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RESEARCH

Health inequalities in post-COVID-19 Chile: Health system coverage and effective access by sex and migrant status

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ABSTRACT

INTRODUCTION In 2022, after the COVID-19 pandemic, approximately 93% of the countries in the Region of the Americas continued to report interruptions in essential health services, with worse outcomes in vulnerable social groups. The present study aims to describe barriers to access to health care in Chile, disaggregated by sex and international migrant status.

METHODS Cross-sectional study, analyzing the results of the CASEN 2022 survey of persons ≥18 years of age. We calculated affiliation, effective access and health barriers by international migrant status and sex. Multiple logistic regression models were performed adjusting for age, rurality, educational level, occupation, and income quintile. The model was expressed as an adjusted Odds Ratio (ORadj) with a 95% confidence interval in STATA v.18.5.

RESULTS For the year 2022 in Chile, a total of 14 767 688 people were represented in this study, with a mean age of 45.4 years (SD: 17.8), 51.2% were women and 9.27% were migrants. Regarding health insurance, 3.11% of the population was not affiliated with the health system, with men ($ORadj_{female/male}$: 0.6; 95% CI: 0.54 to 0.68) and immigrants ($ORadj_{immigrants/chileans}$: 10.3; 8.78 to 12.15) being the most affected groups. In terms of effective access, 17.4% had health needs, with a predominance of the female sex ($ORadj_{female/male}$: 1.3; 95% CI: 1.21 to 1.32). However, of those who had needs and expressed them, 39.2% expressed unmet needs, with a higher probability of showing it in females ($ORadj_{female/male}$: 1.2; 95% CI: 1.10 to 1.27).

CONCLUSIONS In Chile, health system coverage remains a challenge for males and the migrant population. We observe with concern high percentages of unmet health needs, particularly among females. The intersection of sex and international migration reveals a dual vulnerability in access to health care that warrants further study.

KEYWORDS Health Equity, Health Disparate Minority and Vulnerable Populations, Sex, Emigrants and Inmigrants, Chile

INTRODUCTION

In various regions of the world, the COVID-19 pandemic-related health emergency increased barriers to universal access to health care [1,2]. By 2022, approximately 93% of countries in the Americas continued to report disruptions in the response of essential health services [3]. It was estimated that these disruptions could have a greater impact than that caused directly by the COVID-19 pandemic itself [4]. Certain social groups, such as the international migrant population and women, had fewer opportunities to cope with the aftermath of the pandemic and are therefore among the most affected groups [1].

Chile is no exception to this reality. During the COVID-19 pandemic, females faced multiple difficulties, including a higher probability of losing their jobs, taking on additional roles to those they already performed, and returning to work at a slower pace than males [5]. On the other hand, the migrant population, which in 2021 represented 8% of the national population, experienced high levels of socioeconomic precariousness, a greater risk of illness, and a lower probability of being affiliated

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MAIN MESSAGES

- Affiliation with the health system remains a challenge for males and the migrant population. The intersection of sex and international migration reveals a double vulnerability in access to health care that warrants further study.
- This study is nationally representative and describes the population that reports belonging to a health insurance system, taking into account their main conditions of vulnerability. This facilitates the identification of needs and barriers for evaluating health policies.
- Our results highlight the importance of moving toward more robust studies that inform public policies on how sex interacts with other social determinants within the migrant population.
- The results presented are exploratory in nature and do not imply causality. In addition, the information comes exclusively from heads of households, potentially leading to underrepresentation of the migrant population. Both aspects may limit the projection of the results of this study.

with a health system [6]. However, knowledge of the context in which these groups operate and the response to the impact of the pandemic on access to public health care in the country, the National Health Fund, remains limited. In this context, it is necessary further to analyze enrollment gaps and effective access to health care.

Effective access occurs when all barriers (economic, organizational, sociocultural, or geographic) that hinder the use of such services have been overcome, allowing people to receive the care they need [7,8].

On the eve of the United Nations Sustainable Development Goals for 2030 [9], the Pan American Health Organization predicts that, after the pandemic, we will see decreases in potential and effective access [3]. In this context, understanding the situation of health coverage in Chile after the pandemic among migrants, especially migrant women, is of vital importance.

In Chile, the National Socioeconomic Characterization Survey (CASEN), conducted by the Ministry of Social Development and Family, has the largest sample size in Latin America [10]. Its objective is to monitor the impact of public policy, taking into account the socioeconomic realities of the population [11]. In particular, it identifies deficiencies and assesses gaps, with special attention to priority groups, such as the migrant population, as measured by the country of birth of the mother [11]. The 2022 National Socioeconomic Characterization Survey is a key tool for identifying gaps in the wake of the health emergency [1]. The present study aims to evaluate access to health care among individuals aged 18 years and older in Chile in 2022, while accounting for sociodemographic variables. The specific objectives are as follows:

1. Measuring access to healthcare among the migrant and Chilean populations
2. Describe access to healthcare by sex.
3. Measure access to healthcare among the migrant and Chilean populations.
4. Measure access to healthcare among the migrant population, broken down by sex.

