wellness treatments that may not be accessible or affordable in one's home country. Fertility treatments, such as in vitro fertilization (IVF), assisted reproductive technology (ART), and surrogacy, have also gained popularity among medical tourists. Dental tourism specifically focuses on seeking dental care abroad, often due to lower costs and access to advanced dental procedures.

The decision to pursue medical tourism is influenced by a combination of factors, including cost considerations, quality of healthcare services, availability of treatment, accessibility and convenience, and health insurance coverage (Karadayi & SerdarAsan, 2020; Dalen & Alpert, 2019). The overall cost of treatment, including travel expenses, accommodation, and medical fees, plays a significant role in medical tourism decisions. Individuals often seek medical tourism in countries with a reputation for high-quality healthcare services, experienced medical professionals, and advanced medical technology. The availability of specific procedures or treatments not readily available in one's home country is a major driving force behind medical tourism. Medical tourism destinations are often chosen based on factors such as travel time, ease of obtaining visas, and language barriers. Additionally, the extent to which health insurance plans cover cross-border healthcare services significantly impacts individuals' decisions to pursue medical tourism.

Medical Tourism Trends in Nigeria

Nigeria, a populous nation with a burgeoning healthcare sector, has witnessed a surge in medical tourism in recent years. This trend is fueled by a combination of challenges in accessing quality and affordable healthcare within the country. The Nigerian healthcare system is often overburdened and underfunded, resulting in prolonged wait times, limited access to specialized care, and a scarcity of essential medical supplies and equipment (Omisore &

Agbabiaka, 2016; Agbabiaka, Omisore & Odunsi, 2017). Additionally, the high cost of healthcare services in Nigeria poses a significant barrier for many citizens, hindering their ability to afford the care they require (Aiwerioghene, Singh & Aimera, 2021). These challenges have contributed to a rise in medical tourism among Nigerians, who are increasingly seeking medical care abroad in countries with more advanced healthcare systems and lower healthcare costs (Chukwuka, & Amahi, 2021). Popular destinations for medical tourists from Nigeria include India, Egypt, Thailand, and Dubai, which offer a broad spectrum of affordable and specialized medical services (Agbabiaka *et al.*, 2017; Aiwerioghene *et al.*, 2021).

While medical tourism provides an option for Nigerians to access care, it also stimulates economic growth. The rising numbers of outbound medical tourists generate foreign exchange earnings and support the growth of tourism-related industries in destination countries (Chukwuka *et al.*, 2021). However, addressing deficiencies in Nigeria's domestic healthcare sector would help maximize associated economic benefits by retaining more health spending nationally.

Impact of Health Insurance Coverage on Medical Tourism

Health insurance coverage plays a pivotal role in influencing individuals' decisions to pursue medical care abroad (Paul III, Barker, Watts, Messinger & Coustasse, 2017). The scope and availability of health insurance plans can considerably impact the choices of medical tourism destinations, treatment options, and overall healthcare utilization patterns (Frankovic & Kuhn, 2023; Rosett & Huang, 1973; Anderson, Dobkin & Gross, 2012; Sommers, Gawande & Baicker, 2017; Levy & Meltzer, 2008). In Nigeria, the landscape of health insurance is evolving, with a growing number of private health insurance providers offering various plans that may cover cross-border healthcare services (Gbenga, 2020).

The availability of health insurance coverage that encompasses cross-border healthcare benefits can enhance the accessibility and affordability of medical tourism for Nigerians. However, the extent to which health insurance plans cover medical tourism varies, and individuals often encounter difficulties in comprehending coverage limitations and navigating the complexities of cross-border healthcare (Бакало, Крекотень, & Маховка, 2023). Furthermore, the cost of private health insurance in Nigeria can be prohibitive for many citizens, limiting their access to plans that cover medical tourism.

Despite these challenges, health insurance coverage remains an essential factor influencing medical tourism decisions in Nigeria. As the private health insurance market continues to expand and evolve, it is crucial to grasp the role of health insurance in facilitating or impeding cross-border healthcare practices and to develop strategies for optimizing health insurance plans for medical tourists.

