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## ANALYSIS OF PATIENT SATISFACTION WITH THE QUALITY OF ORGANIZATION OF TREATMENT IN FOREIGN CLINICS

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### Abstract

**Introduction.** Medical tourism is defined as travelling to a different country to receive medical treatment at an affordable cost and have access to higher-quality healthcare or obtain specialized treatment, which they would not receive in their home country. Patient satisfaction assessments, the response of health care recipients to significant aspects of their service experience, are considered an important indicator of overall health care quality in both developed and developing countries.

**The purpose** of the study is to evaluate the satisfaction of patients treated in foreign clinics, which is financed by the budget of the Republic of Kazakhstan.

**Materials and Methods.** The cross-sectional study examines patients who received treatment in foreign clinics from 2019 to 2021, using budget funds (86 patients who were treated abroad with budgetary funds).

**Results.** The majority of respondents received treatment in 2019 - 45(52.3%), while the rest received treatment in 2020 – 32 (37.2%), and in 2021 – 9 (10.5%). Women dominated 44 (51.2%), while men 42 (48.8%). The majority of patients (61.6%) were between 0 and 18 years of age. However, in this sample, 4.7 per cent of patients over the age of 60 were in the population. The most popular destination for high-tech medical care is Turkey, followed by the Russian Federation and South Korea.

**Conclusions.** The overall satisfaction rate for medical care was 79 (91.8%), with 7 (8.2%) not satisfied. Among all respondents, 67 (77.9%) would suggest the clinic to their friends and relatives, 10 (11.6%) have trouble answering, and 7 (10.5%) would suggest seeking medical attention from a different location. Sanitary and hygienic conditions and comfort of the clinic assessed 80 (93%) of the respondents, unsatisfied 3 (3.5%) and difficult to answer 3 (3.5%).

**Keywords:** *treatment abroad, treatment efficiency, satisfaction of medical care.*

### Резюме

## АНАЛИЗ УДОВЛЕТВОРЕННОСТИ ПАЦИЕНТАМИ КАЧЕСТВОМ ОРГАНИЗАЦИИ ЛЕЧЕНИЯ В ЗАРУБЕЖНЫХ КЛИНИКАХ

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**Актуальность.** Медицинский туризм определяется как путешествие в другую страну для получения медицинского лечения по доступной стоимости и доступа к высококачественной медицинской помощи или получения специализированного лечения, которого они не получили бы в своей родной стране. Оценки удовлетворенности пациентов, реакция получателей медицинской помощи на значимые аспекты своего опыта обслуживания, считаются важным показателем общего качества медицинской помощи как в развитых, так и в развивающихся странах.

**Цель исследования** – изучить удовлетворенность пациентов, получивших лечение в зарубежных клиниках за счет бюджетных средств Республики Казахстан.

**Материалы и методы.** В поперечное исследование включены пациенты, получившие лечение с 2019 по 2021 годы в зарубежных клиниках за счет бюджетных средств (86 пациентов, получивших лечение за счет бюджетных средств за границей).

**Результаты.** Основная часть респондентов получила лечение в 2019 году – 45 (52,3%), остальная часть получили лечение в 2020 году – 32 (37,2%), в 2021 году – 9 (10,5%). Среди опрошенных респондентов преобладали женщины 44 (51,2%), мужчин было 42 (48,8%). Большинство пациентов (61,6%) находились в возрасте от 0 до 18 лет. В то же время, в данной выборке на долю пациентов в возрасте старше 60 лет приходилось 4,7%. Наиболее популярным направлением для получения высокотехнологической медицинской помощи является Турция, на втором месте Российская Федерация и Южная Корея.

**Выводы.** В целом удовлетворены условиями оказания медицинской помощи 79 (91,8%) респондентов, и 7 (8,2%) не удовлетворены. В целом порекомендуют клинику друзьям и родственникам 67 (77,9%) опрошенных, 10 (11,6%) затруднились ответить и 7 (10,5%) порекомендуют обратиться в другую медицинскую организацию. Санитарно-гигиенические условия и комфортность клиники оценили 80 (93%) респондентов, не удовлетворены 3 (3,5%) и затруднились ответить 3 (3,5%).

