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Between Borders and Viruses: A Time Series Analysis of Healthcare Use by Asylum-Seekers

Hatice Genç Kavas[1,a,*], Ahmet Şengönül[2,b]

[1] *International Trade and Logistics, Faculty of Economics and Administrative Sciences, Sivas Cumhuriyet University, Türkiye*
[2] *Econometrics, Faculty of Economics and Administrative Sciences, Sivas Cumhuriyet University, Türkiye*
**Corresponding author*

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ABSTRACT

In the recent period when the density of immigrants has increased globally, the necessity of analyzing immigrant behaviors and making interpretations accordingly has become evident. This study analyzes how the healthcare utilization behaviors of asylum-seekers and locals changed before and after the COVID-19 pandemic and how pandemic-related variables affect asylum-seekers' motivation.

We examined whether the number of cases, deaths, and vaccinations in Turkiye during the pandemic had a deterrent or attractive effect on hospital visits by asylum-seekers. Admissions to hospital departments (all medicine departments- 55 departments-) were used as the dependent variable. The short-term and long-term effects of explanatory variables on the dependent variable were estimated using the Autoregressive Distributed Lag (ARDL) model.

We found that the overall pandemic situation significantly impacted long-term healthcare use among asylum-seekers. In the short term, only vaccines had a significant impact. We also found that asylum-seekers accounted for only 1% of total healthcare use, with the remaining 99% used by the locals.

When the social and economic impact of asylum-seekers' healthcare services use is evaluated, it may be necessary to determine appropriate policies for these patients in non-pandemic periods and during pandemics. To prevent local's reactions from growing, accurate data and the opportunities of the current situation can be conveyed to the public. Different marketing activities may need to be implemented for these patients, who can also constitute a target market as an opportunity for healthcare institutions. Vaccination policies should be carefully considered.

Keywords: Health Services, Covid-19, Asylum-Seekers, Consumer Behavior, Time Series Analysis

Sınırlar ve Virüsler Arasında: Sığınmacıların Sağlık Hizmeti Kullanımının Zaman Serisi Analizi

ÖZET

Göçmen yoğunluğunun küresel olarak arttığı son dönemde, göçmen davranışlarını analiz etme ve buna göre yorumlama yapma gerekliliği belirginleşmiştir. Bu çalışmada, sığınmacıların ve yerel halkın sağlık hizmetlerinden yararlanma davranışlarının COVID-19 salgını öncesi ve sonrasında nasıl değiştiği ve salgınla ilişkili değişkenlerin sığınmacıların motivasyonunu nasıl etkilediği analiz edilmektedir.

Pandemi sırasında Türkiye'deki vaka, ölüm ve aşılama sayılarının sığınmacıların hastane ziyaretleri üzerinde caydırıcı veya çekici bir etkisi olup olmadığını inceledik. Hastane bölümlerine (tüm poliklinikler - 55 bölüm -) başvurular, bağımlı değişken olarak kullanıldı. Açıklayıcı değişkenlerin bağımlı değişken üzerindeki kısa ve uzun vadeli etkileri, Gecikmesi Dağıtılmış Otoregresif Gecikme Modeli (ARDL) kullanılarak tahmin edildi.

Genel pandemi durumunun sığınmacılar arasında uzun vadeli sağlık hizmeti kullanımını önemli ölçüde etkilediğini bulduk. Kısa vadede, yalnızca aşıların önemli bir etkisi vardı. Ayrıca sığınmacıların toplam sağlık hizmeti kullanımının yalnızca %1'ini oluşturduğunu, kalan %99'unun ise yerel halk tarafından kullanıldığını bulduk.

Sığınmacıların sağlık hizmeti kullanımının sosyal ve ekonomik etkisi değerlendirildiğinde, pandemi dışı dönemlerde ve pandemiler sırasında bu hastalar için uygun politikaların belirlenmesi gerekebilir. Yerel halkın tepkilerinin artmasını önlemek için, doğru veriler ve mevcut durumun fırsatları kamuoyuna iletilebilir. Sağlık kuruluşları için bir fırsat olarak hedef pazar oluşturabilecek bu hastalar için farklı pazarlama faaliyetlerinin uygulanması gerekebilir. Aşılama politikaları dikkatlice düşünülmelidir.