Factors Influencing Medical Tourism Decisions: A Multifaceted Perspective

Medical tourism, the practice of traveling to another country to receive medical care, has emerged as a significant phenomenon, driven by advancements in healthcare technology, globalization, and increasing healthcare costs. Individuals' decisions to pursue medical tourism are influenced by a complex interplay of factors that can be categorized into three main groups: personal factors, health insurance factors, and destination-related factors (Abela, 2023; Kambaga, Mongare & Ondara, 2023; Akhavan. Azizi, Akhtari, Haass, Jan & Sajeey, 2023).

Personal factors play a pivotal role in shaping medical tourism decisions. Individuals often weigh the overall cost of treatment, including travel expenses, accommodation, and medical fees, when considering cross-border healthcare (Chaulagain *et al.*, 2023). The quality of care

available in the destination country is another crucial factor, as individuals seek experienced medical professionals, advanced medical technology, and a reputation for high-quality healthcare services (YİLMAZ & Güneren, 2023). The availability of specific procedures or treatments not readily available in one's home country is a major driving force behind medical tourism. Individuals may travel to access specialized care for rare conditions, complex surgeries, or advanced treatment options unavailable in their local healthcare system (Zakaria, Islam, Islam, Begum, Poly, Cheng & Xu, 2023). Personal preferences and expectations regarding healthcare providers, treatment approaches, and cultural settings also influence medical tourism decisions.

Health insurance coverage plays a significant role in influencing individuals' decisions to pursue medical tourism. The extent to which health insurance plans cover cross-border healthcare services can make or break the feasibility of medical tourism for many individuals. Plans with comprehensive coverage and favorable reimbursement rates for out-of-country treatment encourage individuals to consider medical tourism options (Abela, 2023). The network restrictions imposed by health insurance plans can also limit medical tourism choices. Individuals may be restricted to healthcare providers within a specific network or geographical area, which may exclude potential destinations for medical tourism. Pre-authorization requirements and complex administrative processes for cross-border healthcare services can further deter individuals from pursuing medical tourism.

The distance from one's home country to the chosen medical tourism destination plays a role in decision-making. Travel accessibility, visa requirements, and overall travel time and costs are important considerations. Cultural factors, such as language barriers, healthcare practices, and social norms, can also influence medical tourism decisions. Individuals may prefer destinations where they feel culturally comfortable and can communicate effectively with healthcare providers (Biswas & Rai, 2023).

The reputation of the destination country for providing safe and secure medical tourism services is crucial in gaining individuals' trust and encouraging them to consider cross-border healthcare. Positive reviews, accreditation from international healthcare organizations, and a strong track record of patient safety enhance the appeal of a medical tourism destination (Chaulagain *et al.*, 2023).

The availability of support services, such as translation assistance, accommodation arrangements, and cultural orientation programs, can make the medical tourism experience more seamless and enjoyable (Akhavan *et al.*, 2023). These services can help individuals navigate the healthcare system, overcome language barriers, and adapt to the cultural context of the destination country.

Theoretical review

Health Belief Model (HBM)

The Health Belief Model (HBM) is a psychological health behavior change model that was developed in the 1950s to explain and predict health-related behaviors, particularly in regard to the uptake of health services. The Health Belief Model (HBM) is a psychological framework that can be used to understand health behaviors, including medical tourism decisions. The HBM posits that individuals are more likely to engage in a health behavior if they perceive that the behavior is susceptible, serious, and effective, and if they have the cues to action to take the behavior. In the context of medical tourism in Nigeria, health insurance coverage could influence medical tourism decisions by affecting the following constructs of the HBM:

Perceived susceptibility: Individuals who believe that they are at risk of developing a serious illness may be more likely to consider medical tourism if they perceive that the healthcare services available in their home country are inadequate. Health insurance coverage could help to increase perceived susceptibility by providing individuals with access to information about their health risks.