**Ключевые слова:** лечение за рубежом, эффективность лечения, удовлетворённость медицинской помощью.

Түйіндеме

## ШЕТЕЛДІК КЛИНИКАЛАРДАҒЫ ЕМ САПАСЫНА ПАЦИЕНТТЕРДІҢ ҚАНАҒАТТАНУЫН ТАЛДАУ

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**Кіріспе.** Медициналық туризм басқа елге қолжетімді бағамен емделуге және жоғары сапалы медициналық көмекке қол жеткізуге немесе өз елінде қабылдамайтын мамандандырылған ем алуға бару ретінде анықталады. Пациенттердің қанағаттану рейтингтері, медициналық көмек алушылардың олардың күтім тәжірибесінің маңызды аспектілеріне реакциялары дамыған және дамушы елдердегі денсаулық сақтаудың жалпы сапасының маңызды көрсеткіші болып саналады.

**Зерттеудің мақсаты** – Қазақстан Республикасының бюджет қаражаты есебінен шетелдік клиникаларда емделген науқастардың қанағаттануын зерттеу.

**Материалдар мен әдістері.** Көпденең-қима Зерттеуге 2019-2021 жылдар аралығында бюджет қаражаты есебінен шетелдік клиникаларда емделген науқастар (шетелде бюджет қаражаты есебінен емделген 86 науқас) қамтылды.

**Нәтижелер.** Респонденттердің көпшілігі емделді 2019 жылы – 45 (52,3%), қалғандары 2020 жылы – 32 (37,2%), 2021 жылы – 9 (10,5%) емделді. Сауалнамаға қатысқан респонденттердің ішінде әйелдер 51,2% (n=44), ерлер 48,8% (n=42) пациенттердің көпшілігі (61,6%) 0 мен 18 жас аралығындағылар. Сонымен қатар, бұл іріктеуде 60 жастан асқан науқастардың үлесі 4,7% құрады. Жоғары технологиялық медициналық көмек алу үшін ең танымал бағыт – Түркия, одан кейін Ресей Федерациясы және Оңтүстік Корея.

**Қорытындылар.** Жалпы респонденттердің 79 (91,8%) медициналық көмек көрсету жағдайларына қанағаттанса, 7 (8,2%) қанағаттанбаған. Жалпы респонденттердің 67 (77,9%) достары мен туыстарына емханаға баруды ұсынса, 10 (11,6%) жауап беруге қиналса, 10,5% (7) басқа медициналық ұйымға баруды ұсынады. Емхананың санитарлық-гигиеналық жағдайы мен жайлылығын респонденттердің 80 (93%) бағалады, 3 (3,5%) қанағаттанбады және 3 (3,5%) жауап беруге қиналады.

**Түйін сөздер:** шетелде емделу, емдеудің тиімділігі, медициналық көмекке қанағаттану.

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### Introduction

In other countries, high-tech medical care is financed in a variety of ways, depending on the specific health care system [1]. In most countries, there are government programs for the financing of high-tech medical care. In the United Kingdom and Sweden, the National Health Service (NHS) is funded by the national budget [4]. In the USA, many people with private health insurance pay for high-tech medical care themselves [9]. In other countries, there are foundations and charities that are responsible for the funding of high-tech medical care. In the United Kingdom, for example, there are foundations that fund rare diseases, although government-sponsored programs exist [2]. Different approaches to funding high-tech health care have advantages and disadvantages [5]. In some countries, there are government-sponsored programs or specific medical tourism programs to help people who are seeking medical care in a foreign country. These programs may cover costs such as travel, medical care, and accommodation [3].

The Republic of Kazakhstan allocates state funding for treatment of Kazakh citizens in foreign countries since 2015 according to the order of the Ministry of Health of the Republic of Kazakhstan № 544 from 30.06.2015 "On approval of the Rules of sending citizens of the Republic of Kazakhstan for treatment abroad at the expense of budgetary funds".

The program of treatment of patients by foreign specialists, apart from providing patients with the needed help, allows gaining experience, new techniques for our doctors, improving professionalism and level of medical services. Based on the above-mentioned priorities of treatment abroad and positive results of diagnostics and treatment of diseases in developed countries, it is necessary to evaluate the efficiency of financing of this sphere, to identify barriers for patients in organizational processes, which will help to eliminate weaknesses in this area of health care.

**The purpose of the study** is to examine the satisfaction of patients who received treatment in foreign clinics at the expense of budgetary funds of the Republic of Kazakhstan.

### Materials and Methods:

The study included patients who were treated in foreign clinics from 2019 to 2021 using budgeted funds. The volume of the general population was 193 treated people. With the help of the random number generator "Randomus" [8] 90 respondents were selected. An informed consent was obtained from each patient for the use of their data for the scientific study. Only patients who agreed to participate were included in the study. 4 patients who refused to participate in the study were excluded. Thus, 86 subjects participated in the study. The study design is a cross-sectional study.

