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Medical Tourism among Afghan Patient Population: Assessment of their Perception and Expectation of Healthcare Services across the Border of Afghanistan

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Abstract
The Afghan healthcare system lacks sufficient resources to meet the expectations and perceptions of the Afghan patient population in various domains of service quality, including tangibility, reliability, responsiveness, and empathy. As a result, many Afghan patients travel outside of Afghanistan for different types of healthcare services. Investigating the perceptions and experiences of Afghan medical tourists is crucial for identifying gaps in local healthcare services. Purpose: The study investigated Afghan patients' perceptions and expectations of healthcare received across the border of Afghanistan, exploring their perceptions and expectations on five domains of service quality. Methodology: A service quality questionnaire was used to collect data from 28 Afghan patients with treatment experience outside Afghanistan, assessing their perceptions and expectations of healthcare services. Significance of the Study: Assessing and understanding the perspectives of Afghan medical tourists on healthcare services outside Afghanistan will inform local authorities about gaps in healthcare services, improve service delivery, and reduce patient outflow. Enhanced local healthcare can better meet the needs and expectations of Afghan patients, helping to avoid unnecessary medical tourism. Results: The wilcoxon signed ranks test assessed significant discrepancies between participants' perceptions and expectations in tangibility, assurance, empathy, reliability, and responsiveness, with perceptions generally exceeding expectations in assurance (p-value 0.004), tangibility (p-value <0.001), and responsiveness (p-value <0.001). No significant differences were noted in reliability (p-value 0.836) and empathy (p-value 0.391). Conclusion: The findings of this study highlight the need in Afghanistan to address gaps in healthcare quality and services, thereby meeting patient expectations and ultimately enhancing the healthcare experience for the Afghan patient population, thereby reducing reliance on medical tourism outside Afghanistan.

Keywords: Medical Tourism, Lower-Income Countries, Perception, Expectation

1. Introduction

Over the past few decades in Afghanistan, years of conflict and other challenges, such as political instability and economic hardship, have caused many problems in the health industry. Many Afghan residents have limited access to high-quality healthcare, adequate healthcare infrastructure, and trained medical professionals (Shoib et al.,

2022). Therefore, these challenges in the healthcare system have made many Afghans with different health issues often seek medical care across the border of Afghanistan as medical tourists and experience medical tourism.

Many scholars have defined medical tourism as the process by which people travel across borders to seek healthcare services (Al-Lamki, 2011; Enzensberger, 1996; Jones & Keith, 2006). The modern concept of medical tourism emerged in the 19th century and continued to grow with advancements in technology, including the internet and the ease of intercontinental transportation (Bauer et al., 2015; Xu et al., 2020; Zhong et al., 2021).

In Afghanistan, exploring various aspects of medical tourism is crucial for the Afghan patient population interested in seeking care across the border. By studying the perceptions and expectations of Afghan medical tourists, this study aims to identify potential concerns or gaps in health service delivery across the Afghanistan border. This study aims to investigate the perceptions of Afghan medical tourists seeking care across the border in neighboring countries, to provide information that can guide Afghan patients in making more informed decisions when considering medical tourism and utilizing healthcare services across the Afghanistan border.

2. Purpose

This study aimed to investigate the perceptions of the Afghan patient population regarding seeking healthcare across the borders of Afghanistan. This study was designed to assess patients' understanding of their perceptions and experiences with healthcare services outside of Afghanistan, and to identify potential factors that influence their decisions, the barriers they face, and the benefits of seeking care outside of Afghanistan. The goal of this study was to share the experiences of Afghan medical tourists and increase public awareness among those interested in seeking care across the border.

3. Rationale

To date, no research is available on the Afghan patient population seeking healthcare services outside Afghanistan. Studying the Afghan patient population's medical tourism is important because it can explain why people seek medical treatment abroad. This study can help identify gaps in local healthcare services and barriers to accessing quality care, making healthcare services more accessible to Afghans and preventing the drain of local revenue. Additionally, studying the perceptions and expectations of Afghan medical tourists can shed light on their experiences with the quality of healthcare services they receive and their overall satisfaction with healthcare services outside of Afghanistan.

Study results on medical tourism in some countries on tourist perception indicated that the care provided to patients did not meet their expectations, primarily due to poor communication and inadequate human resources, which are crucial factors in healthcare service delivery that can lead to substandard healthcare services and complications (Bauer, 2015; Culley et al., 2011; Raoofi et al., 2024).

4. Significance

In Afghanistan, exploring various aspects of Afghan patient medical tourism is crucial for patients interested in seeking care across the border. The findings of this study can be helpful for the Afghan patient population interested in seeking care outside of Afghanistan, providing them with information about the quality of care, patient experience, satisfaction, cultural barriers, communication barriers, and level of travel convenience. Additionally, the findings of this study enable the local health system to modify its healthcare services to meet the needs of the patient population better and reduce local revenue drain.

5. Study Design

A qualitative study was conducted using snowball sampling with the Afghan population who had experience with medical tourism. The data was collected on the phone, and the survey link was sent to the participants. We included participants aged 18 years or older who had experienced medical tourism outside of Afghanistan within the study

timeframe, from August 2024 to December 2024. We excluded participants under 18 years old and individuals who were not Afghan natives. The service quality (SERQUAL) questionnaire dimensions (tangibility, reliability, responsiveness, assurance, and empathy) were used to assess participants' expectations and perceptions.