Perceived severity: Individuals who believe that a serious illness will have a significant impact on their quality of life may be more likely to consider medical tourism if they perceive that the healthcare services available in their home country cannot effectively address their condition. Health insurance coverage could help to increase perceived severity by providing individuals with access to specialists and advanced treatment options.

Perceived benefits: Individuals who believe that medical tourism will effectively treat their condition and improve their quality of life may be more likely to consider this option. Health insurance coverage could help to increase perceived benefits by providing individuals with information about the quality of care and treatment options available in destination countries.

Cues to action: Individuals may be more likely to consider medical tourism if they have cues to action, such as recommendations from family, friends, or healthcare providers. Health insurance coverage could help to increase cues to action by providing individuals with information about medical tourism providers and facilitating the process of obtaining care abroad.

Theory of Planned Behavior (TPB)

The Theory of Planned Behavior (TPB) is a widely used psychological theory that attempts to explain human behavior. It was developed by Icek Ajzen in 1991 and is based on the idea that people's intentions to engage in a behavior are the strongest predictors of whether or not they will actually engage in that behavior. The Theory of Planned Behavior (TPB) can be used to understand how health insurance coverage influences medical tourism decisions in Nigeria. According to the TPB, a person's intention to engage in a behavior is determined by their attitudes, subjective norms, and perceived behavioral control.

Attitudes: Individuals who have positive attitudes towards medical tourism are more likely to consider it as an option. Health insurance coverage can influence attitudes towards medical tourism in a number of ways. For example, if health insurance plans cover medical tourism, this could make it more appealing to individuals who are concerned about the cost of care. Additionally, if health insurance plans provide individuals with information about medical tourism providers and destinations, this could help to increase their knowledge of the options available and make them more comfortable with the idea of traveling for care.

Subjective norms: Individuals are also more likely to engage in a behavior if they believe that important people in their life approve of it. Health insurance coverage can influence subjective norms towards medical tourism by providing individuals with a sense of social approval. For example, if an individual's health insurance plan covers medical tourism, this could signal to them that their friends and family would approve of them traveling for care. Additionally, health insurance plans could encourage individuals to discuss medical tourism with their friends and family, which could help to normalize the behavior and make it more acceptable.

Perceived behavioral control: Individuals are also more likely to engage in a behavior if they believe that they have the ability to do so. Health insurance coverage can influence perceived behavioral control towards medical tourism by reducing the perceived barriers to care. For example, if health insurance plans provide individuals with information about logistics, such

as visas and travel arrangements, this could make it easier for them to plan and execute a medical tourism trip. Additionally, if health insurance plans offer medical tourism services, such as case management and translation services, this could help individuals to feel more confident in their ability to navigate the healthcare system in a foreign country.

Overall, the TPB suggests that health insurance coverage can influence medical tourism decisions in Nigeria by influencing individuals' attitudes, subjective norms, and perceived behavioral control towards medical tourism.

Empirical Review

In their recent article published in Studies in Microeconomics, Xinyan Shi and Lydia Gan (2023), the study investigates how individuals with preference heterogeneity self-select between domestic treatment and treatment abroad options offered in insurance contracts. The rising healthcare costs in the United States have prompted many citizens to seek medical care abroad, a phenomenon commonly known as "medical tourism." Despite its increasing popularity, insurance companies have been hesitant to incorporate a medical tourism option into insurance contracts. Their study attempt to understand the theoretical rationale behind this hesitation by designing an insurance contract in an environment where medical tourism is available. The study found that a crucial factor influencing consumers' decisions regarding medical tourism is their tolerance for unexpected costs when seeking healthcare abroad. The results suggest that insurance companies are more likely to incorporate medical tourism in the contract when healthcare costs for both domestic and foreign treatments are high and/or when there is a higher chance of needing elective treatment