METHODS

Study design

This is a quantitative, observational, cross-sectional study, following the STrengthening the Reporting of OBservational studies in Epidemiology (STROBE) checklist guidelines [12]. A secondary analysis was performed using the results of the 2022 National Socioeconomic Characterization Survey [13]. The level of representativeness is national, regional, and by urban/rural areas. The sampling frame was probabilistic, stratified, and two-stage. In the 2022, 72 056 households and 202 231 individuals were interviewed, of whom 106 575 were women and 11 894 were immigrants [11,13].

Participants

This study included responses from individuals aged 18 and older who responded to the 2022 National Socioeconomic Characterization Survey. Individuals without information on their place of birth or who responded to the study variables with "does not remember information" or "does not know" were excluded.

Study variables

Access to health care, divided into affiliation and effective access, was defined as a dependent variable to examine its association with sex, migrant status, and sex by migrant status. Migrant status was assessed by self-reporting the country of residence of the mother at the time of birth (Chilean or international migrant). Affiliation and effective access to the health system were calculated following the methodology of previous studies [14].

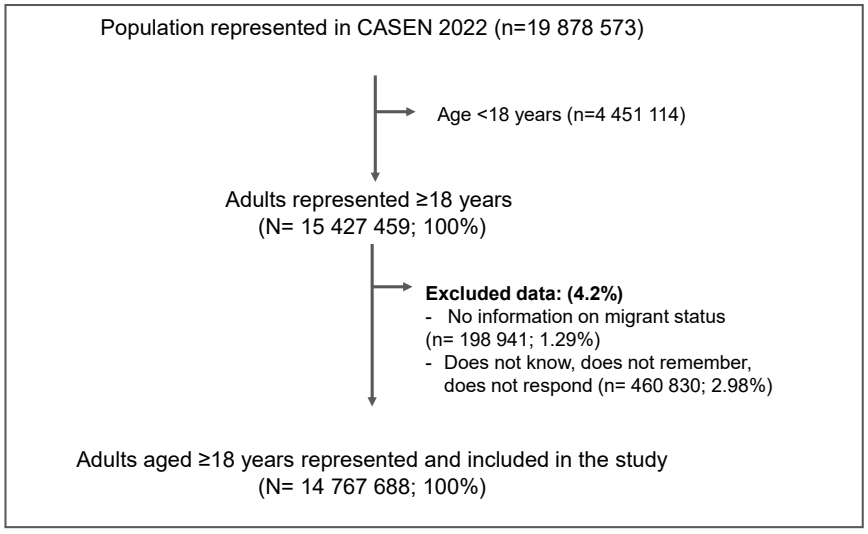
Affiliation with the health system

Whether the individual reported having affiliation or not with a health insurance system (yes/no).

Effective access

a. Expressed demand measured by the question: Did you have any health problems in the last 3 months and seek medical attention for this reason? (Yes/no).

Figure 1. Flow chart of adults aged 18 and over represented in the 2022 CASEN survey.



Abbreviations: CASEN: National Socioeconomic Characterization Survey.
Source: Prepared by the authors based on the study results.

b. In the case of unexpressed demand, the main barriers to access were characterized.
c. Satisfied demand measured by the question: Did you encounter any barriers during medical care? (Yes/no).
d. In the case of unmet demand, the main barriers to access were characterized.

The following variables were included: age, rural status, affiliation with the public National Health Fund system (yes/no), educational level (no education, basic, secondary, and higher education), activity (employed, unemployed, inactive), and autonomous income quintile (poorest I, II, III, IV, richest V).

Statistical analysis

To evaluate the association between variables, bivariate analyses were performed using chi-square tests for categorical variables and comparisons of means for quantitative variables. The magnitude and direction of the associations were estimated using multiple logistic regression models, calculating odds ratios for not being enrolled and for not having effective access to the health system, adjusting for age, rural status, educational level, occupational status, and income quintile. The results include 95% confidence intervals. The analysis was performed in Stata v18.5, accounting for the complex sample design using the *svyset* and *svy* commands.

RESULTS

In Chile, a total of 15 427 459 people aged 18 and over were represented in the 2022 National Socioeconomic Characterization Survey. After applying the exclusion criteria (4.3%), a total of 14 767 688 people were included in the analysis (Figure 1).

Of the total population included in the study, 51.2% were female, with an average age of 45.4 years (standard deviation = 17.8), and 9.3% were migrants. Most resided in urban areas (88.4%), had a medium- to high-level of education (69.8%), and were employed (59.4%). 96.9% were enrolled in a health care system (Table 1).

17.4% of the population had a health need, of which 89% achieved effective access, and 11% faced barriers to expressing their needs (Figure 2). Having a health need and not having effective access was mainly due to the individual "considering it unnecessary."

Of the individuals who had effective access (n = 2 280 351), 60.8% reported that their needs were met. The remaining 39.2% reported barriers to care. Most people with unmet demand had problems getting an appointment (53.8%) and receiving care (delays in care, changes in appointment times; 53.1%) (Table 2).