6. Ethical Consideration

The study design and survey adhered to all requirements for ethical research as outlined in historical documents such as the Belmont report, which establishes the ethical and confidential treatment of research participants. The University of A.T. Still University's IRB approved the study as exempt from the review.

7. Method

In this study on medical tourism among the Afghan population with experience in medical tourism outside of Afghanistan, we employed a non-probability snowball sampling technique due to the unique characteristics of the target population and the resource constraints associated with data collection. Snowball sampling was particularly effective for accessing the Afghan population with experience in medical tourism outside of Afghanistan, as it relied on the initial participants to refer others within their network to the study. Snowball sampling enabled us to gather data from Afghan participants who had personal experiences with medical tourism outside Afghanistan, thereby obtaining contextually relevant data related to participants' perceptions and expectations. The recruitment process began with a small number of participants who met the inclusion criteria. We encouraged them to identify and introduce additional participants who met the inclusion criteria and were interested in the study.

A significance level (alpha) of 0.05, a conventional threshold, was selected to determine statistical significance, minimize the risk of Type I errors, and ensure the reliability of interpreting the results. Data collection involved a structured survey questionnaire assessing five domains of service quality (tangibility, responsiveness, assurance, empathy, and reliability) in the context of medical tourist experiences. The responses were analyzed using the Wilcoxon test, and chi-square statistical techniques were employed to gain insights into the perceptions and expectations of the Afghan medical tourism experience outside Afghanistan. The study aimed to contribute valuable findings to the understanding of medical tourism within the Afghan population, informing both healthcare providers and policymakers on this emerging trend.

8. Results

8.1. Socio-demographics

The data were gathered from 28 participants with experience in medical tourism on both sides of the Afghanistan border. Participants' socio-demographics were analyzed using SPSS Software version 28 (Armond, New York, USA). The first variable was gender distribution. In the sample, 57.1% of participants identified their gender as male, and 42.9% identified as female (Figure 1). In Afghanistan, women do not have the privileges and freedom that men do, which can negatively affect their participation and awareness in the practice of seeking care across the border.

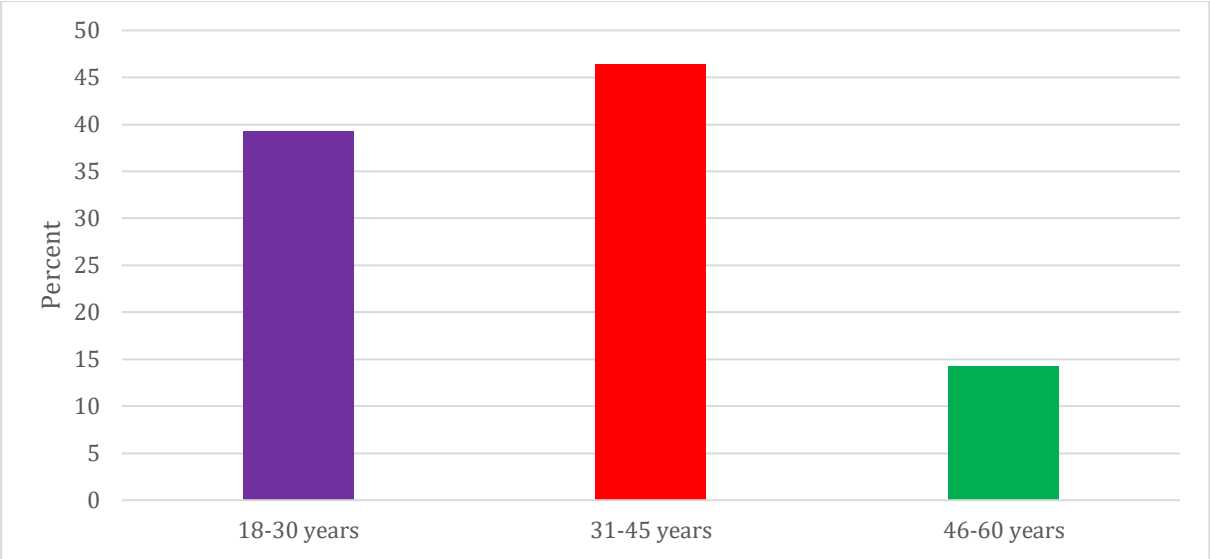

Figure 1: Percentage of participants' age distribution

When examining the age demographics of the participants, the sample showed that 39.3% were aged between 18 and 30, 46.4% fell within the 31-45 years range, and 14.3% belonged to the 46-60 years category. The largest age group is participants aged 31-45, indicating that the sample leaned toward a younger adult demographic, which may influence their likelihood of seeking healthcare services across the border (Figure 2).