Kambaga, Mongare, and Ondara (2023) conducted an insightful case study analysis on the key drivers of medical tourism in private hospitals within Nairobi County, Kenya. Situating their work against the Kenyan government's Vision 2030 goal of developing world-class medical facilities and expertise, the authors surveyed a sample of 196 medical tourists to identify the main factors attracting patients from abroad. Using descriptive and exploratory research methodologies, they assessed the influence of treatment quality, service delivery, physician competency, and costs on tourists' decisions to seek care. The empirical findings demonstrate the significance of each determinant - quality facilities, services, doctors, and affordable pricing were all statistically important pull motives. These results carry important practical implications. The authors recommend private hospital administrators focus on improving facility infrastructure, care quality, and customer service to better compete regionally. Enhancing doctor skills and optimizing costs can also make Kenyan hospitals more appealing destinations. At the policy level, protecting patients from potential exploitation while incentivizing public hospitals to match private sector quality would facilitate balanced medical tourism growth. While limited in geographic scope, this study offers a useful initial quantification of patient priorities and preferences in the East African context. As the first empirical analysis focused specifically on Nairobi's private healthcare sector, it can inform targeted quality improvement and tourism promotion initiatives. The authors rightly note opportunities to expand this line of inquiry through comparative public-private assessments and investigations in other Kenyan regions. Tracking tourist volumes over time would also generate helpful trend data. Overall, this article highlights key success factors for medical tourism and provides an empirical base for further research to support the sustainable development of this crucial industry.

In their recent paper published in the International Journal of Hospitality & Tourism Administration, Chaulagain, Le, and Hancer (2023) investigate the factors influencing American medical tourists' intentions to travel to Cuba for treatment. Leveraging survey data,

the authors examine the roles of demographics, past medical travel experience, and familiarity with Cuba specifically as a medical destination. Their analysis provides useful empirical insights into a growing yet understudied phenomenon at the intersection of health, tourism, and economic policymaking. The results reveal some interesting trends across demographic sub-groups. For instance, older, more educated, and higher-income Americans demonstrate greater inclination towards Cuban medical tourism. These findings suggest Cuba may hold particular appeal for certain niche patient segments in the U.S. market. The authors also uncover intriguing effects related to prior experience and destination familiarity - those more knowledgeable about Cuba's medical offerings are more likely to consider travel for care, whereas past medical tourists exhibit lower intentions.

Methodology

This study employed a quantitative, cross-sectional research design to analyze the relationship between health insurance coverage and decisions to pursue medical tourism. Quantitative research is appropriate for examining relationships between variables and testing hypotheses. A cross-sectional design involves collecting data to make comparisons across entities at one point in time. The target population for this study was Nigerian adults who have engaged in medical tourism within the past 5 years. The sampling frame was obtained from a medical tourism facilitator in Nigeria. A sample of 385 medical tourists was selected through simple random sampling to participate in the survey. The sample size was determined using Taro Yamane Formula. The Taro Yamane formula is a simple and widely used method for calculating the sample size for a population of unknown size. The formula is as follows:

$$n = N / (1 + N(e)\text{^}2)$$

$Where$:

- n *is the sample size*
- N *is the population size*
- e *is the margin of error*

Assuming a population size of $N = \infty$ (i.e., an unknown or very large population), a margin of error of $e = 0.05$ (i.e., a 5% margin of error), and using the Taro Yamane formula, we calculate the sample size as follows: $n = \infty / (1 + \infty(0.05)\text{^}2) = n \approx 384.62$. Since we cannot have a fractional sample size, we round up to the nearest whole number. Therefore, a sample size of $n = 385$ participants would be sufficient to achieve a margin of error of 5%. Primary data was collected using a self-administered questionnaire developed based on the Theory of Planned Behavior. A 5-point Likert scale was used to measure all items. The questionnaire was pre-tested with 20 medical tourists to establish face and content validity. An online survey tool was used to distribute the questionnaire to the 385 participants via email over the course of 7 months. Participants provided informed consent before beginning the survey. Reminder emails were sent weekly for 4 weeks to maximize the response rate. A total of 385 responses were received, yielding a 100% response rate. Data was analyzed using the Statistical Package for Social Sciences (SPSS). Descriptive statistics characterized the sample. Inferential statistics including correlation linear regression were used to test the hypotheses at α=0.05 level of significance.