Süreç

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Anahtar Sözcükler: Sağlık Hizmetleri, Covid-19, Sığınmacılar, Tüketici Davranışı, Zaman Serisi Analizi

[a] *hkavas@cumhuriyet.edu.tr* *0000-0002-6813-529X* [b] *sengonul@hotmail.com* *0000-0002-4999-1461*

Introduction

Internal turmoil, government changes, unemployment, deteriorating living conditions, and wars drive people to migrate. The Arab Spring triggered a global wave of forced migration, particularly from conflict-ridden Islamic regions in recent years. Turkiye has been significantly impacted as a transit and destination country. According to a September 2023 report by the United Nations High Commissioner for Refugees (UNHCR) (2023), Turkiye has hosted the most significant number of people needing international protection for nine years1. As of September 2023, it hosts 3.6 million Syrians under temporary and global security and around 320,000 individuals of other nationalities (UNHCR, 2024). Following the 2016 refugee agreement with the European Union (EU), aimed at protecting the EU's external borders and housing refugees in Turkiye, aiming to prevent the northwestern movements of people seeking asylum in European countries and the opportunity to start a new life (Nasjlova, 2023: 154; Saatçioğlu, 2020: 171) the movement of asylum seekers toward Europe has been limited. Over the years, most migrants to Turkiye have come from Iraq, Iran, Turkmenistan, Uzbekistan, Syria, and Afghanistan. However, since 2022, Russian (25%) and Ukrainian (8%) citizens have become the most prominent groups. While Iraqis have been the most frequent immigrants in recent years, they are also most likely to leave. Syrian citizens tend to remain in Turkiye the longest (Turkish Statistical Institute, 2018; 2019; 2020; 2021; 2022; 2023).

The high number of migrants brings various challenges, including language, education, employment, health, and especially discrimination. Coleman (2006) highlighted the impact of international migration on demographic shifts, noting the social and cultural effects. He pointed out that the rapid growth of non-European populations in Europe has led to noticeable differences in culture, language, and religion, with this group growing at an average annual rate of 4.1%. Jansen (1969) stated that migration brings challenges in various areas: geographical (space), demographic (population structure), economic (employment), political (control and restriction), social-psychological (adaptation), and sociological (society). Both immigrants and host country populations are mutually affected by migration. Alongside integration challenges, migration can create new market opportunities. Changes in sociocultural infrastructure often lead to shifts in consumer behavior. Refugees' ethnic identity heavily influences their consumption preferences, as cultural values shape what and how they consume. Migration can also impact consumer prices; increased demand may increase prices, while unregistered employment can lower prices. In Turkiye, it was found that immigrants reduced consumer prices by 2.5% (Balkan & Tumen, 2026: 657; Chebet & Ghazala, 2024: 56-57).

Healthcare marketing managers need skills in patient privacy laws, community and healthcare management, hospital operations (both for-profit and non-profit), finances, media relations, and managing publications and events. Fulfilling these roles effectively is crucial to achieving the hospital's mission and vision (Gbadeyan, 2010: 118). Hospitals aiming to enter the global healthcare market should build strong support around the international patient center, with staff trained to respect cultural differences and tailor services for foreign patients (Lee & Davis, 2004: 55). Healthcare institutions aim to optimize their position, often leading to conflicts between patient-centered approaches and institutional priorities (Kay, 2007). Healthcare marketing seeks to balance complex institutional structures with the evolving needs of healthcare consumers. Patient and organizational perspectives must be considered, as neglecting patients' needs can reduce system effectiveness. Analyzing patient behavior can help address systemic issues and prevent conflicts of interest.

Mass migrations also bring health challenges, such as malnutrition, infectious diseases, and inadequate shelter, which can affect both migrants and local populations. Ensuring migrants' consistent access to healthcare is crucial for their well-being and that of the host country. Moreover, empirical findings suggest that increases in health expenditures and the implementation of health reforms have a positive impact on economic growth (Altun et al., 2018: 237). Governments are increasingly studying immigrants' access to healthcare services. Since a country's prosperity depends on public health, shaping health policies is essential and is influenced by economic conditions and healthcare demand. This study examines the healthcare demand behavior of asylum seekers as well as Turkish citizens in the healthcare system, focusing on admissions to secondary healthcare before and after the COVID-19 pandemic.

