

BRIEF REPORT

MIGRATION TO STUDY IN MEDICAL SCHOOLS OF PERU

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ABSTRACT

The aim of this study was to describe the frequency of migration to study medicine in Peru. We conducted a secondary data analysis of the Red-LIRHUS study (2011-2012). We included 3 680 Peruvian students. Approximately, 23.2% migrated for medical school. Less than 1% were international migrants. We found a higher proportion of migrant students in Universities outside of Lima than in Universities in Lima (27.1% vs. 15.8%). There was also a higher proportion of migrants in private universities (28.3% vs. 16.0%) Migrant students were more likely to live alone (27.4% vs. 6.4%) and to report having failed a module/course (51.0% vs. 38.6%) compared to non-migrant students. It is necessary to evaluate potential interventions for the preservation of the well-being of people who migrate for their medical training.

Keywords: Emigration and Immigration; Human Migration; Medical Students; Peru (source: MeSH NLM)

INTRODUCTION

Migration is a worldwide demographic phenomenon based on moving to a different city or country to settle, usually in search for better living, working or studying conditions. It is estimated that 3.3% of the world's population is an international migrant ⁽¹⁾. Latin America social context show an increased migrant mobilization due to the political and social crisis in Venezuela. Countries with population that traditionally migrated into other countries, are now receiving migrants in large amounts, such is the case of Peru ⁽²⁾. However, Peru has a high tradition of internal migration; it is estimated that at least 20% of peruvians live in a department different from the one in which they were born. Most of the mobilization comes from rural areas to the cities, and from the jungle and sierra, to the coast ⁽³⁾.

One of the conditioning factors for migration is the search for academic and professional development. This means that people migrate to study a career, so the main destinations are cities with universities. This mobilization within the country depends on a minimum level of income to be able to afford at least residence and food outside the city of origin. Thus, this economic issue affects students who attend public universities, and mainly private universities. In 2011, the Peruvian government created "Beca 18", a program which covers all costs and provides poor or extremely poor secondary school students the opportunity to study in technological institutes, or public and private universities ⁽⁴⁾. However, this program did not include the career of human medicine until 2019.

Given that evidence is required to help implement strategies for the benefit of future medical students, it is important to know the profile of these students regarding whether or not

Citation: Chambergo-Michilot D, Muñoz-Medina CE, Lizarzaburu-Castagnino D, León-Jiménez F, Odar-Sampé M, Pereyra-Elías R, *et al.* Migration to study in medical schools of Peru. Rev Peru Med Exp Salud Publica. 2020;37(1):81-6. Doi: <https://doi.org/10.17843/rpmesp.2020.371.4695>

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Received: 27/03/2019
Approved: 30/12/2019
Online: 23/03/2020

they have migrated. Therefore, this study aims to characterize the profile of 1st and 5th year migrant medical students from 32 medical schools in Peru.

THE STUDY

A cross-sectional study conducted using data from the Red-LIRHUS study. The original study evaluated 11,072 1st and 5th year human medicine students from 63 universities in 11 Spanish-speaking Latin American countries (Peru, Bolivia, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Honduras, Mexico, Paraguay and Venezuela) between September 2011 and July 2012. The methodology of this study has been previously reported in detail ⁽⁵⁾.

The frequency of students who reported having migrated to study the career was evaluated by the researchers (frequency in Peru was compared with the other ten countries included). We also performed additional analyses on students from 32 universities with human medicine schools. All of the universities that existed at the time of data collection (census) were included. The original study was approved by the Research Ethics Committee of the Peruvian National Institute of Health (223-2011-CIEI/INS), and all participants signed an informed consent form prior to the completion of the surveys.

To define the migration variable, we considered participants "migrants" (yes or no) if the place where they completed their secondary studies was different from the place where they completed their undergraduate medical studies. This migration was, in turn, classified as national or international. We also assessed whether they were "province-to-province", "province-to-capital" or "capital-to-province" migrants.

The variables used to define the participants were the following: sex (male or female), people they live with (parents, relatives, friends or none), migrant parents (both, one, none), medical relatives (yes or no), year of study (1st or 5th), university location (capital or province) and university financing (public or private), as well as the educational level of the parents (university or postgraduate) as an alternate income source (both, one or none). In addition, variables related to career development and satisfaction were included: failing at least one course (yes or no), satisfaction with the career (yes or no; from the answer to, are you satisfied with studying medicine?: satisfied and very satisfied vs. indifferent, dissatisfied and very dissatisfied), intention to drop out from the career (yes or no; have you ever thought of dropping out or changing careers?)