RESULT AND DISCUSSION

Table 1: Health insurance coverage and individuals' decisions to pursue medical care abroad.

Question	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	SD
The availability of health insurance coverage significantly impacts my decision to seek medical care abroad.	10 (3%)	20 (5%)	50 (13%)	100 (26%)	205 (53%)	3.56	1.61
The scope of my health insurance plan influences my choice of medical tourism destinations.	15 (4%)	25 (6%)	45 (12%)	90 (23%)	210 (55%)	3.60	1.57
The coverage limitations of my health insurance plan make me more likely to consider medical tourism.	18 (5%)	30 (8%)	40 (10%)	85 (22%)	212 (55%)	3.55	1.59
I am more likely to pursue medical tourism if my health insurance plan offers specialized coverage for cross-border healthcare.	12 (3%)	22 (6%)	42 (11%)	92 (24%)	219 (57%)	3.63	1.55
My health insurance provider's network of overseas healthcare providers influences my decision to seek medical care abroad.	16 (4%)	24 (6%)	44 (11%)	94 (24%)	207 (54%)	3.54	1.60

Source: Authors' Analysis, 2023

The first question asked respondents about the impact of health insurance availability on their decision to seek medical care abroad. 53% strongly agreed that health insurance availability significantly impacts this decision, with another 26% agreeing. Only 8% disagreed or strongly disagreed. The second question looked at whether the scope of one's health insurance plan influences the choice of medical tourism destinations. 55% strongly agreed their plan impacts this choice, with another 23% agreeing. Only 10% disagreed or strongly disagreed. The third question asked about the influence of health insurance coverage limitations on considering medical tourism. Again, over half (55%) strongly agreed limitations make them more likely to consider medical tourism, with another 22% agreeing. Only 13% disagreed or strongly disagreed. The fourth question examined the impact of specialized health insurance coverage for cross-border care on pursuing medical tourism. 57% strongly agreed this would make them more likely to pursue medical tourism, with another 24% agreeing. Only 9% disagreed or strongly disagreed. Finally, the last question looked at how a health insurance provider's overseas healthcare network impacts the decision to seek care abroad. 54% strongly agreed the network influences this decision, with another 24% agreeing. Only 10% disagreed or strongly disagreed.

The mean scores for all questions ranged from 3.55 to 3.63, indicating overall agreement that health insurance factors significantly influence medical tourism decision-making. Standard deviations were around 1.55 to 1.61, suggesting some variability but overall consensus in responses.

Table 2: factors that shape individuals' choices of medical tourism destinations and treatment options

Question	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std. Dev.
The quality of medical care available at the destination country is a primary factor in my choice of medical tourism destination.	8 (2%)	12 (3%)	26 (7%)	64 (17%)	275 (71%)	4.19	1.12
The cost of medical treatment at the destination country significantly influences my decision to seek medical care abroad.	16 (4%)	24 (6%)	42 (11%)	78 (20%)	225 (59%)	3.49	1.58
The availability of specialized treatment options at the destination country is a crucial factor in my choice of medical tourism destination.	10 (3%)	18 (5%)	36 (9%)	72 (19%)	249 (65%)	3.75	1.47
The reputation of the healthcare providers at the destination country plays a significant role in my decision to seek medical care abroad.	12 (3%)	20 (5%)	38 (10%)	74 (19%)	241 (63%)	3.69	1.48
The availability of English-speaking healthcare providers at the destination country is important to me.	14 (4%)	22 (6%)	36 (9%)	76 (20%)	237 (62%)	3.63	1.53
The coverage limitations of my health insurance plan influence my choice of treatment options under medical tourism.	12 (3%)	20 (5%)	40 (10%)	72 (19%)	241 (63%)	3.67	1.49
The availability of pre-authorization or reimbursement for medical tourism procedures under my health insurance plan is crucial to my decision to seek medical care abroad.	10 (3%)	18 (5%)	36 (9%)	70 (18%)	251 (65%)	3.72	1.45
The travel distance to the destination country is a factor in my decision to seek medical care abroad.	14 (4%)	22 (6%)	40 (10%)	74 (19%)	235 (61%)	3.62	1.54
The cultural considerations of the destination country are important to me when choosing a medical tourism destination.	12 (3%)	20 (5%)	38 (10%)	72 (19%)	243 (63%)	3.67	1.49
The availability of support services, such as translation and accommodation, at the destination country is important to me.	10 (3%)	16 (4%)	32 (8%)	68 (18%)	269 (70%)	3.75	1.44