The analysis by sex showed that females were longer-lived, had a lower level of education, with a high percentage of labor inactivity, and belonged to a lower autonomous income quintile than males (Table 1). After adjusted analysis, affiliation in the health system showed that females were less likely to

Table 1. Differences in distribution between sociodemographic variables and health system affiliation.

Sociodemographic and health characteristics		Total population (n = 14 767 688)							Migrant population (n = 1 369 324)		
		% Total	% Females	% Males	p value	% Migrant	% Chilean	p value	% Migrant females	% Migrant males	p value
Age	Years (average, SD)	45.4 (17.8)	46.3 (18.2)	44.4 (17.2)	< 0.001	36.8 (11.9)	46.2 (18.0)	0.001	37.3 (12.5)	36.3 (11.1)	< 0.001
Area of residence	Rural	11.6	11.1	12.2	< 0.001	2.9	12.5	< 0.001	2.97	2.7	< 0.001
Level of education	No education	11.3	12.2	10.3	< 0.001	5.3	11.9	< 0.001	5.5	5.1	< 0.001
	Basic	18.9	18.5	19.3		13.3	19.5		12.8	13.9	
	Secondary	34.4	33.8	35.0		36.4	34.2		35.6	38.2	
	Higher	35.4	35.4	35.4		44.5	34.5		46.1	42.9	
Activity	Employed	59.4	48.8	70.5	< 0.001	78.1	57.5	< 0.001	67.5	89.3	< 0.001
	Unemployed	5.5	5.3	5.8		6.1	5.5		7.3	4.8	
	Inactive	35.1	45.9	23.8		15.8	37.1		25.2	5.9	
Income quintile	I (most poor)	19.6	21.7	17.4	< 0.001	11.8	20.4	< 0.001	13.5	10.1	< 0.001
	II	21.8	23.3	20.3		19.5	22.1		21.0	17.9	
	III	21.8	22.0	21.7		25.1	21.5		26.0	24.1	
	IV	19.7	18.3	21.3		26.7	19.0		24.9	28.5	
	V (most ritch)	17.0	14.7	19.4		16.9	17.0		14.6	19.4	
Affiliation in the health care system	Yes	96.9	97.5	96.3	< 0.001	84.3	98.2	< 0.001	14.4	17.2	< 0.001
	No	3.1	2.5	3.7		15.7	1.8		85.6	82.8	
Affiliation with the FONASA public health system	Yes	82.0	84.6	79.3	< 0.001	86.1	81.7	< 0.001	88.7	83.4	< 0.001

Abbreviations: SD, standard deviation. FONASA, National Health Fund.
Data by sex and migrant status among adults aged 18 and over in Chile in 2022.
Source: prepared by the authors based on the study results.

have no affiliation compared to males (adjusted odds ratio: 0.6; 95% confidence interval: 0.54 to 0.68). With regard to effective access, females were more likely to have health needs (illnesses, accidents; adjusted odds ratio: 1.3; 95% confidence interval: 1.21 to 1.32) and less likely to have unexpressed demands (adjusted odds ratio: 0.9; 95% confidence interval: 0.73 to 0.98). However, females were more likely to encounter barriers during care compared to males (adjusted odds ratio: 1.2; 95% confidence interval: 1.10 to 1.27) (Table 3).

In the analysis by migrant status, 51.3% were female. Migrants lived mainly in urban areas, had higher levels of education, and were predominantly in income quintiles III and IV, compared with Chileans (Table 1). After adjustment for affiliation in a health system, migrants were more likely to be uninsured than Chileans (adjusted odds ratio: 10.3; 95% confidence interval: 8.78 to 12.15) (Table 3). Concerning effective access, although migrants were less likely to have health problems (illnesses or accidents; adjusted odds ratio: 0.7; 95% confidence interval: 0.59 to 0.76), when migrants had health needs, they were more likely not to express their needs compared to Chileans (adjusted odds ratio: 1.5; 95% confidence interval: 1.06 to 2.21). No differences were found between migrants and Chileans in the presence of barriers to health care (p = 0.11). Barriers to effective access in migrant and Chilean populations are shown in Table 2.