For the statistical analysis, we used the Stata 13.0 statistical package (Stata Corporation, College Station, Texas, USA). The

KEY MESSAGES

Motivation for the study: "Beca 18" is financing the medical career and there is little evidence about the migratory profile of medical students in Peru.

Main findings: One out of four Peruvian medical students is a migrant, most frequently belongs to provincial and private universities. Compared to non-migrant students, migrants more often live alone and have unfavorable academic outcomes.

Implications: The implementation of accompaniment (academic/mental health) programs for migrant students should be evaluated.

frequencies and percentages of the variables included were reported in this study. In the analysis of the students from Peru, we used the Chi-square test to compare the characteristics of those who reported having migrated to study the career with those who did not. Since the sample size is in the order of thousands of participants, we considered a value of $p < 0.01$ as statistically significant.

RESULTS

Migrant students frequency in the RED-LIRHUS study

Of the 11,072 students (52.7% women, 20.4 years old), 3,680 were students at Peruvian universities (50.9% women, 20.5 years old). In the entire sample, 32.8% reported having migrated to study the career. This proportion varied significantly between countries. Peru was the country where less students reported having migrated to study (23.2%). Meanwhile, in Bolivia, Costa Rica and El Salvador, the frequency of student migration was around 50% (Figure 1).

Characterization of migrant students in Peru

In the universities of Lima, 15.8% of the students were migrants (15.3% national and 0.5% international). Meanwhile, in provincial universities, 27.1% were migrants (20.5% from other provinces, 6.0% from Lima and 0.6% international). In Lima and provinces, the proportion of students who reported having migrated from abroad was low (<1%).

The characteristics of migrant and non-migrant students were similar regarding gender, year of study, or having medical relatives. Migrant students most often reported that one or both parents were also migrants ($p < 0.001$); they also had

a higher proportion of parents (one or both) with university and graduate studies ($p=0.006$). Migrant students more frequently live alone compared to non-migrant students (37.4% vs. 6.4%; $p<0.001$).

In relation to the host university, the proportion of migrants in provincial and in private universities was higher (Table 1). Regarding academic results, 51.0% of migrant students failed at least one course, while in non-migrant students this proportion was of 38.6% ($p<0.001$). Dissatisfaction with the career was slightly higher in the migrant group (13.9% vs. 10.0%; $p=0.001$), as well as the consideration of withdrawing from the career (26.0% vs. 21.0%; $p=0.002$).

DISCUSSION

According to the results, 1 out of 4 students from human medicine schools in Peru migrated to study the career, while in other Latin American countries included in the Red-LIRHUS study the proportion of migrating students was up to 50%. The proportion of migrants in universities located in Lima was 15.8%, while in provinces it was almost twice. The proportion of migrant students in Lima was somewhat lower than reported in other studies conducted in some of the country's medical schools. Pereyra-Elías *et al.* observed that the proportion of national migrant students in health sciences careers at a private university in Lima was 19.6%⁽⁶⁾. A different study

reported that the number of national migrant second year students from a university in Lima was 36.7%, and that 17.2% came from small cities⁽⁷⁾. On the other hand, the proportion of foreign students in our study was low. Studies in Germany report about 10% of foreign students in medical schools (8.9). In Chile, the number of foreign university students was 0.4%⁽¹⁰⁾, similar to that reported in this study. The difference in international migration between Germany with Chile and Peru is due to the fact that universities that are better positioned in international rankings are more attractive to international students with greater economic resources; but there are other factors, such as free tuition and ease of entry. Public universities in Chile are not free and admission to Peruvian universities is very selective in medicine, with 50 applicants per vacancy in the case of Universidad Nacional Mayor de San Marcos. A different case in Latin America is found in Argentina, where the Faculty of Medicine of Universidad de Buenos Aires⁽¹¹⁾ has 5.7% of international students and, unlike Peru and Chile, it is free and admission is not so complicated.