Method

The study combined, categorized, and analyzed the number of patient admissions to secondary healthcare facilities in Sivas using SPSS Statistics 23 and E-views programs. Applicant individuals are considered as those under temporary protection and those who are not (Turkish/local individuals) and men and women. The period for the study is January 2019 and July 2021 (943 days). The data were obtained from the electronic data records of 2 hospitals (all of the secondary healthcare facilities in the city) in Sivas. The number of patients who applied to 55 departments was used as data. The study was conducted retrospectively using the number of patient admissions from the hospital's statistics departments. Patients' data is not used. It is assumed that individuals who register to hospitals use outpatient clinic services. The number of daily cases, vaccination numbers, and deaths from COVID-19 in Turkiye were also used as data. The hypothesis to be tested with the help of these data is the hypothesis that the number of cases, vaccines, and deaths caused by COVID-19 and outpatient admissions may affect hospital admissions, hence their

healthcare demand. A time series econometric model was established and analyzed to test this hypothesis, and a model known as the Autoregressive Distributed Lag Model (ARDL) developed by Pesaran et al. (Pesaran et al., 2001: 293) was estimated for this analysis. Using this method, long-term cointegration between the variables in the models mentioned above will be detected, and both the short and long-term effects of the explanatory variables in the model on the dependent variable will be estimated, if any. Ethics Committee Report numbered 60263016-050.06.04-E.482051 from Sivas Cumhuriyet University and the research permits were obtained.

Findings

Table 1. Number of admissions to hospitals and polyclinics (January 1, 2019 - July 31, 2021 - 943 Days)

	Total Admission			Admission of Pediatrics (Age of 0-17)			Admission of Obstetrician and Gynecologist		
	Pre-Covid (436 Days)	Post-Covid (507 Days)	After Vaccine (199 Days)	Pre-Covid (436 Days)	Post-Covid (507 Days)	After Vaccine (199 Days)	Pre-Covid (436 Days)	Post-Covid (507 Days)	After Vaccine (199 Days)
Asylum Seeker Male Patient	14789	7999	3445	2597	1146	450	0	0	0
Asylum Seeker Female Patient	19904	12620	5592	2215	1041	413	3923	2953	1131
Total Asylum Seeker Patient	34693	20619	9037	4812	2187	863	3923	2953	1131
Local Male Patient	1337133	905264	416720	88011	31856	15696	0	0	0
Local Female Patient	1611494	1015853	497588	82841	32410	16074	114581	72273	32439
Total Local Patient	2948627	1921117	914308	170852	64266	31770	114581	72273	32439
Total Patient	2983320	1941736	923345	175664	66453	32633	118504	75226	33570

According to Table 1, the total number of admissions made by patients under local and temporary protection with state insurance (Asylum-seeking patients) to secondary hospitals providing healthcare services in Sivas between January 1, 2019, and July 31, 2021, is approximately 5 million (total before and after COVID-19). During this period, 98.8% of the total admissions were local people, while 1.12% were patients under temporary protection. During this period, the total number of admissions to the pediatric clinic was 242 117; 97.1% were local people, and 2.8% were asylum-seekers. The total number of admissions to gynecology and obstetrics outpatient clinics is 193 730. 96.4% of these admissions comprise local people, and 3.5% comprise asylum seekers.

Table 2. Number of admissions made to emergency departments (January 1, 2019 - July 31, 2021 - 943 Days)

	Emergency Department			**Gynecology Emergency Department**			**Pediatric Emergency Department**		
	Pre-Covid (436 Days)	*Post-Covid (507 Days)*	*After Vaccine (199 Days)*	*Pre-Covid (436 Days)*	*Post-Covid (507 Days)*	*After Vaccine (199 Days)*	*Pre-Covid (436 Days)*	*Post-Covid (507 Days)*	*After Vaccine (199 Days)*
Asylum Seeker Male Patient	2909	2135	960	0	0	0	2134	1298	575
Asylum Seeker Female Patient	2397	2035	953	2397	994	402	1707	1098	566
Total Asylum Seeker Patient	5306	4170	1913	2397	994	402	3841	2396	1141
Local Male Patient	271924	215660	101106	0	0	0	107490	52003	27287
Local Female Patient	250359	183737	93130	38884	30041	13181	96993	48433	25170
Total Local Patient	522283	399397	194236	38884	30041	13181	204483	100436	52457
Total Patient	527589	403567	196149	41281	31035	13583	208324	102832	53598

Table 2 shows the admissions made to the emergency departments of hospitals during the period subject to the study. According to the table, the total number of admissions to the Emergency Department is 1 127 305, constituting approximately 19% of the total admissions to the hospital. Considering that there are 55 different departments, this rate is striking. While 99% of the patients coming to the General Emergency Department are local people, 1% are asylum-seeking patients. The total number of admissions to the gynecology emergency department is 72 316. 95.3% of these admissions are local people, and 4.6% are asylum-seeking women. The total number of admissions to the pediatric emergency department is 311 156. While 98% of the children are local people, 2% are asylum-seeking children.