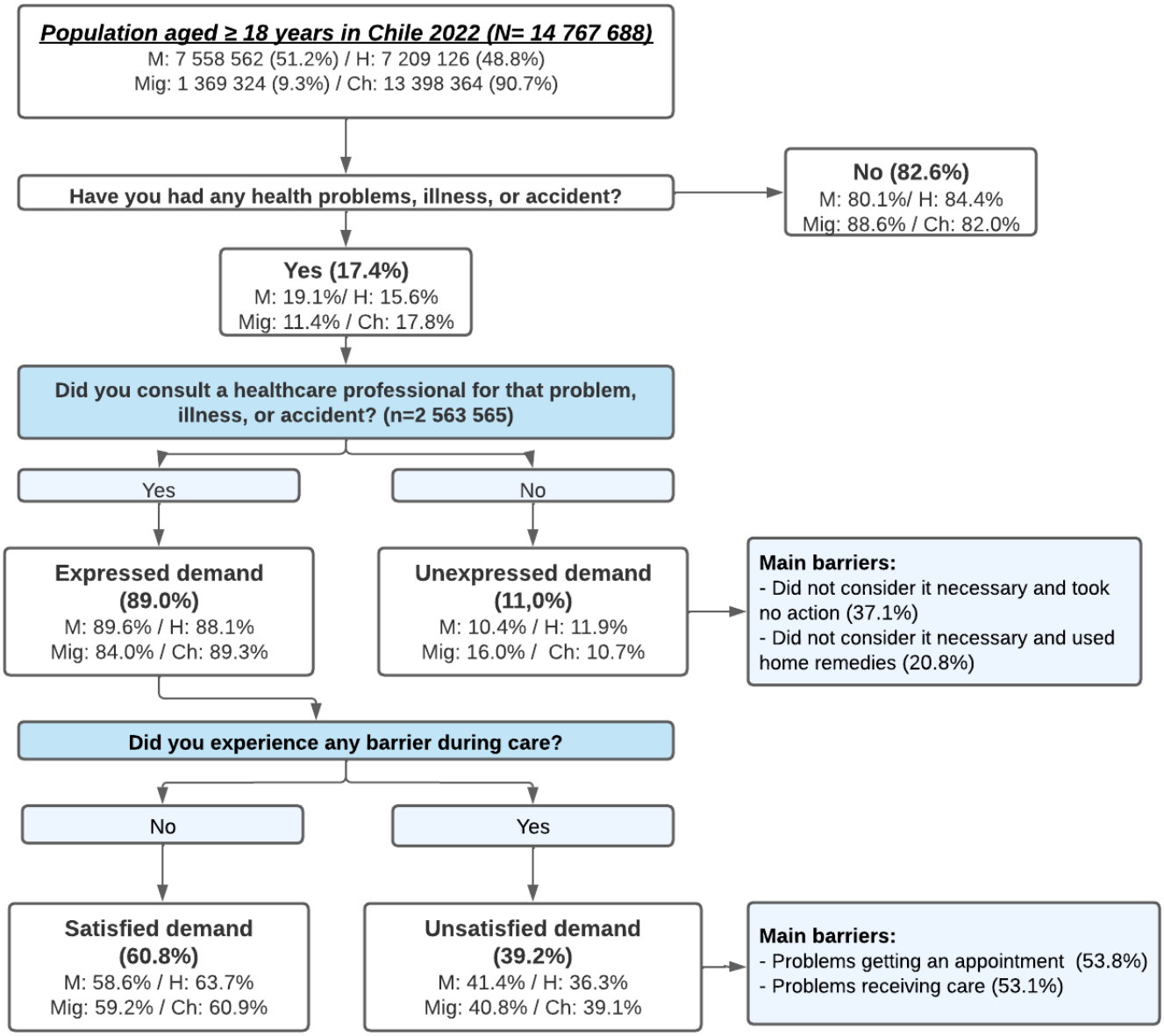
In the subgroup analysis by migrant status according to sex (n = 1 369 324), the characteristics are shown in Table 1. After adjusted analysis and in relation to enrollment in the health system by migrant status by sex, migrant females were less likely to have no affiliation compared to migrant males (adjusted odds ratio: 0.8; 95% confidence interval: 0.61 to 0.94) (Table 4).

With regard to effective access, no significant differences were found among migrants according to sex (p = 0.45). However, migrant women were less likely than men to express their demands when they arose (adjusted odds ratio: 0.6; 95% confidence interval: 0.37 to 0.90) (Figure 3). No gender differences in barriers to healthcare were observed among the migrant population (p = 0.10).

DISCUSSION

This study examines the current situation of access to healthcare in Chile following the COVID-19 health emergency, broken down by sex and migrant condition. The main finding is that, despite a significant proportion of people have affiliation in the Chilean health system, some populations remain without affiliation or face barriers to effective access to health care, making them vulnerable. Over the last few decades in Chile, access to health care has undergone significant changes. Specifically, between 2000 and 2010, there was a notable reduction in lack of non-affiliation the health system, narrowing

Figure 2. Effective access to healthcare for individuals aged 18 and over in Chile, 2022.



Abbreviations: F: Female M: Male. Mig: migrants, Ch: Chileans.
Source: Prepared by the authors based on the study results.

the gap from 11% to 3% [15]. However, despite achieving 97% affiliation and maintaining it over time, even after the pandemic, there is concern about rising barriers to effective access. A study prior to the COVID-19 pandemic reported barrier rates of around 25%, while after the pandemic, we observed a rate of around 40%[16].