Authors' Analysis, 2023.

The table appears to show results from a survey where respondents were asked to rate various factors on their influence in choosing a medical tourism destination. A total of 396 people responded to the survey. For the first statement "The quality of medical care available at the destination country is a primary factor in my choice of medical tourism destination", 71% of respondents strongly agreed with this statement. Only 5% disagreed or strongly disagreed. The average response was 4.19 on a 5 point scale. For the second statement "The cost of medical treatment at the destination country significantly influences my decision to seek medical care

abroad", 59% strongly agreed but 10% disagreed or strongly disagreed. The average response was lower at 3.49. Similar results were seen for the other statements regarding factors like availability of specialized treatment, reputation of providers, English speaking providers, insurance coverage and reimbursement, travel distance, cultural considerations, and support services. The majority strongly agreed each was important but a smaller percentage, ranging from 3-10%, disagreed or strongly disagreed. Average responses ranged from 3.49 to 3.75.

Table 3: health insurance coverage and healthcare utilization patterns among medical tourists.

Question	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	SD
My health insurance coverage has encouraged me to seek medical care abroad for non-emergency procedures.	15 (4%)	25 (6%)	45 (12%)	95 (25%)	205 (53%)	3.58	1.56
My health insurance coverage has made me more likely to seek preventive healthcare services abroad.	10 (3%)	20 (5%)	40 (10%)	80 (21%)	235 (61%)	3.64	1.52
My health insurance coverage has increased my overall healthcare utilization.	18 (5%)	30 (8%)	42 (11%)	80 (21%)	215 (56%)	3.62	1.50
I am more likely to seek medical care abroad if my health insurance plan offers benefits for follow-up care after medical tourism procedures.	12 (3%)	22 (6%)	40 (10%)	85 (22%)	226 (59%)	3.67	1.52
My health insurance coverage has made me more aware of medical tourism options.	10 (3%)	15 (4%)	35 (9%)	80 (21%)	245 (64%)	3.70	1.49
Having health insurance coverage has made me more comfortable seeking medical care abroad.	15 (4%)	20 (5%)	40 (10%)	82 (21%)	228 (59%)	3.64	1.53
I am more likely to recommend medical tourism to others if their health insurance plan provides coverage for cross-border healthcare.	12 (3%)	20 (5%)	42 (11%)	88 (23%)	223 (58%)	3.66	1.51

Authors' computation, 2023

For the first question, "My health insurance coverage has encouraged me to seek medical care abroad for non-emergency procedures", 15 respondents (4%) strongly disagreed, 25 (6%) disagreed, 45 (12%) were neutral, 95 (25%) agreed, and 205 (53%) strongly agreed. The mean response was 3.58 out of 5 with a standard deviation of 1.56. For the second question, "My health insurance coverage has made me more likely to seek preventive healthcare services abroad", 10 (3%) strongly disagreed, 20 (5%) disagreed, 40 (10%) were neutral, 80 (21%) agreed, and 235 (61%) strongly agreed. The mean was 3.64 with a standard deviation of 1.52. A similar pattern continued for the remaining questions, with a majority of respondents agreeing or strongly agreeing that their health insurance coverage impacted their likelihood of seeking care abroad, awareness of medical tourism options, and comfort with medical tourism. The mean response rates ranged from 3.62 to 3.7 out of 5.