We have developed a questionnaire, which was approved by the Ministry of Health of the Republic of Kazakhstan. The questionnaire contained 42 questions: four general questions, thirty questions about satisfaction with the hospital, eight questions about satisfaction with the work of the team. The criteria for including patients in the study were: patients who received funds from the budget to pay for treatment in foreign clinics, informed consent to participate in the study.

The criteria for exclusion from the study were: patients who did not complete the treatment, fatal cases, patients who refused to participate in the study. Before starting the study, the approval of the Ethical Committee of NAO "Astana Medical University" was obtained (Protocol No. 9 of 20.11.2022).

Statistical processing of the results was carried out using the statistical package of the program SPSS (Statistical Package for the Social Sciences) version 23.0 for Windows (NAO "Medical University of Astana"). Comparison of quantitative signs between groups was carried out using Mann-Whitney criterion. Arithmetic mean and standard deviation were used to describe quantitative data with normal distribution. The 95% confidence interval (CI) was calculated for the population mean. Frequencies and percentages were used to describe qualitative data. CIs were also calculated for sample mean and sample proportion. Pearson's chi-square was used to compare two independent groups of nominal variables. Correlation analysis was performed using Pearson's criterion of agreement.

### Results

The study involved 86 respondents who received treatment at the expense of budget funds abroad. The main part of respondents received treatment in 2019 - 45 (52.3%), the rest received treatment in 2020 - 32 (37.2%), in 2021 - 9 (10.5%). Female respondents were predominantly 44 (51.2%) of the surveyed respondents, while males were 42 (48.8%).

The majority of patients (61.6%) were aged between 0 and 18 years. At the same time, the proportion of patients over 60 years of age in this sample was 4.7%. According to the decree of the Ministry of Health, applications for funding are reviewed by a specially organized commission when a complete set of documents is available. More than half of the respondents were satisfied with the conditions of consideration and referral for treatment abroad - 57 (66.3%), rather satisfied - 16 (22.1%), not satisfied - 6 (7%) and another 4 (4.7%) noted a long waiting time.

The most common way of finding out about the program of sending citizens abroad for medical treatment at the expense of the budget was from the republic's medical organizations 50 (58.1%), from the Internet and other communication channels 19 (22.1%), from representatives of territorial health authorities 15 (17.4%), and from relatives 2 (2.3%).

Information about the results of the decision of the expert commission of the Ministry of Health of the Republic of Kazakhstan on the transfer of citizens abroad was received by 52 (60.5%) of the employees of the institutions, by 30 (34.9%) of the employees of the Republican Medical Organization, and 4 (4.7%) did not remember or independently learned about it on the Internet or by telephone.

Almost all patients bought tickets in time for departure - 80 (93%), 1 (1.2%) answered negatively and 5 (5.8%) gave another answer.

The most popular destination for high-tech medical care is Turkey, followed by the Russian Federation and South Korea. The distribution of countries for the treatment of patients at the expense of budgetary funds is presented in Table 1.

Table 1.

**Distribution of respondents by country for treatment.**

Country	N	%
Turkey	41	47,7
Russia	29	33,7
India	2	2,3
South Korea	4	4,7
Spain	2	2,3
Ukraine	3	3,5
Germany	1	1,2
Other	2	2,4

The most popular areas are related to the cost of medical services, logistics and other components.

Respondents were asked questions about satisfaction with the organization of treatment abroad at the expense of budget funds (Table 2).

Table 2.

**Distribution of respondents by answers to questions.**

Variable	N	%
<b>Arrangement of transfer upon arrival in another country by a medical organization</b>		
Airport transfer	60	69,8%
Airport transfer not organized	17	19,8
Getting from the airport	9	10,4
<b>Waiting time after admission and before being seen by a doctor at the clinic</b>		
Up to 30 minutes	45	52,3
More than 60 minutes	16	18,6
More than 120 minutes	7	8,1
Other	18	20,9
<b>Conversations about the state of health, gave explanations</b>		
Had a conversation	74	86
Had a short conversation	9	10,5
Didn't have the conversation	3	3,5
<b>Frequency of doctor visits to patients</b>		
Once a day	37	43
2 times a day	20	23,3
4 or more times	10	11,6
Chose a different answer	19	22,1
<b>Evaluation of a pain management procedure in a medical organization</b>		
Excellent	51	59,3
Good	24	27,9
Satisfactory	9	10,5
Extremely poor	2	2,3

Upon arrival in the country for treatment, airport transfer was organized in 60 (69.8%) of cases, not organized in 17 (19.8%) of cases and 9 (10.4%) of respondents took a cab from the airport on their own. The waiting time to be examined by a doctor at the clinic took up to 30 minutes for

45 (52.3%) of respondents, more than 1 hour for 16 (18.6%), more than 2 hours for 7 (8.1%) and 18 (20.9%) responded otherwise and also noted that due to arriving in the evening or at night, the examination was done the next day.