When we look at Table 1 and Table 2, one of the striking issues is the difference in the healthcare service demands of local and asylum-seeking female patients. It is observed that 7.11% of the total admissions of local female patients were made to Gynecology and Obstetrics outpatient clinics and 2.62% to Gynecology emergency outpatient clinics. This rate increases significantly in asylum-seeking female patients. It can be seen that 21% of the total asylum-seeking female patients applied to gynecology and obstetrics outpatient clinics and 10.45% to gynecology emergency outpatient clinics for healthcare.

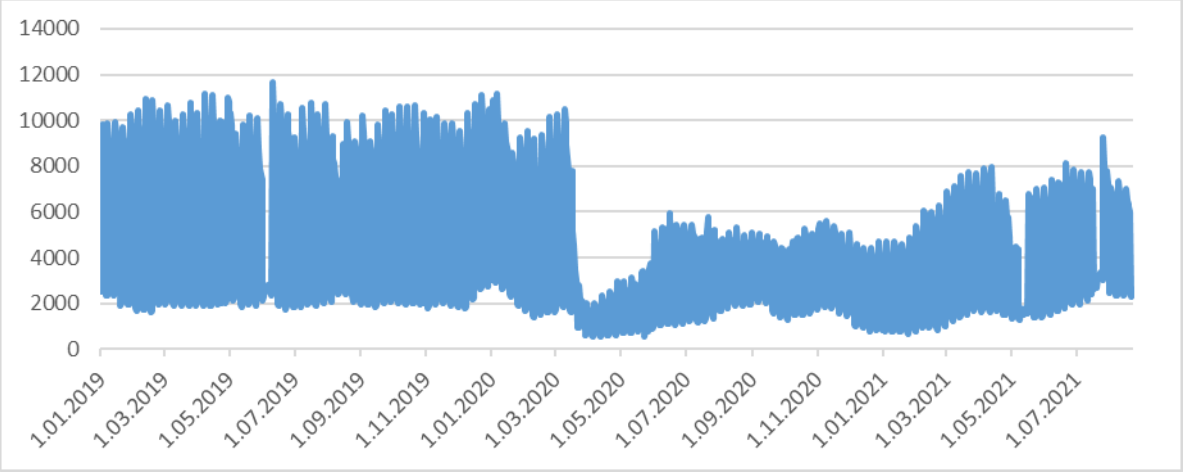

Figure 1. Local patient total admission before and after Covid-19

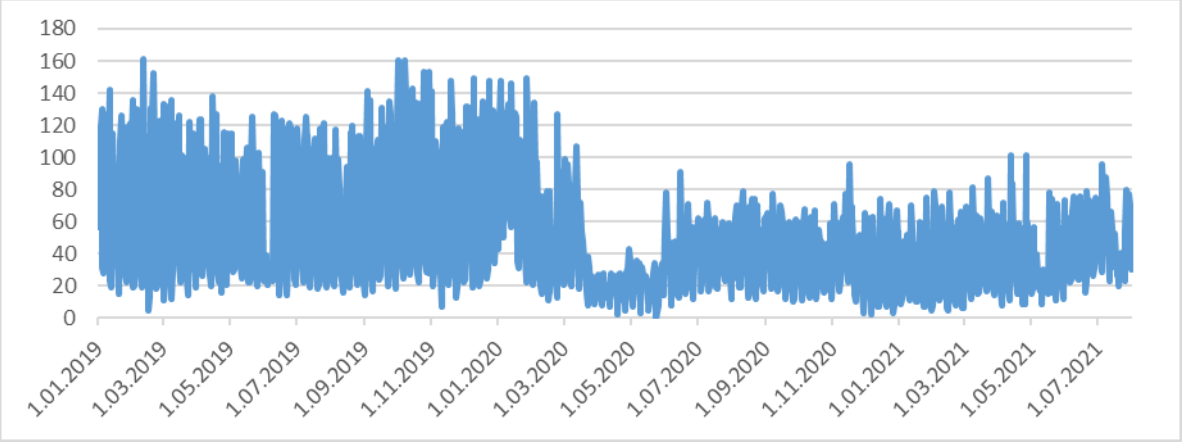

Figure 2. Asylum-seeking patients total admission before and after Covid-19

Figure 1 shows local patients' daily hospital admission charts, and Figure 2 shows asylum-seekers daily hospital admission charts. Before the Pandemic, the highest number of applications for local people was 11 642 (June 17, 2019) and 161 for asylum-seekers (February 11, 2019). Asylum-seeking patients receiving healthcare before the pandemic accounted for approximately 1.4% of local patients. After Covid, this rate is 1.2%.