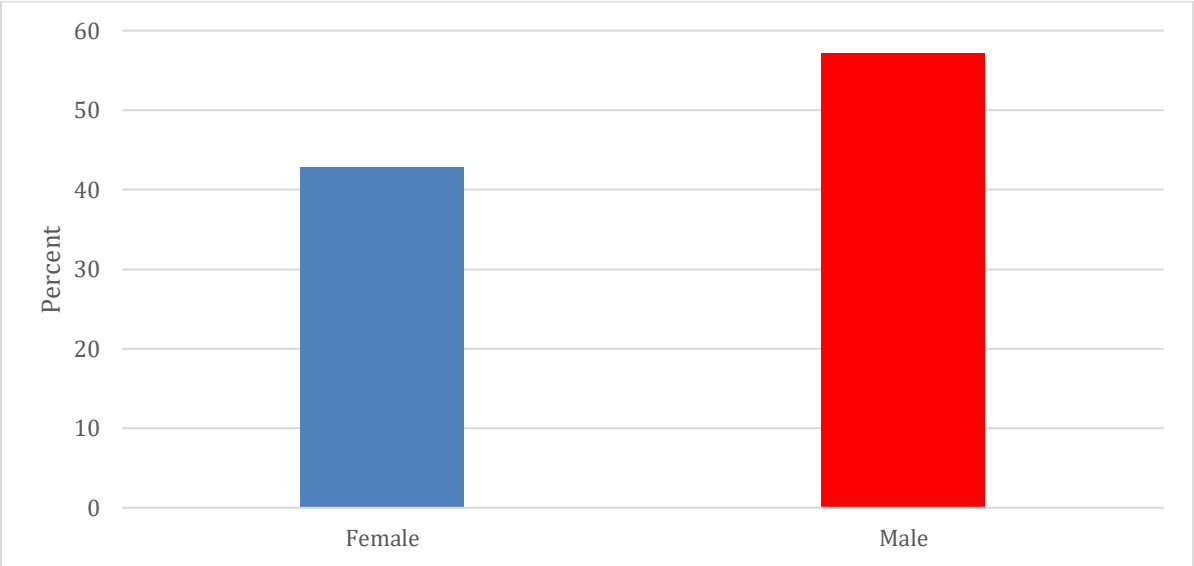

Figure 2: Percentage of participants' gender distribution

In terms of educational attainment, the data indicated that 25.0% of participants completed high school, 46.4% held a bachelor's degree, and 21.4% had attained a master's degree or higher. Additionally, 7.1% preferred not to disclose their educational background (Figure 3).

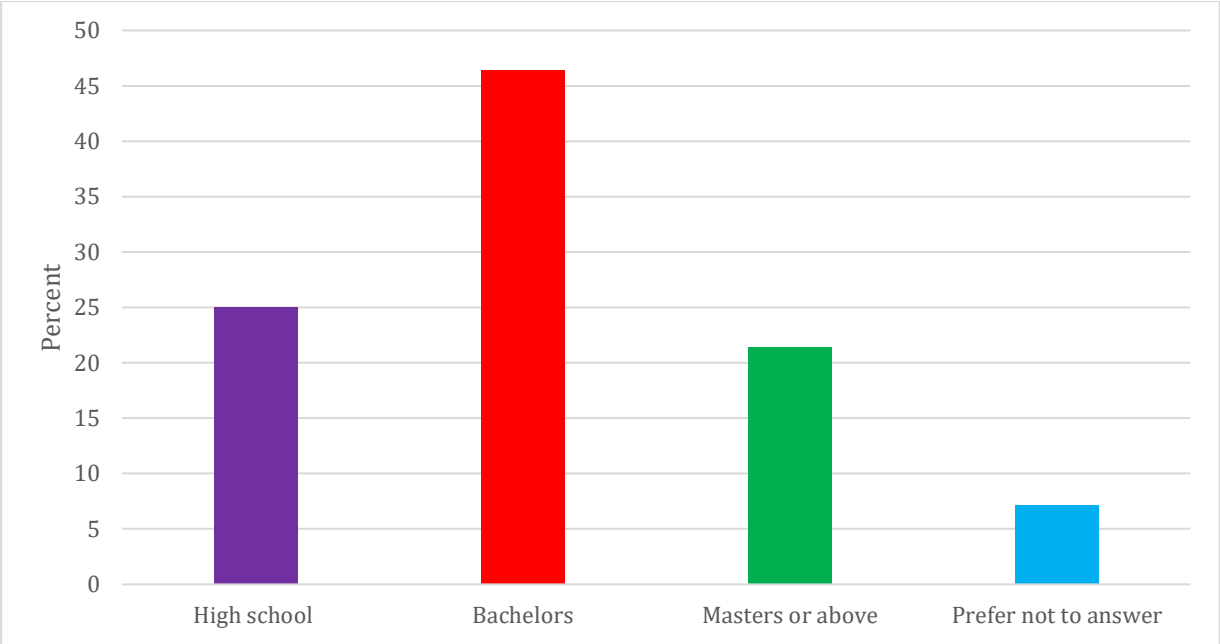

Figure 3: Percentage of participants attained level of education distribution.

Regarding the type of permanent residence, 25.0% of participants resided in rural areas, 3.6% in suburban areas, and a significant 71.4% in urban settings. The results regarding the usage of healthcare services across Afghanistan's borders indicated that 14.3% have used healthcare services across the border once, while 85.7% have used them more than once (Figure 4).