Directly at the healthcare facility, 74 (86%) of respondents were asked about their health status, diagnosis, purpose of prescription, methods of use, and side effects. According to these respondents, the information they received was comprehensive. Another part of respondents was interviewed briefly and needed additional counseling – 9 (10.5%). At the same time, 1(1.2%) and 2 (2.3%) did not receive any counseling.

When analyzing the answers about the frequency of doctor visits to patients, it was found that 37 (43%) of patients visited the doctor once a day, 20 (23.3%) visited 2 times a day, 10 (11.6%) visited 4 or more times a day and 19 (22.1%) chose another answer where patients specified that they were not on inpatient care. We assume that the frequency of medical visits depended on the diagnosis and severity of the patients. The pain management procedures in the medical organization were rated as excellent by 51(59.3%) of respondents, good by 24 (27.9%), fair by 9 (10.5%) and extremely poor by 2 (2.3%). There were no differences by gender (p=0.143).

Patients aged 0 to 18 years are less satisfied with the anesthesia procedure in the clinic (Table 3), compared to older patients, almost 20% are not satisfied (p=0.029). The country of residence also has no effect on the satisfaction of the respondents with the anesthesia procedure (p=0.678).

Such qualities as politeness and attentiveness of the doctor and medical staff were also evaluated to assess satisfaction with the provision of medical services abroad. Thus, 57 (66.3%) of respondents indicated excellent politeness and attentiveness of the doctor, good level – 26 (30.2%) and satisfactory – 3 (3.5%). Responses to politeness and attentiveness of other medical staff did not differ significantly, with 54 (62.8%) reporting excellent, 25 (29.1%) good and 7 (8.1%) satisfactory.

Satisfaction with the attitude of doctors and nurses, the doctor's explanation of the prescribed treatment, the doctor's detection of changes in the patient's state of health was rated by 45 (52.3%) as 'excellent', 29 (33.7%) as 'good', 10 (11.6%) as 'satisfactory' and 2 (2.3%) as 'poor'. The work of the interpreters was rated as "excellent" by 45 (52.3%) of the respondents, "good" by 26 (31.4%), "satisfactory" by 13 (11.6%) and "poor", "extremely poor" by 4 (4.6%). At the same time, 19 (23.9%) of respondents had problems with communication, language barrier with medical staff. There were no differences by gender (p=0.989), age (p=0.315) and country of residence (p=0.190).

Table 3.

**Satisfaction with anesthesia procedure by age group.**

	0-18 years (абс. (%))	18-39 years	40-60 years	Over 60 years
1 point	1 (1,9%)	1 (6,2%)	0	0
3 points	9 (17,0%)	0	0	0
4 points	13 (24,5%)	3 (18,8%)	4 (30,8%)	4 100,0%
5 points	30 (56,6%)	12 (75,0%)	9 (69,2%)	0

Regarding satisfaction with organized meals, 18(21%) were completely and rather unsatisfied, 24 (27.9%) were partially satisfied, and 44 (51.2%) were completely satisfied. Meanwhile, 26 (30.2%) (n=26) of caregivers were not provided with meals. 67 (77.9%) of the respondents were satisfied with the night stay in the ward, 15 (17.4%) indicated that it was usually quiet, while 4 (4.7%) of the respondents were not satisfied.

Sanitary and hygienic conditions in the ward (quality of cleaning, lighting in the rooms, temperature regime) were satisfied by 72 (83.7%) of respondents. 9 (10.5%) of

respondents were partially satisfied and 5 (5.8%) of respondents were not satisfied.

When the need for assistance from medical staff arose, 47 (54.7%) of respondents rated it as "excellent" and 20(33.7%) as "good", 7 (8.1%) of respondents were satisfied with the assistance provided and 3 (3.5%) were not satisfied.

One third of the respondents had to buy medicines at their own expense – 24 (30.2%) due to lack of medicines in the clinic or use of alternative medicines. However, the majority of respondents, 60 (69.8%), received free medicines at the clinic (Figure 1).