Model

- Model: Asylum Seeker Patient's Total Admission (Daily Deaths, Daily Vaccines, Daily Total Cases)

General Model

Asylum Seeker Patient's Total Admission (ASPTA)$_t$ = β_0 + β_1 Daily Deaths + β_2 Daily Vaccines + β_3 Daily Total Cases + u_t

ARDL Model

$$\Delta ASPTA_t = \alpha_0 + \sum_{i=1}^{p} \beta_i \Delta ASPTA_{t-i} + \sum_{i=0}^{p} \sigma_i \Delta DailyDeaths_{t-i} + \sum_{i=0}^{p} \delta_i \Delta DailyVaccines_{t-i} + \sum_{i=0}^{p} \rho_i \Delta DailyTotalCases_{t-i} + \lambda_1 ASPTA_{t-1} + \lambda_2 DailyDeaths_{t-1} + \lambda_3 DailyVaccines_{t-1} + \lambda_4 DailyTotalCases_{t-1} + u_t \quad (1)$$

According to the Model discussed, the dependent variables are the number of asylum-seekers who applied to all secondary healthcare hospitals in Sivas to use health services post-COVID-19 (13.01.2021-07.31.2021). The explanatory variables of the models are the number of deaths per day from COVID-19, the number of vaccinations per day, and the number of total cases per day.

Analysis

- Model: Asylum Seeker Patient's Total Admission (Daily Deaths, Daily Vaccines, Daily Total Cases)

Table 3. Unit Root Test

Unit Root Test						
	ADF Test Statistics (constant and trend)			ZA Test Statistics (constant and trend)		
Variables	Level	1. Difference	Cointegration	t-value	t-table[a]	Cointegration
Asylumseekertotal	-3.23(0.079)**	-11.73 (0.00)***	I (1)	-13.79	-5.57***	I (1)
Cases	-1,56 (0.80)	-13.07 (0.00)***	I (1)	-2.92	-5.34***	I (0)
Vaccine	1.27 (1.00)	-6.93 (0.00)***	I (1)	-5.00	-5.71*	I (1)
Death	-5.25 (0.00)***	-0.86 (0.95)***	I (0)	-7.08	-5.71***	I (0)

* %10, ** %5, *** %1 indicates p-values significance level.

[a] t-table values are at 1%, 5% and 10% significance levels.

Taken from Zivot and Andrews (1992) table arranged according to the C model, which takes into account the break in the constant and the trend.

According to the ADF unit root test results reported in Table 3, the variables of the number of refugees (Asylumseekertotal), the number of COVID-19 cases (Cases) and the number of vaccines (Vaccine) are not stationary at the level; however, when their first differences are taken, they become statistically significant at the 1% level of significance and are observed to be stationary. These results show that the series in question are integrated of the first degree (I(1)). On the other hand, the number of deaths (Death) variable was found to be stationary at the level and was evaluated as I(0) at the 1% significance level.

The Zivot-Andrews (ZA) test results in the same table, which take structural breaks into account, are generally consistent with the ADF test, but reveal some differences. According to the ZA test, the Asylumseekertotal and Vaccine variables are not stationary at the 1% significance level and are classified as I(1). For the Cases variable, the ZA test shows significant stationarity at the level and provides evidence that this variable is I(0). The Death variable is found to be stationary at the level according to both the ADF and ZA tests, and this shows the consistency between the test results. Since the dependent variable is integrated of order I(1) and the independent variables are a combination of I(0) and I(1), the ARDL approach is more appropriate, as the bounds testing methodology developed by Pesaran et al. (2001) allows for cointegration analysis under such mixed integration conditions.