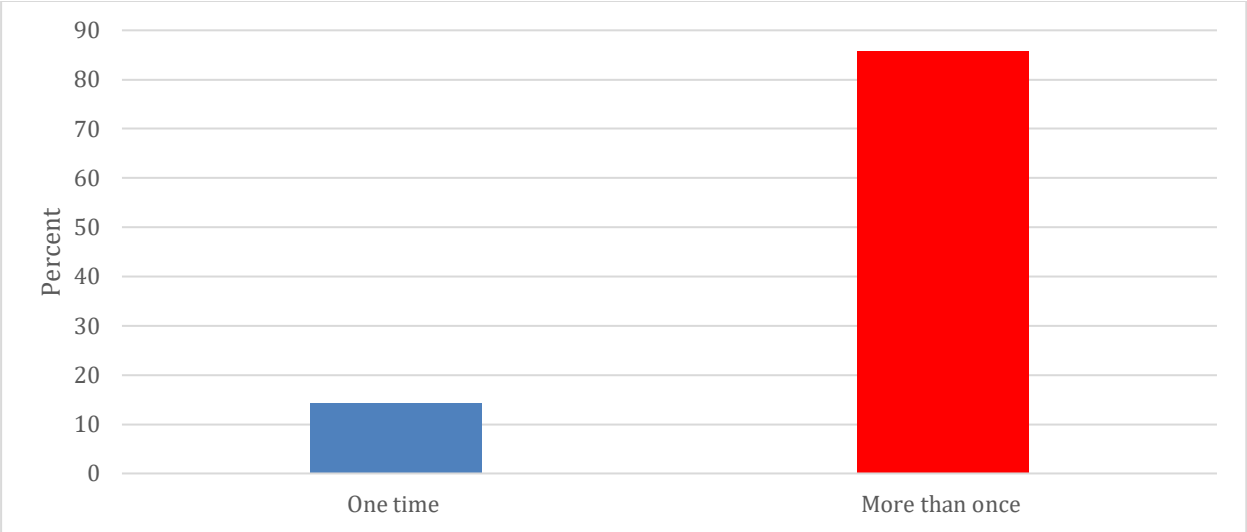

Figure 4: Percentage of participants' times of medical tourism use distribution

In examining the types of healthcare services used across the Afghan border, 60.7% of participants reported using general medicine, 28.6% required surgery, 7.1% indicated they used other types of services, and 3.6% preferred not to disclose their responses (see Figure 4). Finally, the income levels of the participants indicate that 17.9% identify themselves as having a lower income, while a substantial 82.1% classify themselves as middle-income (Figure 5).

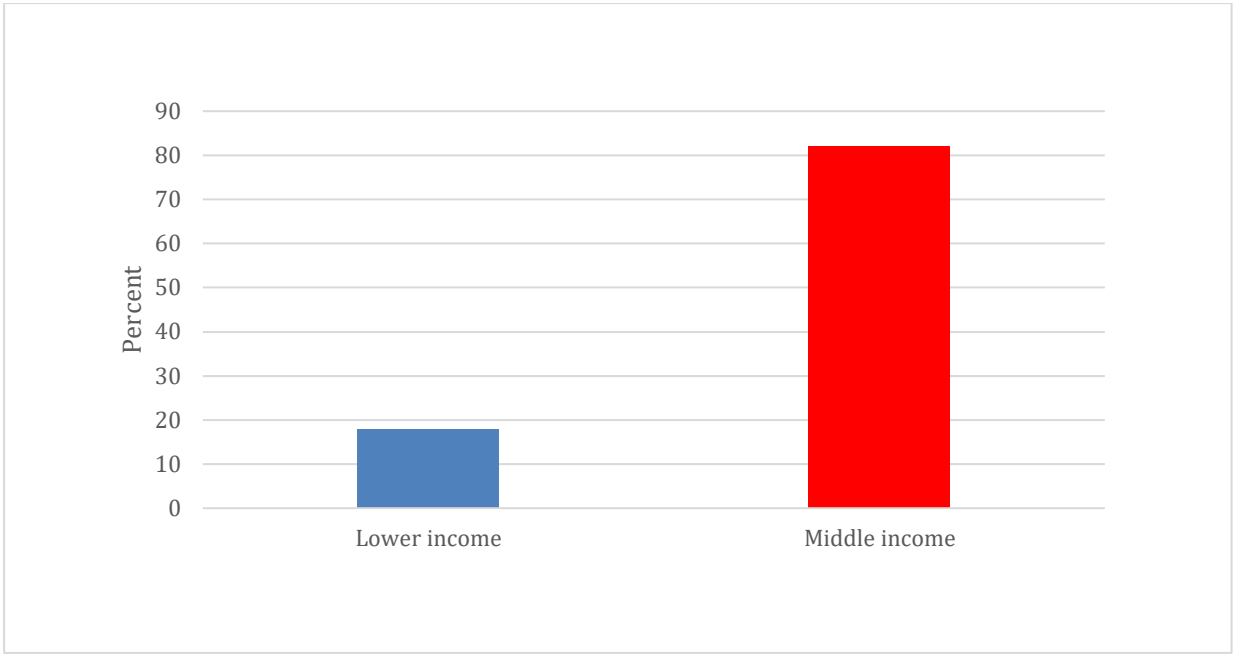

Figure 5: Percentage of participants' level of income distribution

How does the Afghan patient population perceive healthcare services compared to their expectation? What are the potential factors that lead to seeking care across the border?
Since the data in the sample were not normally distributed, nonparametric tests were used to answer the two research questions in this study (Nahm, 2016). For the question that aimed to assess the difference between the Afghan medical tourist perception and expectation on five domains of SERQUAL (tangibility, assurance, reliability, and empathy), we used the wilcoxon signed-rank test to determine if there was a statistically significant difference between the median paired differences (Proudfoot et al., 2018).