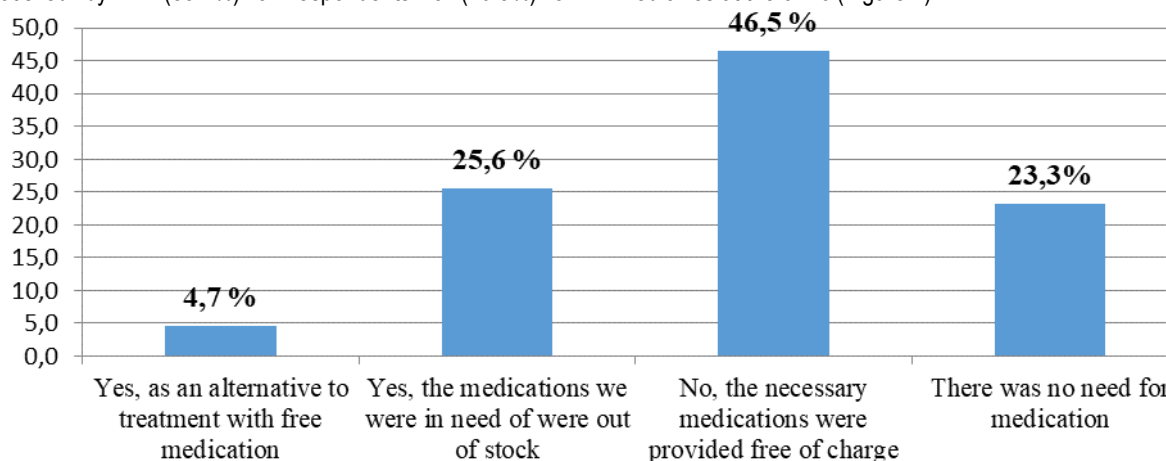


Figure 1. Acquisition of medicines at own expense.

Table 4.

**Need to purchase medicines at own expense by country.**

Country	Yes	No	p
Turkey	26,8% (11)	73,2% (30)	0,20
Russia	31,1% (9)	68,9% (20)	
India	50% (1)	50,0% (1)	
South Korea	25,0% (1)	75% (3)	
Spain	50,0% (1)	50,0% (1)	
Ukraine	66,7% (2)	33,3% (1)	
Germany	0	100,0% (1)	
Other	25% (1)	75% (3)	

In terms of countries, the most frequent need to purchase medicines at their own expense occurred in Ukraine, India, and less frequently in Turkey and Russia. The differences are not statistically significant (Table 4).

A part of respondents 18 (20.9%) noted that they paid for additional diagnostic tests at their own expense, such as computer tomography, genetic tests, laboratory tests, dental treatment and extraction, PCR test, X-ray. "Green corridors" were created for 52 (60.5%) when undergoing diagnostic procedures.

Overall, 79 (91.8%) of respondents were satisfied with the conditions of medical care, and 7 (8.2%) were not satisfied.

26 (30.2%) of respondents had a need for a short-term visa, 54 (62.8%) of respondents had no visa requirements when arriving in another country, and 6 (7%) chose the answer "other". At the same time, 71 (82.5%) were satisfied with the actions of the clinic staff when there was a need for a short-term visa and 15 (17.4%) were not satisfied.

In general, 67 (77.9%) of respondents would recommend the clinic to friends and relatives, 10 (11.6%) found it difficult to answer and 7 (10.5%) would recommend referral to another medical organization. Sanitary and

hygienic conditions and comfort of the clinic were evaluated by 80 (93%) of respondents, 3 (3.5%) were not satisfied and 3 (3.5%) found it difficult to answer.

Satisfaction with conditions in the emergency room during hospitalization in the clinic (duration and conditions of waiting, availability of access to toilet, drinking water, cleanliness, and freshness of the emergency room) showed that 75 (87.2%) of respondents are satisfied with conditions, 11 (12.8%) of respondents are not fully satisfied with conditions, there are shortcomings in the organization of conditions).

Upon discharge from a foreign medical facility, 72 (83.7%) of respondents were provided with all necessary documents (discharge summary, MRI, CT scan results, etc.), 3 (3.5%) noted that the documents were not provided, and 11 (12.8%) answered "other", explaining in comments that the documents were not provided in full, without translation, or in abbreviated form. Respondents also indicated that they received the documents later; treatment and test results documents were necessary for many respondents to continue rehabilitation and treatment.