Table 4. Co-integration and ARDL results for asylum-seeking patients admissions

Dependent Variable: Asylum Seeker Patients			Observation Period: January 2021- July 2021	
Test Name: ARDL			Selected Model: **ARDL(8, 0, 1, 0)**	
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
Long Term Equation				
DEATH	0.003556	0.000746	4.770293	0.0000
VACCINE	-3.83E-07	1.65E-07	-2.317020	0.0216
TOTAL CASES	-2.22E-05	7.08E-06	-3.134852	0.0020
Short Term Equation				
D(ASYLUMSEEKERTOTAL(-1))	-0.082417	0.133452	-0.617579	0.5376
D(ASYLUMSEEKERTOTAL (-2))	-0.203640	0.121505	-1.675990	0.0954
D(ASYLUMSEEKERTOTAL (-3))	-0.246657	0.108342	-2.276654	0.0240
D(ASYLUMSEEKERTOTAL (-4))	-0.271075	0.098972	-2.738898	0.0068
D(ASYLUMSEEKERTOTAL (-5))	-0.379933	0.087503	-4.341969	0.0000
D(ASYLUMSEEKERTOTAL (-6))	-0.393962	0.076122	-5.175399	0.0000
D(ASYLUMSEEKERTOTAL (-7))	0.231578	0.067422	3.434730	0.0007
D(VACCINE)	1.34E-05	3.06E-06	4.387245	0.0000
CointEq(-1)*	-0.634463	0.132814	-4.777067	0.0000

	F-Statistic	Signif.	I(0)	I(1)
Bounds Test	5,614054	%1	3.42	4.84
R^2	0,731969			
Adjusted R^2	0,719138			