Currently, affiliation in Chile's health insurance system is almost universal, with public insurance predominating. The latter has intensified in recent years, as the population has migrated from the private to the public system [17]. Despite these significant advances, our findings show how men continue to be less likely than women to have affiliation in the insurance system and to seek medical care because they do not consider it necessary. Non-affiliation, predominantly among males, has been reported in Chile since 2000 [14] and has continued even after the pandemic. It is likely that, as in other countries, the cultural construction of masculinity [18] could override the need for medical care. In this construction, men tend to approach the health system only when there is a serious health need or problem [19]. For its part, enrollment in the social security system among the migrant population does not seem to have changed after the pandemic. The high non-affiliation rate remains similar to pre-pandemic levels (2017: 16.3% versus 2022: 15.7%). However, it is crucial to consider that there could be underreporting of post-pandemic information, given the deepening inequalities in the migrant population during the

Table 2. Barriers to effective access to healthcare for adults aged 18 and over in Chile, 2022.

Did not express health needs due to barriers (n = 283 214)1a										
Barriers	**Total n = 283 214**	**Sex analysis (n = 283 214)**			**Migrant condition analysis (n = 283 214)**			**Migrant and sex analysis (n = 29 914)**		
		Female (n = 149 857)	**Male (n = 133 357)**	**p value**	**Migrant (n = 29 914)**	**Chilean (n = 258 300)**	**p value**	**Female (n = 10 640)**	**Male (n = 14 274)**	**p value**
Did not consider it necessary and took no action.	37.1	34.0	40.6	< 0.001	46.8	36.1	< 0.001	46.0	45.5	< 0.001
Did not consider it necessary and took home remedies.	20.8	21.6	19.9		17.9	21.1		15.2	19.9	
Decided to take usual medications.	14.1	15.1	13.1		9.2	14.6		11.4	7.6	
Requested appointment time, but did not receive it	4.2	5.3	2.9		0.5	4.5		0.5	0.4	
Did not have time.	3.7	3.3	4.1		6.5	3.4		7.3	6.0	
Another reason.	20.2	20.7	19.5		19.2	20.3		19.8	18.7	
Had an appointment with barriers (n =893 875)[2]										
Barriers	**Total n=893 875**	**Sex analysis (n=893 875)**			**Migrant analysis (n=893 875)**			**Migrant and sex analysis (n=131 150)**		
		Female (n=535 314)	**Male (n=358 561)**	p value	**Migrant (n=53 490)**	**Chilean (n = 840 385)**	p value	**Female (n=32 622)**	**Male (n=20 868)**	p value
Problems getting an appointment (yes)	53.8	54.6	52.7	< 0.001	52.8	53.9	< 0.001	49.0	58.7	< 0.001
Problems getting seen (yes)	53.1	52.8	53.6	< 0.001	50.0	53.3	< 0.001	50.9	48.7	< 0.001
Problems getting there (yes)	32.0	30.1	34.6	< 0.001	26.2	32.3	< 0.001	26.6	25.7	0.01
Problems with delivery or access to medications due to cost (yes)	29.3	30.8	27.0	< 0.001	28.8	29.3	0.02	30.4	26.5	< 0.001
Problems paying for care (yes)	25.5	25.8	25.0	< 0.001	25.4	25.5	0.81	24.2	27.4	< 0.001

Abbreviations: SD, standard deviation.

[a]Main reason why the health need was not expressed. The results add up to 100%. [2] Reasons why the health need was not satisfied despite having been addressed. Each reason adds up to 100%.

Source: Prepared by the authors based on the study results.

Table 3. Adjusted analysis of the association between sociodemographic variables.