At the same time, only 56 (65.1%) of the respondents answered positively to the question about the sufficiency of the documents submitted by the foreign organization for the continuation of treatment in Kazakhstan, 13(15.1%) answered yes with some doubts, 9 (10.5%) of the respondents considered them insufficient, and 8 (9.3%) answered "other", referring to the lack of translation of the documents and the lack of specialized clinics for the continuation of treatment in the region of residence.

After the treatment, the clinic organized the transfer for 55 (64%) of the respondents, it was not organized for 20 (23.3%), and 11 (12.8%) did not need to get transferred or drove at their own expense.

The mean clinic conditions rating score was  $4.65 \pm 0.66$  out of 5, with 72.1% rating the conditions as "5". The mean clinic conditions assessment score for men was 5 points and for women also 5 points ( $p=0.41$ ), the differences were not statistically significant.

Older patients were more satisfied with the organization of medical care compared to patients aged 0-18 years. Regardless of age, respondents averaged 5 points on a 5-point scale for clinic conditions ( $p=0.859$ ), with no differences by age.

We believe that it is necessary to evaluate this program in a more comprehensive way and therefore we evaluated the work of the Working Body through the eyes of patients. The majority of respondents – 67 (77.9%) - are satisfied and 13 (15.1%) are partially satisfied with the competence of the employees of the Work Group (providing full information about the treatment, providing information in an open and accessible way and resolving conflicts), 4 (4.7%) are not satisfied with the work of the Work Group in this direction and 1 (1.3%) of respondents noted the provision of incomplete information.

78 (90.7%) of respondents were satisfied and partially satisfied with the information provided on the conditions of referral and treatment, 6 (7%) were not satisfied and 2 (2.3%) of respondents noted that such information was not provided in full.

If during the stay in the health care institution the patients needed the help of the institution for further management, 66 (76.7%) believe that the help was provided in time, 6 (7%) do not agree with this opinion and 14 (16.3%) did not know.

#### Discussion

The purpose of the study is to evaluate the satisfaction of patients treated in foreign clinics, which is financed by the budget of the Republic of Kazakhstan.

Thus, the Ministry of Health of the Republic of Kazakhstan has a rather large geography of countries. There is a list of medical organizations approved by the expert commission on sending citizens of the Republic of Kazakhstan for treatment abroad and in domestic medical organizations with the participation of foreign specialists at the expense of budgetary funds №9 dated June 23, 2021. This list includes 58 medical organizations, in addition to medical organizations of Turkey and Russia; it also includes medical organizations of such countries as Czech Republic, Spain, Thailand, Belarus, France, India.

The study conducted in Turkey revealed that patients' age, sex, marital status, education, hospital expenses coverage status, profession, nationality, initial state, and advertising are determinants influencing their satisfaction levels. The objective is to delineate effective marketing strategies for Turkey aimed at capturing a substantial market share in health tourism [10]. Within our study, no significant disparities were found between satisfaction levels and gender ( $p=0.989$ ), age ( $p=0.315$ ), or country of residence ( $p=0.190$ ), consistent with findings reported by other authors [7]. In a study involving 175 foreign patients from the Middle East, Europe, Asia, and Africa [6], no statistically significant discrepancies were observed concerning age ( $p<0.05$ ). Overall, patients expressed satisfaction with both the accessibility and quality of medical care (79 (91.9%)

The satisfaction of patients is a crucial factor in terms of maintaining and improving the current situation regarding the sending of patients for treatment to foreign clinics, a trend that is increasing worldwide. At this stage, it is necessary to identify deficiencies in sending patients for treatment to foreign clinics and conduct research on this issue, regularly repeating satisfaction measurements and continually improving to enhance satisfaction. On the other hand, increasing the number of patient studies would allow us to identify deficiencies and problems from the patients' perspective, enabling us to have different viewpoints on addressing these deficiencies and achieving our goals, as our literature search has shown that research up to this point has typically focused on policy and analysis of the current state.

**Conclusion.** As a conclusion, the study findings may assist the medical tourism industry and healthcare industry to make service improvement to maximize its business performance. This study might help the tourism and healthcare industry to keep track important dimensions in service quality and continuously monitor their service delivery in ensuring maximum satisfaction among its customers. Medical tourism, although a new phenomenon in its current form, has grown robustly both in terms of the revenue it generates and the geography of its distribution. As the healthcare industry becomes more and more competitive, service quality and customer satisfaction become of paramount importance.

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