*There are no missing data

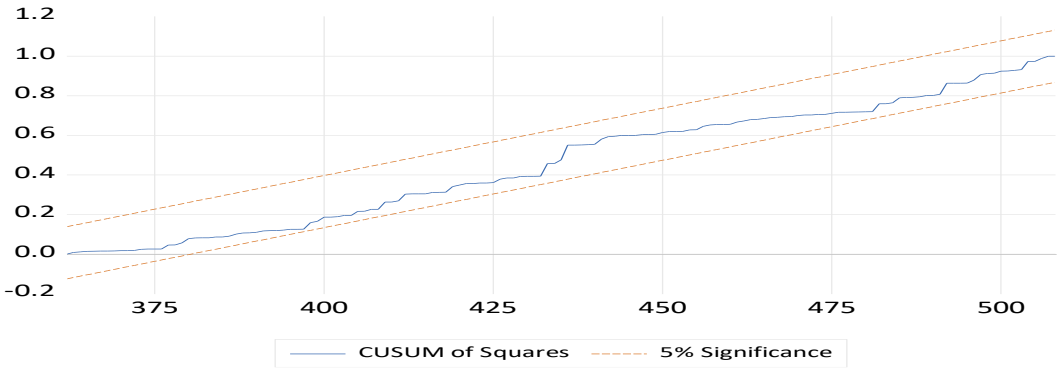

Figure 3. The result of CUSUM test

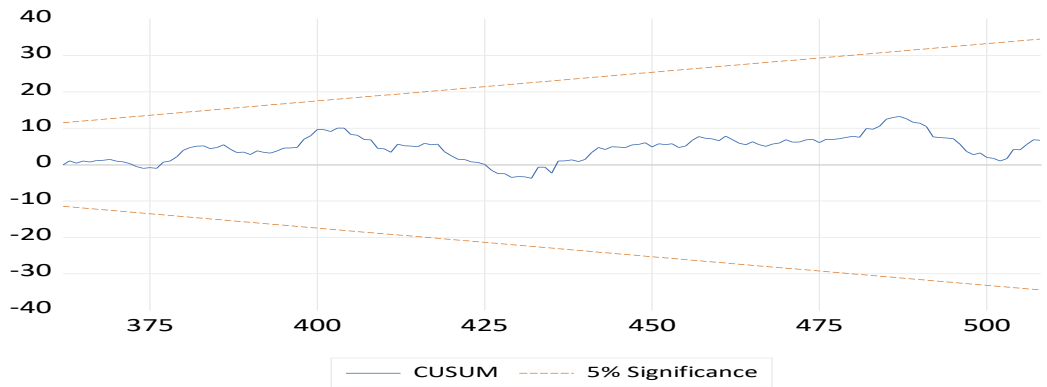

Figure 4. The result of CUSUM of squares test

CUSUM and CUSUM of squares statistics are within critical limits at the 5% significance level (Figure. 3 and Figure. 4). The CUSUM series does not cross the essential lines, which indicates model stability. Since the adjusted R2 in the ARDL equation in Table 4 is 0.7191, it can be seen that the explanatory variables explain the model as a whole by approximately 72%. According to the ARDL long-term equation, COVID-19-related cases, deaths, and vaccines against COVID-19 affect asylum-seekers healthcare demand in hospitals at p = 0.05. When evaluated in the long term, deaths increase hospital visits, while each vaccine administered and the total number of cases decreases. The 10 million vaccinations administered reduced the number of refugees going to hospital by 3,8, and the 100 thousand cases reduced by 2,2. In the short term, only the number of vaccinations among the explanatory variables affects the admission of asylum-seeking patients, and this effect is positive, unlike the long term. In the short term, daily vaccinations increase hospital visits. 100 thousand vaccines administered have increased the number of refugees going to hospital by 1,3. In addition, the fact that 10 asylum-seekers went to the hospital six days ago or more recently reduces the number of hospital visits today; for example, the admissions of asylum-seekers who received healthcare services 10 two days ago decreased by 2 today (Table 4).

Discussion and Conclusion

Individuals under temporary protection in Turkiye receive free health, housing, and education services (Ministry of Interior Directorate General of Migration Management, 2014: 1-2). Given their large numbers, these individuals constitute both a socio-cultural and economic burden for the country, but they also present an opportunity to the sector as healthcare customers. They were initially seen as “guests forced to migrate.” Still, over time, the local population began to view them as a threat, particularly to the economy and their right to essential services. Host countries, including Turkiye, have started highlighting the strain refugees place on services and the risks they may pose to society (Grove & Zwi, 2005: 1937). A survey found that 86% of Turks are uncomfortable with the idea of Syrians, the largest immigrant group, settling permanently (Bolgun & Uçan, 2020: 265). Such sentiments are often voiced on social media, where influencers can shape public opinion, reinforcing prejudice and myths. This interaction between the media and the public is crucial in shaping policy and mass perceptions (Kolukırık, 2009: 6). In our study, the total number of health services utilized during the period was approximately 5 million (4,925,056), of which 1.11% were immigrants and 99% were locals (Table 1). Although there is discomfort among locals about immigrants’ intensive use of health services, our study shows the opposite of the thought.

After the pandemic, the number of asylum-seeking patients visiting the hospital decreased by about 50% per day, while the rate for local people dropped by approximately 44% (Table 1). With the pandemic, the local population’s demand for health services has decreased more than that of immigrants. Social isolation may have protected individuals from diseases, or individuals’ irrational health service use behaviors due to the free examination services in the pre-pandemic period may have changed after the pandemic, which may have significantly reduced demand. It is also stated in the literature that Covid-19 affects disadvantaged groups more severely (Matlin et al., 2021: 1-2; Rafieifar et al., 2021: 774) . The fact that the decrease in asylum-seekers admissions is lower than that of the local population can be evaluated in this context.

In the model showing long- and short-term cointegration, a significant relationship is found between asylum-seekers demand for healthcare services and COVID-19 cases, deaths, and vaccinations. According to ARDL results, asylum-seekers health service utilization is impacted by COVID-19 cases, vaccinations, and deaths in the long term. While COVID-19 cases and vaccinations reduce utilization over time, deaths increase it. In the long term, the increase in Covid-19 cases may have reduced the demand for healthcare services due to the risk of contracting the disease in hospitals, while the fear of death may have increased the willingness to seek healthcare. The thought of death may have been more dominant than the thought of having been infected to seek health care. In the short term, hospital admissions are positively impacted only by vaccinations, unlike in the long term. Vaccinations led to an increase in health service use (Table 4). Vaccination, which increased rapidly between 2010 and 2019, stagnated or decreased worldwide between 2019 and 2021 (UNICEF, 2023: 14). In Turkiye, pregnant refugees have a much lower vaccination rate than Turkish pregnant women (Mutlu & Yılmaz, 2021: 21). In a study conducted in 8 countries, including Turkiye, only one out of 1,914 refugees has been vaccinated against COVID-19. 68% of the people had not even heard of vaccination plans in their communities, and 47% thought they were not eligible for the vaccine or did not know if they were eligible for the vaccine (Valette et al., 2021). In the Turkish National COVID-19 Vaccine Administration Strategy, vaccination priority is grouped according to age and service sector, not local and refugee (Republic of Turkiye Ministry of Health, 2021). Therefore, there are no political obstacles to refugees’ access to vaccination services. While immigrants, who are a disadvantaged group, already experience difficulties in accessing health services and vaccination due to reasons such as racism, language, lack of information, stress, country policies, stigma and fear of being prescribed medication." (Assi et al., 2019: 151; Gunst et al., 2019: 821; Hackerr et al., 2015: 176; Heslehurst et al., 2018: 2, Khanom et al., 2021: 4-8), these difficulties have become even more evident during the COVID-19 period (Da Mosto et al., 2021: 1; Hamidi & Karachiwalla, 2022: 661; Mangrio et al., 2020: 1; Matlin et al., 2021: 2; Navarro-