The second question aimed to determine the underlying factors that influenced Afghan medical tourists' decisions to seek healthcare services across the border; the chi-square test of independence was used to determine whether Afghan medical tourists' socio-demographic details (age, gender, educational status, income level, type of residence) were associated with the frequency of border healthcare use across the border of Afghanistan.

The Wilcoxon test was used to determine the differences in perceptions and expectations of Afghan medical tourists across five service quality dimensions: tangibility, assurance, reliability, empathy, and responsiveness for healthcare services on the Afghanistan border. In the case of tangibility, it was observed that there were more positive ranks (26) than negative ranks (1), indicating that participant perceived the healthcare service across the border of Afghanistan to exceed their expectations. The mean rank for negative perceptions was 19.50, while the mean rank for positive perceptions was 13.79, indicating a strong appreciation for perceived tangibility compared to expectations.

For assurance, there were five negative ranks and 21 positive ranks, with a mean rank of 12.90 for negative perceptions compared to 13.64 for positive perceptions, suggesting that while some respondents felt that the assurance of healthcare services across the border of Afghanistan did not meet their expectations, it was still perceived positively. However, the gap was narrower than for tangibility.

The results for reliability were more balanced, with an equal number of negative 10 and positive 10 ranks. The mean ranks were also relatively close, at 11.05 for negative ranks and 9.95 for positive ranks, indicating a division in perceptions of reliability versus expectations, as participants were equally split in their assessments of the reliability of healthcare services across the Afghanistan border.

Regarding empathy, there were six negative ranks and 13 positive ranks. The mean rank for the Afghan medical tourists' negative perceptions was 12.33, and for positive perceptions, the mean was 8.92, indicating that participants' perceptions exceeded their expectations for empathy.

The results showed three negative ranks compared to 22 positive for the last domain of service quality responsiveness. The mean for negative perceptions was 11.50, and the mean for positive perceptions was 13.20, indicating that Afghan medical tourists' perceptions exceeded their expectations (Table 1).

Table 1: Wilcoxon signed-rank test for differences between participants' perceptions and expectations of tangibility, assurance, reliability, empathy, and responsiveness.

		N	Mean Rank	Sum of Ranks
Perception of Tangibility - Expectation of Tangibility	Negative Ranks	1[a]	19.50	19.50
	Positive Ranks	26[b]	13.79	358.50
	Ties	1[c]		
	Total	28		
Perception of Assurance - Expectation of Assurance	Negative Ranks	5[d]	12.90	64.50
	Positive Ranks	21[e]	13.64	286.50
	Ties	2[f]		
	Total	28		
Perception of Reliability - Expectation of Reliability	Negative Ranks	10[g]	11.05	110.50
	Positive Ranks	10[h]	9.95	99.50
	Ties	8[i]		
	Total	28		
Perception of Empathy - Expectation of Empathy	Negative Ranks	6[j]	12.33	74.00
	Positive Ranks	13[k]	8.92	116.00
	Ties	9[l]		
	Total	28		
Perception of Responsiveness - Expectation of Responsiveness	Negative Ranks	3[m]	11.50	34.50
	Positive Ranks	22[n]	13.20	290.50
	Ties	3[o]		
	Total	28		

Note. a. Perception of Tangibility < Expectation of Tangibility, b. Perception of Tangibility > Expectation of Tangibility, c. Perception of Tangibility = Expectation of Tangibility, d. Perception of Assurance < Expectation of Assurance, e. Perception of Assurance > Expectation of Assurance, f. Perception of Assurance = Expectation of Assurance, g. Perception of Reliability < Expectation of Reliability, h. Perception of Reliability > Expectation of Reliability, i. Perception of Reliability = Expectation of Reliability, j. Perception of Empathy < Expectation of Empathy, k. Perception of Empathy > Expectation of Empathy, l. Perception of Empathy = Expectation of Empathy, m. Perception of Responsiveness < Expectation of Responsiveness, n. Perception of Responsiveness > Expectation of Responsiveness, and o. Perception of Responsiveness = Expectation of Responsiveness.

The Wilcoxon signed-ranks test results were used to analyze five dimensions of service quality: tangibility, assurance, reliability, empathy, and responsiveness. In the Wilcoxon signed-ranks test results comparing the Afghan medical tourists' perception of tangibility to their expectation of tangibility, the test statistic yielded a Z value of -4.079. This result was statistically significant, with a *p*-value of less than .001.