	Without foresight (n = 14 767 688)				Health needs (n = 14 767 688)				Unspoken demand (n = 2 563 565)				Unmet need (n = 2 280 351)			
	aOR	(95% CI)			aOR	(95% CI)			aOR	(95% CI)			aOR	(95% CI)		
Female	0.6	(0.54	to	0.68)	1.3	(1.21	to	1.32)	0.9	(0.73	to	0.98)	1.2	(1.10	to	1.27)
Male	Ref				Ref				Ref				Ref			
Migrant	10.3	(8.78	to	12.15)	0.7	(0.59	to	0.76)	1.5	(1.06	to	2.21)	1.2	(0.96	to	1.46)
Chilean	Ref				Ref				Ref				Ref			
35 to 44 years old	0.7	(0.57	to	0.76)	1.2	(1.16	to	1.33)	1.1	(0.88	to	1.50)	1.0	(0.92	to	1.19)
45 to 54 years old	0.7	(0.61	to	0.87)	1.6	(1.48	to	1.67)	1.0	(0.81	to	1.17)	1.2	(1.02	to	1.41)
55 to 64 years old	0.8	(0.64	to	0.91)	1.9	(1.76	to	2.00)	1.0	(0.80	to	1.16)	1.2	(1.04	to	1.31)
65 to 74 years old	0.3	(0.25	to	0.43)	2.1	(1.99	to	2.27)	1.0	(0.78	to	1.17)	1.0	(0.89	to	1.16)
≥75 years old	0.2	(0.14	to	0.28)	2.6	(2.46	to	2.85)	0.8	(0.68	to	1.06)	1.0	(0.86	to	1.15)
< 35 years old	Ref				Ref				Ref				Ref			
Rural	1.3	(1.15	to	1.52)	0.7	(0.67	to	0.74)	0.8	(0.69	to	1.02)	0.8	(0.75	to	0.91)
Urban	Ref				Ref				Ref				Ref			
No education	1.5	(1.19	to	1.82)	1.0	(0.91	to	1.04)	1.1	(0.89	to	1.32)	1.4	(1.23	to	1.61)
Basic	1.5	(1.26	to	1.80)	0.9	(0.84	to	0.95)	0.9	(0.73	to	1.03)	1.3	(1.11	to	1.42)
Secondary	1.3	(1.07	to	1.48)	0.8	(0.79	to	0.89)	0.9	(0.79	to	1.07)	1.2	(1.04	to	1.28)
Higher	Ref				Ref				Ref				Ref			
Unemployed	1.7	(1.43	to	2.09)	1.0	(0.90	to	1.08)	1.2	(0.98	to	1.58)	1.0	(0.82	to	1.20)
Inactive	1.4	(1.20	to	1.58)	1.0	(0.92	to	1.00)	1.0	(0.87	to	1.15)	1.0	(0.93	to	1.11)
Employed	Ref				Ref				Ref				Ref			
I quintile	2.4	(1.85	to	3.04)	0.8	(0.69	to	0.89)	1.4	(1.14	to	1.78)	2.2	(1.90	to	2.57)
II quintile	2.0	(1.55	to	2.46)	0.8	(0.68	to	0.87)	1.2	(0.94	to	1.46)	2.0	(1.76	to	2.37)
III quintile	2.2	(1.75	to	2.87)	0.8	(0.70	to	0.90)	1.2	(0.96	to	1.50)	1.7	(1.44	to	1.91)
IV quintile	2.2	(1.58	to	3.06)	0.8	(0.73	to	0.96)	1.1	(0.85	to	1.30)	1.5	(1.28	to	1.71)
V quintile	Ref				Ref				Ref				Ref			
_cons	0.0	(0.01	to	0.01)	0.2	(0.15	to	0.21)	0.1	(0.09	to	0.15)	0.3	(0.25	to	0.34)

aOR, adjusted odds ratio. Ref, reference. CI, confidence interval. cons, intercept (model constant).

Multivariate analysis to evaluate access to healthcare among women compared to men and among international migrants compared to Chileans, adjusting for sociodemographic variables and considering a 95% confidence interval.

Source: Prepared by the authors based on the study results.

Table 4. Adjusted analysis of the association between sociodemographic variables, affiliation, and effective access to the health system, by migrant status.