Roman & Roman, 2022: 153; Rafieifar et al., 2021: 772; World Health Organisation, 2021). Our study presents a framework different from the literature and reveals a causal relationship between immigrants and vaccination. According to the results of our analysis, vaccinations may have boosted asylum-seekers' confidence, encouraging them to seek healthcare in the short term. However, in the long term, multiple vaccinations may have caused reluctance to visit hospitals. Khanom et al. (2021) found in their study that asylum seekers avoid medication use and stigmatization due to illness. In this context, our study's finding that asylum seekers avoid vaccination is consistent with that study. If vaccine hesitancy arises, more caution may be needed in vaccination policies to prevent the spread of infectious diseases from immigrants. Additionally, asylum-seekers' healthcare demand follows a 7-day cycle after vaccinations begin. It can be seen that the patients tend to demand healthcare again after 7 days of using healthcare services. (Table 4).

With increasing healthcare costs, the burden on the health economy from both asylum-seekers and local patients should be carefully considered. The financial impact will be much more significant in regions with higher refugee populations. This economic challenge should not fall solely on Turkiye; other countries seeking to prevent the flow of immigrants from Turkiye to Europe should also be encouraged to take necessary actions.

The issue of immigration requires a multidisciplinary approach. The opportunities and challenges immigrants create for the host country should be carefully analyzed, and appropriate actions should be taken. The local community's perception of refugees as a threat poses a broader challenge for governments. New strategies are needed to address the negative criticisms from locals. If not properly managed, this issue could snowball, leading to more significant problems. As a result, social threats may become just as important as economic ones. Health is a fundamental right for every individual, as detailed by the WHO: "The enjoyment of the highest attainable standard of health should be available to all, without distinction of race, religion, political belief, or economic and social condition" (World Health Organisation, 2020). Thus, access to healthcare is a fundamental human right, regardless of one's social, minority, or economic group. The study shows that the significant burden on the healthcare economy primarily comes from the local population, though the number of immigrant patients is also considerable. It will also be valuable for both pandemic and non-pandemic periods, especially considering the potential cross-border spread of other viruses, such as monkeypox. To ensure everyone's safety, migrants must also be protected inclusively. The high population of immigrants may pose a threat in terms of economic, socio-cultural, and health, but seeing these disadvantaged groups as both a resource and a customer and turning this situation into an opportunity will be beneficial for their social integration. This integration is possible, especially by changing social approaches.

In our study, we addressed the issue of immigrants' healthcare service demand in a multidimensional manner. It offers an initial understanding of foreigners' motivations for using healthcare services in the context of open borders and mass migration. It can serve as a foundation for governments to develop health economics policies and for healthcare providers to understand their target groups better. Developing appropriate strategies for this market will be crucial for healthcare providers. Future studies could explore the impact of culture on consumer behavior by analyzing locals' use of healthcare services with a new model. It contributes to social sciences, health sciences, policies, and migration. It can provide helpful information for both academia and policymakers. This study only used data on patient demand from the province of Sivas. In this sense, while the impact of healthcare use by refugees may not be felt in Sivas in an absolute term, it could be more significant in regions with higher immigrant populations.

Katkı Oranları ve Çıkar Çatışması / Contribution Rates and Conflicts of Interest

Etik Beyan	Bu çalışmanın hazırlanma sürecinde bilimsel ve etik ilkelere uyulduğu ve yararlanılan tüm çalışmaların kaynakçada belirtildiği beyan olunur.	**Ethical Statement**	It is declared that scientific and ethical principles have been followed while carrying out and writing this study and that all the sources used have been properly cited
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Etik Bildirim	iibfdergi@cumhuriyet.edu.tr	**Complaints**	iibfdergi@cumhuriyet.edu.tr
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