In the analysis of tangibility, the median values for perception and expectation were identified as the central tendencies of the data regarding the perception of tangibility. The median was 14, indicating that half of the participants rated their perception of tangibility at 14 or above on the scale, suggesting that a significant portion had a relatively high perception of tangibility. In the Wilcoxon signed-ranks test results comparing the Afghan medical tourists' perception of assurance to their expectation of assurance, the test statistic showed a Z value of -2.844. This result was statistically significant, with a *p*-value of .004.

In the assurance analysis, the median values for perception and expectation were identified as the central tendencies of the data regarding the perception of assurance. The median was 13, indicating that half of the participants rated their perception of assurance at 13 or above on the scale, suggesting that a significant portion had a relatively high perception of assurance.

In contrast, the Wilcoxon signed-ranks test found differences between perception and expectation of reliability. The test statistic revealed a Z value of -0.207. This result was not statistically significant, as evidenced by the *p*-value of 0.836, suggesting that Afghan medical tourists neither perceived reliability to be significantly greater nor significantly lower than their expectations for healthcare services across the border in Afghanistan.

The Wilcoxon signed-ranks test found differences between perceptions and expectations of empathy. The test statistic revealed a Z value of -0.858. This result was not statistically significant, as evidenced by the p-value of 0.391, suggesting that Afghan medical tourists neither perceived empathy to be significantly greater nor significantly lower than their expectations for healthcare services across the border in Afghanistan.

In the Wilcoxon signed-ranks test, performed to compare the Afghan medical tourists' perception of responsiveness with their expectation of responsiveness, the test statistic was significant, with a Z value of -3.457, and indicated by a *p*-value of less than 0.001.
Furthermore, there was a difference between the median of 14 for perception and the median of 10 for expectation, indicating that medical Afghan tourists perceived responsiveness as significantly higher than expected for healthcare services across the Afghanistan border. These findings were consistent with the results from the Wilcoxon signed-ranks test (Table 2).

Table 2: Wilcoxon signed-rank test for tangibility, assurance, reliability, empathy, and responsiveness.

	Perception of Tangibility - Expectation of Tangibility	Perception of Assurance - Expectation of Assurance	Perception of Reliability - Expectation of Reliability	Perception of Empathy - Expectation of Empathy	Perception of Responsiveness - Expectation of Responsiveness
Z	-4.079[b]	-2.844[b]	-.207[c]	-.858[b]	-3.457[b]
p-value	<.001	.004	.836	.391	<.001
Median for perception	14	13	13	13.5	14
Median for expectation	9.0	11	13	12.0	10

Note: a. Wilcoxon signed ranks test
b. Based on negative ranks.
c. Based on positive ranks.

8.2 Association of Socio-demographics and Seeking Care across the Border of Afghanistan

The chi-square test revealed a significant association between the gender of Afghan medical tourists and the frequency of healthcare services used across the Afghan border. With a Pearson chi-square value of 0.097 and a *p*-value of 0.755, the test indicated that healthcare service usage patterns across the Afghanistan border do not differ significantly between females and males in this study.

The chi-square test showed a significant relationship between the type of permanent residence and the frequency of healthcare services in Afghan medical tourists used across the border of Afghanistan, with a Pearson chi-square value of 14 and a *p*-value of <.001 indicating that usage of healthcare services outside Afghanistan varied significantly among rural, suburban, and urban residents.

The chi-square test revealed a statistically significant association between Afghan medical tourists' income levels and the frequency of healthcare services used across the Afghanistan border, with a Pearson chi-square value of 21.46 and a *p*-value of <.001. This indicates that higher-income medical tourists used services more frequently than lower-income participants.

The chi-square test showed no significant association between the type of healthcare services used across the border and the frequency of usage across the border of Afghanistan, with a Pearson chi-square value of 2.35 and a p-value of 0.501 indicating that the frequency of service usage does not significantly differ by service type in Afghan medical tourist in this study (Table 3).

Table 3: Association of Participants' Socio-demographics and Number of Medical Services Used Across the Border

		One time	More than once	Total
Age	18-30 years	2	9	11
	31-45 years	1	12	13
	46-60 years	1	3	4
Gender	Female	2	10	12
	Male	2	14	16
Attained education	High school	2	5	7
	Bachelors	1	12	13
	Masters or above	0	6	6
	Prefer not to answer	1	1	2
Type of healthcare services used across the border	General medicine	2	15	17
	Surgery	1	7	8
	Other	1	1	2
	Prefer not to answer	0	1	1
Type of permanent residence	Rural	4	3	7
	Suburban	0	1	1
	Urban	0	20	20

Note. Results reported in row in numbers. For age df (degree of freedom)= 2, X^2 (Pearson chi-square) = 0.97, p = 0.616. For gender df = 1, X^2 = 0.09 , p = 0.755. For education, df = 3, X^2 = 4.71, p =0.191. For residence type, df = 2 X^2 = , p < 0.001. For the type of healthcare services, df = 3, X^2 = 2.35, p = 0.501.