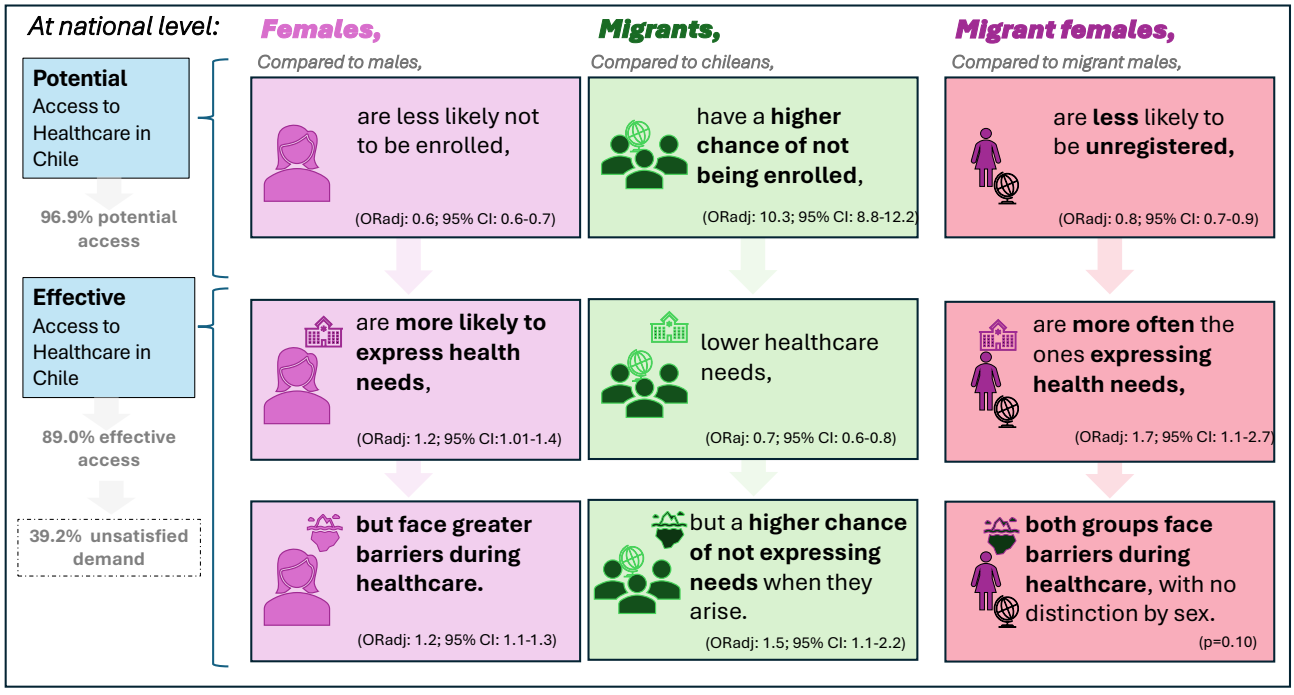
	Without foresight (N = 1 369 324)			Health needs (n = 1 369 324)			Unspoken demand (n = 156 064)			Unmet need (n = 131 150)		
	OR	(95% CI)		OR	(95% CI)		OR	(95% CI)		OR	(95% CI)	
Female	0.8	(0.61 to	0.94)	1.1	(0.87 to	1.36)	0.6	(0.37 to	0.90)	1.4	(0.93 to	2.15)
Male	Ref			Ref			Ref			Ref		
35 to 44 years old	0.6	(0.46 to	0.71)	0.9	(0.69 to	1.26)	1.0	(0.49 to	2.10)	1.1	(0.67 to	1.88)
45 to 54 years old	0.4	(0.30 to	0.63)	1.7	(1.27 to	2.38)	1.2	(0.59 to	2.43)	1.3	(0.72 to	2.20)
55 to 64 years old	0.8	(0.52 to	1.32)	2.3	(1.56 to	3.32)	1.7	(0.87 to	3.43)	0.8	(0.42 to	1.70)
65 to 74 years old	1.0	(0.54 to	1.90)	2.0	(1.22 to	3.28)	1.8	(0.47 to	6.90)	0.9	(0.37 to	2.10)
≥75 years old	1.1	(0.49 to	2.30)	4.6	(2.44 to	8.61)	0.3	(0.03 to	2.30)	1.1	(0.35 to	3.40)
< 35 years old	Ref			Ref			Ref			Ref		
Rural	1.3	(0.92 to	1.87)	0.6	(0.43 to	0.91)	2.5	(1.06 to	5.69)	1.6	(0.66 to	3.70)
Urban	Ref			Ref			Ref	to		Ref		
No education	1.3	(0.88 to	1.91)	1.1	(0.77 to	1.55)	1.2	(0.51 to	2.87)	1.2	(0.58 to	2.69)
Basic	1.9	(1.38 to	2.56)	0.9	(0.65 to	1.15)	0.3	(0.14 to	0.78)	1.0	(0.55 to	1.67)
Medium	1.6	(1.21 to	2.03)	0.8	(0.63 to	1.03)	1.0	(0.56 to	1.95)	1.6	(1.03 to	2.61)
High	Ref			Ref			Ref			Ref		
Unemployed	1.6	1.12 to	2.35)	0.9	(0.61 to	1.29)	0.9	(0.33 to	2.27)	0.5	(0.25 to	1.15)
Inactive	1.2	(0.87 to	1.56)	0.9	(0.69 to	1.14)	0.9	(0.41 to	1.83)	0.8	(0.46 to	1.33)
Employed	Ref			Ref			Ref			Ref		
I quintile	3.4	(2.19 to	5.29)	0.8	(0.51 to	1.15)	1.3	(0.46 to	3.75)	3.4	(1.53 to	7.42)
II quintile	2.2	(1.49 to	3.38)	0.7	(0.46 to	1.04)	1.3	(0.48 to	3.65)	2.7	(1.30 to	5.76)
III quintile	3.1	(2.04 to	4.83)	0.6	(0.43 to	0.92)	1.4	(0.46 to	4.01)	1.7	(0.87 to	3.45)
IV quintile	3.5	(2.00 to	6.17)	0.7	(0.45 to	0.97)	1.6	(0.61 to	4.17)	2.1	(1.04 to	4.11)
V quintile	Ref			Ref			Ref			Ref		
_cons	0.1	(0.05 to	0.10)	0.2	(0.10 to	0.28)	0.2	(0.05 to	0.65)	0.3	(0.13 to	0.50)

OR, Odds ratio. CI, Confidence interval. Ref, Reference. cons, Intercept (model constant).

Multivariate analysis to assess access to healthcare among migrant women compared to migrant men, adjusting for sociodemographic variables, considering a 95% confidence interval.

Source: Prepared by the authors based on the study results.

Figure 3. Inequalities in access to healthcare in Chile following the COVID-19 pandemic.