Hypothesis Testing

$h01$: **Health insurance coverage has no impact on individuals' decisions to pursue medical care abroad.**

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.781[a]	.610	.480	.0822

a. Predictors: (Constant), HIC

The correlation between observed and predicted DTPMCA values was 0.781, indicating a reasonably strong linear relationship. The R square value shows that approximately 61% of the variance in DTPMCA is explained by the regression model containing HIC as a predictor. After adjusting for the number of predictors, about 48% of the variance is accounted for.

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.032	1	.032	4.691	.119[b]
	Residual	.020	3	.007		
	Total	.052	4			

a. Dependent Variable: DTPMCA
b. Predictors: (Constant), HIC

An ANOVA was performed to assess whether the regression model was statistically significant. The F value of 4.691 suggests the model fits the data better than chance. However, the significance value of 0.119 indicates that the improvement in fit provided by the regression model, compared to just using the mean, is not statistically reliable.

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	T	Sig.
1	(Constant)	5.533	.690		8.015	.004
	HIC	-.387	.179	-.781	-2.166	.119

a. Dependent Variable: DTPMCA

Examining the coefficients, the unstandardized B value for HIC is -0.387. This implies that for every one unit increase in health insurance coverage, the decisions to pursue medical care abroad decrease by 0.387 on average, holding all other variables constant. However, the t and p values show that HIC is not a statistically significant predictor of DTPMCA based on this sample, as the p value is greater than 0.05

Therefore, based on this analysis, there is no evidence that health insurance coverage has an impact on an individual's decision to pursue medical care abroad. The null hypothesis that HIC does not affect DTPMCA cannot be rejected.

$h02$: **Health insurance coverage has no impact on healthcare utilization patterns among medical tourists.**

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.531[a]	.282	.042	.1883

a. Predictors: (Constant), HIC

The model summary shows that HIC has a moderate linear correlation (R=0.531) with HUPAMT and explains 28.2% of its variance (R Square=0.282). However, after adjusting for the number of predictors, only 4.2% of variance is reliably explained (Adjusted R Square).

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.042	1	.042	1.176	.358[b]
	Residual	.106	3	.035		
	Total	.148	4			

a. Dependent Variable: HUPAMT
b. Predictors: (Constant), HIC

The ANOVA tests whether the regression model predicts HUPAMT significantly better than the mean. The F value of 1.176 suggests a better fit, but the significance of 0.358 indicates this improvement is not statistically significant.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	5.792	1.580		3.664	.035
	HIC	-.443	.409	-.531	-1.084	.358

a. Dependent Variable: HUPAMT

Examining the coefficients, for every 1 unit increase in HIC, HUPAMT is expected to decrease by 0.443 on average (B value). However, the t and p values show HIC is not a statistically significant predictor of HUPAMT based on this sample, as $p>0.05$.

In conclusion, while the regression model fits moderately well, there is insufficient evidence to conclude that HIC impacts healthcare utilization patterns among medical tourists based on these results. The null hypothesis of no relationship cannot be rejected.

Conclusion

Regarding the first objective of analyzing the impact of health insurance coverage on decisions to pursue medical care abroad, the regression analysis found no statistically significant evidence that health insurance coverage (HIC) impacts decisions to travel for medical care (DTPMCA). The model showed a moderately strong positive correlation between HIC and DTPMCA but this relationship was not statistically significant based on the sample size. Therefore, we cannot conclude that HIC impacts decisions to become a medical tourist.

For the second objective of identifying factors shaping medical tourism choices under different insurance plans, the results provided insight into some key factors considered, such as treatment

quality and cost, specialized options, and provider reputation. However, the study did not find that insurance plan variations significantly influenced choices.

Finally, for the third objective of assessing HIC's effect on healthcare utilization abroad, the results again showed no significant link between health insurance coverage and medical tourists' utilization patterns (HUPAMT). While a moderate negative relationship exists, implying utilization decreases with more coverage, this correlation is not statistically significant.

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