9. Discussion

Medical tourism, commonly defined in medical literature as receiving healthcare services across the border of the host country, has gained momentum worldwide in recent years (McCartney & Wang, 2024; Xu et al., 2020). Study

results have suggested that multiple factors, including the price of healthcare services, the availability of specific procedures and treatments, and the quality of care, act as both pushing and pulling factors in different cultures (Azimi et al., 2020; Vovk et al., 2020). In Afghanistan, a study of 28 Afghan participants with experience in medical tourism yielded significant findings on several domains of service quality for the healthcare services they received across the border, highlighting the dynamics of medical tourism among Afghan patients and local systemic healthcare challenges.

In this study, the gender distribution indicated a higher percentage of male participants (57.1%) compared to females (42.9%). This difference highlights sociocultural norms in Afghanistan that often limit women's access to healthcare; the findings reveal consistent patterns observed in other South Asian countries, such as Pakistan and Bangladesh (Habib et al., 2024; Hinata et al., 2020). Regarding educational attainment, 46.4% of participants held bachelor's degrees, suggesting a correlation between education and awareness of medical tourism options (Shaygani et al., 2023). Additionally, among 28 participants, 82.1% chose "middle-income" as their income level; the findings were consistent with the income level of many medical tourists from Asian countries, who are often identified as belonging to the middle-income class, such as those from Bangladesh (Rahman et al., 2022).

The types of healthcare services used by 28 Afghan medical tourists showed that 60.7% used general medicine, while 28.6% sought surgical services. The finding suggests a broader need for comprehensive and general medicine in Afghanistan, and a similar pattern was not observed in other studies; for example, in Bangladesh, medical tourists commonly utilized specialized care, such as cardiac surgery and orthopedics, in the destination country (Zakaria et al., 2023).

The Wilcoxon signed-ranks test was used in this study to assess the Afghan patients who received healthcare services across the border of Afghanistan and to examine the differences between their perceptions and expectations across several service quality dimensions. Their perception was higher than expected for tangibility, assurance, and responsiveness, while perceptions of reliability and empathy did not present significant differences.

The results demonstrated a statistically significant difference between participants' perceptions and expectations for both tangibility ($p < .001$) and assurance ($p = .004$). In the context of lower-income countries, similar trends have been reported in studies examining healthcare services in nations such as Bangladesh. Zakaria et al. (2023) indicated that npatient population from Bangladesh who visited India for self-treatment; regression analysis revealed that facility and services had a strong influence on their decision ($\beta = 0.24$, $t = 4.71$, $p < 0.001$) to seek care across the border of their homeland.

For reliability and empathy, the Wilcoxon test results showed no statistically significant difference in perceptions versus expectations for reliability ($p = 0.836$) and empathy ($p = 0.391$). Multiple study results indicated that participants reported a negative gap between patients' expectations and perceptions of the reliability dimension of service quality, demonstrating a significant discrepancy in hospital services (Guiry & Vequist, 2011; Qolipour et al., 2018).

There was a statistically significant difference ($p < .001$) in the responsiveness domain of service quality, aligning with findings suggested by Rahman et al. (2022) and Zakaria et al. (2023), which indicated that responsiveness to healthcare influenced medical tourists' decisions to seek healthcare services across the border of their home country.

9.1. Theoretical Application

The theoretical application of our study on the perception and expectations of Afghan medical tourists who used healthcare services across the border of Afghanistan can provide valuable insights for the private healthcare industry to assess their service quality and find the gaps and fill them with short-term, long-term term strategies to prevent unnecessary cash flow from Afghanistan to other countries. Assessing the service quality dimensions in this study can highlight the motivations and driving factors for medical travel, allowing policymakers in the

private sector to develop and implement targeted improvements to enhance the overall experience of the Afghan patient population in Afghanistan.

9.2. Limitation

This study only included patient populations that were educated and could speak English, which limited the study's generalizability.

9.3. Recommendations

We require future large-scale research that includes Afghan participants from diverse socio-demographic backgrounds, including those who cannot speak English and individuals with varying educational levels, including those with no formal education, to ensure comprehensive insights into the perceptions of medical tourism among Afghan residents. Furthermore, we need to employ mixed-method approaches to enrich data through qualitative and quantitative insights into the perceptions and expectations of healthcare services across the Afghanistan border.

10. Conclusion

The results of this study suggested that Afghanistan has a considerable number of gaps in their health system as perceived by the Afghan patient population seeking healthcare services for various diseases and health issues outside Afghanistan, highlighting that the Afghan health system needs improvements across multiple dimensions of service quality, including assurance, reliability, empathy, tangibility, and responsiveness. When these gaps are appropriately filled and the shortcomings are addressed, local Afghan healthcare services and quality will improve, satisfying Afghan patient expectations and reducing reliance on medical tourism.

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Declaration of Generative AI and AI-assisted Technologies: This study has not used any generative AI tools or technologies in the preparation of this manuscript.

References

Al-Lamki L. (2011). Medical Tourism: Beneficence or maleficence? *Sultan Qaboos University Medical Journal*, *11*(4), 444–447. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3206745/

Azimi, R., Mahmoudi, G., & Esmaeili, H. A. (2018). Ranking factors affecting the attraction of foreign medical tourists in hospitals affiliated to Mashhad university of medical sciences based on marketing mix model. *Iranian journal of public health*, *47*(10), 1593–1598.