Inequalities in access to healthcare in Chile following the COVID-19 pandemic, evaluated by gender and migrant status. Analysis adjusted for age, rural status, educational level, occupation, and autonomous income quintile. Abbreviations: ORadj: Adjusted odds ratio; 95% CI: 95% confidence interval.
Source: Prepared by the authors based on data from the study.

health emergency. In other countries, the COVID-19 pandemic has exacerbated health inequalities in vulnerable populations [20]. This is due to socioeconomic factors and legal, administrative, cultural, and linguistic barriers [2,21].Regarding effective access to healthcare in Chile, robust programs and policies aimed at guaranteeing this right have been implemented over the past few decades. Examples of this include the Explicit Health Guarantees regulated by Laws 19 966 and 20 850 (Ricarte Soto Law). Both constitute concrete mechanisms to ensure access, opportunity, financial protection, and quality of care for specific pathologies and high-cost treatments, regardless of the individual's socioeconomic status [22,23]. However, the results of this study show that women face greater barriers to health care than men, mainly due to external factors such as difficulties in obtaining medical appointments or affording medication, among others. A greater likelihood of perceiving their health as poor or fair [18] and greater adherence to the health system through preventive and reproductive check-ups for themselves and their families may contribute to women having better self-awareness of their health status. In Chile, women may be moving from a lower likelihood of unmet needs in 1998 [15] to a higher likelihood of unmet medical needs in 2022. A recent study shows that the incorporation of women into the workforce over the last two decades has likely been characterized by precarious work, lower wages, and inflexible hours, hindering access to medical services and appointments [24]. During the pandemic, dissatisfaction with medical needs among women compared to their peers worsened, with a decrease in income and an increase in the burden of care in families, creating problems in paying for care and the cancellation of scheduled appointments. This is particularly noticeable in oncology and cardiovascular consultations compared to their male counterparts [24,25].

The intersection between sex and international migration highlights a double vulnerability in access to health care in these population groups. Although women are more integrated into the health care system, there were no differences in health needs or barriers to care. This could indicate underlying reasons that differ by sex in this population. Our results highlight the importance of advancing more robust studies that will enable the development of public policies focused on how sex interacts with other social determinants in the migrant population.

This study has important limitations that must be considered. The results presented are exploratory and do not imply causality, given the impossibility of evaluating temporal relationships. The information comes exclusively from household heads, and there may be an underrepresentation of the migrant population. However, the survey has important strengths: it allows for analysis with national representativeness, describes the population that declares belonging to a health

insurance system, taking into account their main conditions of vulnerability, and facilitates the identification of needs and barriers to evaluate health policies in these groups after the pandemic.

CONCLUSIONS

In Chile, affiliation in the health system remains a challenge for males and the migrant population. We note with concern the high percentages of unmet demands, especially among women. The intersection of gender and international migration reveals a double vulnerability in access to health care that warrants further study.

Contributor roles MN and ID contributed to the conception, design, and analysis of the data. MN, ID, and MIM contributed to the drafting of the manuscript and the interpretation of the results. ID, BC, and PMV contributed to the analysis and interpretation, and critical review to determine important intellectual content. All authors reviewed and approved the final version for publication.

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Desigualdades en salud en Chile post COVID-19: adscripción y acceso efectivo según sexo y condición migrante

RESUMEN

INTRODUCCIÓN El año 2022, posterior a la pandemia de COVID-19, aproximadamente 93% de los países de la región de Las Américas continuaban reportando interrupciones en los servicios esenciales de salud, con peores desenlaces en grupos sociales vulnerables. El presente estudio tiene por objetivo describir las barreras en el acceso a la atención en salud en Chile, desglosado por sexo y condición migrante internacional.

MÉTODOS Estudio de corte transversal, analizando los resultados de la Encuesta de Caracterización Socioeconómica Nacional (CASEN) 2022, realizada en Chile a personas desde los 18 años. Se calculó la adscripción, acceso efectivo y barreras en salud por condición migrante internacional y sexo. Se utilizaron modelos de regresión logística múltiple ajustando por edad, ruralidad, nivel educativo, ocupación y quintil de ingreso. El modelo fue expresado en *Odds ratio* ajustados con un intervalo de confianza del 95% en STATA v.18.5.

RESULTADOS Para el año 2022 en Chile, un total de 14 767 688 personas estuvieron representadas en este estudio, con una edad promedio de 45,4 años (desviación estándar: 17,8). De ellas, 51,2% eran mujeres y 9,27% población migrante. Respecto a la adscripción en salud, 3,11% de la población no estaba afiliada al sistema de salud, siendo los hombres (*Odds ratio* ajustado mujeres/hombres: 0,6; intervalo de confianza 95%: 0,54 a 0,68) y migrantes (*Odds ratio* ajustado migrantes/chilenos: 10,3; 8,78 a 12,15) los grupos más afectados. Respecto al acceso efectivo, 17,4% tuvo necesidades en salud, a predominio del sexo femenino (*Odds ratio* ajustado mujeres/hombres: 1,3; intervalo de confianza 95%: 1,21 a 1,32). Sin embargo, de las personas que tuvieron necesidades y la expresaron, 39,2% manifestaron necesidades no satisfechas, con mayor probabilidad de evidenciarlo en el sexo femenino (*Odds ratio* ajustado mujeres/hombres: 1,2; intervalo de confianza 95%: 1,10 a 1,27).

CONCLUSIONES En Chile, la adscripción al sistema de salud sigue siendo un desafío en el sexo masculino y en población migrante. Observamos con preocupación altos porcentajes en demandas no satisfechas, especialmente en mujeres. La intersección entre sexo y migración internacional revela una doble vulnerabilidad en el acceso a la atención en salud, lo que requiere su abordaje.

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