Bauer I. L. (2015). Looking over the fence-how travel medicine can benefit from tourism research. *Journal of Travel Medicine*, *22*(3), 206–207. https://doi.org/10.1111/jtm.12197

Culley, L., Hudson, N., Rapport, F., Blyth, E., Norton, W., & Pacey, A. A. (2011). Crossing borders for fertility treatment: motivations, destinations and outcomes of UK fertility travellers. *Human Reproduction (Oxford, England)*, *26*(9), 2373–2381. https://doi.org/10.1093/humrep/der191

Enzensberger, H. M. (1996). A theory of tourism. *New German Critique*, (68), 117-135

Guiry, M., & Vequist, D. G. (2011). Traveling abroad for medical care: U.S. medical tourists' expectations and perceptions of service quality. *Health Marketing Quarterly*, *28*(3), 253–269. https://doi.org/10.1080/07359683.2011.595644

Habib, S. S., Jamal, W. Z., Zaidi, S. M. A., Siddiqui, J. U., Khan, H. M., Creswell, J., Batra, S., & Versfeld, A. (2021). Barriers to access of healthcare services for rural women-applying gender lens on tuberculosis in a rural district of Sindh, Pakistan. *International Journal of Environmental Research and Public Health*, *18*(19), 10102. https://doi.org/10.3390/ijerph181910102

Hinata, H., Lwin, K. S., Eguchi, A., Ghaznavi, C., Hashizume, M., & Nomura, S. (2024). Factors associated with barriers to healthcare access among ever-married women of reproductive age in Bangladesh: Analysis from the 2017-2018 Bangladesh demographic and health survey. *PloS one*, *19*(1), e0289324. https://doi.org/10.1371/journal.pone.0289324

Jones, C. A., & Keith, L. G. (2006). Medical tourism and reproductive outsourcing: The dawning of a new paradigm for healthcare. *International Journal of Fertility and Women's Medicine*, *51*(6), 251–255. https://pubmed.ncbi.nlm.nih.gov/17566566/

McCartney, G., & Wang, C. F. (2024). Medical tourism and medical tourists: providing a sustainable course to integrating health treatments with tourism. *Journal of Travel Medicine*, *31*(5), taae034. https://doi.org/10.1093/jtm/taae034

Nahm F. S. (2016). Nonparametric statistical tests for the continuous data: the basic concept and the practical use. *Korean Journal of Anesthesiology*, *69*(1), 8–14. https://doi.org/10.4097/kjae.2016.69.1.8

Proudfoot, J. A., Lin, T., Wang, B., & Tu, X. M. (2018). Tests for paired count outcomes. *General Psychiatry*, *31*(1), e100004. https://doi.org/10.1136/gpsych-2018-100004

Qolipour, M., Torabipour, A., Faraji Khiavi, F., & Saki Malehi, A. (2018). Assessing medical tourism services quality using serqual model: A patient's perspective. *Iranian Journal of Public Health*, *47*(1), 103–110.

Rahman, I., Martin, D. S., & Liu, S. (2022). Outbound medical tourists: The interplay of perceived quality, length of stay, group-size, post-visit destination image and revisit intention. *PloS one*, *17*(5), e0267755. https://doi.org/10.1371/journal.pone.0267755

Raoofi, S., Khodayari-Zarnaq, R., & Vatankhah, S. (2024). Healthcare provision for medical tourism: A comparative review. *Journal of Education and Health Promotion*, *13*, 63. https://doi.org/10.4103/jehp.jehp_1740_22

Shaygani, F., Ahmadi Marzaleh, M., & Gheibi, Z. (2023). Knowledge and attitude of students of medical sciences universities regarding health tourism: A cross-sectional study. *Health Science Reports*, *6*(9), e1580. https://doi.org/10.1002/hsr2.1580

Shoib, S., Saleem, S. M., Essar, M. Y., & Armiya'u, A. Y. (2022). Challenges faced by healthcare workers in Afghanistan amidst the COVID-19 pandemic and political instability: A call for action. *Clinical Epidemiology and Global Health*, *15*, 101050. https://doi.org/10.1016/j.cegh.2022.101050

Vovk, V., Beztelesna, L., & Pliashko, O. (2021). Identification of factors for the development of medical tourism in the world. *International Journal of Environmental Research and Public Health*, *18*(21), 11205. https://doi.org/10.3390/ijerph182111205

Xu, T., Wang, W., & Du, J. (2020). An integrative review of patients' experience in the medical tourism. *Inquiry : A Journal of Medical Care Organization, Provision and Financing*, *57*, 46958020926762. https://doi.org/10.1177/0046958020926762

Zakaria, M., Islam, M. A., Islam, M. K., Begum, A., Poly, N. A., Cheng, F., & Xu, J. (2023). Determinants of Bangladeshi patients' decision-making process and satisfaction toward medical tourism in India. *Frontiers in Public Health*, *11*, 1137929. https://doi.org/10.3389/fpubh.2023.1137929

Zhong, L., Deng, B., Morrison, A. M., Coca-Stefaniak, J. A., & Yang, L. (2021). Medical, health and wellness tourism research: A review of the literature (1970-2020) and research agenda. *International Journal of Environmental Research and Public Health*, *18*(20), 10875. https://doi.org/10.3390/ijerph182010875