The highest proportion of internal migrant students is from one province to another, which may be due to the difficulties of leaving their family behind to migrate and study⁽⁴⁾. This could lead to applicants choosing nearby universities (in other provinces) so they can visit their relatives more easily and frequently. On the other hand, the higher cost of living in Lima could also influence the decision⁽¹²⁾. Likewise, there is a larger proportion of internal migrant students in private

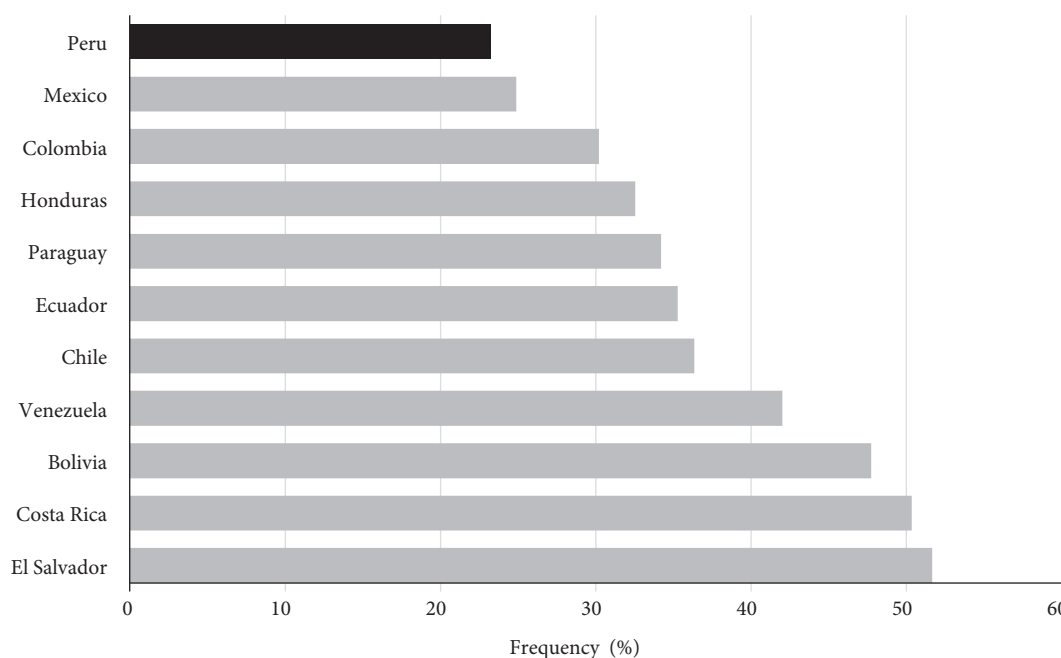


Figure 1. Frequency of students migrating to study the human medicine career from 11 Latin American countries, Red-LIRHUS study, 2011-2012.

Table 1. Sociodemographic and academic characteristics of Peruvian medical students according to migration status, LIRHUS 2011-2012 (n=3680 ^a)

Characteristics	Migrated to study				p Value ^b
	Yes		No		
	n	(%)	n	(%)	
Sex					
Male	445	52.2	1360	48.2	0.041
Female	408	47.8	1463	51.8	
Year					
First	554	64.9	1820	64.4	0.802
Fifth	300	35.1	1006	35.6	
University location					
Lima	202	23.7	1064	37.7	<0.001
Province	652	76.3	1762	62.3	
Type of university					
Public	240	28.3	1272	45.1	<0.001
Private	609	71.7	1547	54.9	
Lives with:					
Parents	359	42.4	2421	86.8	<0.001
Relatives	123	14.5	115	4.1	
Friends	48	5.7	75	2.7	
Alone	316	37.4	179	6.4	
Migrant parents					
Both	568	67.5	714	25.9	<0.001
One	192	22.8	835	30.3	
None	82	9.7	1208	43.8	
University graduated parents					
Both	408	47.8	1177	41.6	0.006
One	220	25.8	787	27.9	
None	226	26.4	862	30.5	
Medical relatives					
Yes	458	53.8	1414	50.3	0.072
No	393	46.2	1397	49.7	
Failed a course					
Yes	429	51.0	1070	38.6	<0.001
No	412	49.0	1702	61.4	
Dissatisfied with career					
Yes	118	13.9	279	10.0	0.001
No	734	86.1	2519	90.0	
Thought about quitting the career					
Yes	214	26.0	569	21.0	0.002
No	608	74.0	2144	79.0	

^a Some variables have missing values; ^b value obtained by means of the Chi-square test

universities, which could be due to the fact that migration implies a cost that is not accessible to the most of the population, but instead to students from families with higher income, whose parents have college and postgraduate studies. Finally, the low proportion of international migrants could be due to a combination of the factors described above, in addition to the fact that few Peruvian universities appear in international rankings of academic/research quality⁽¹³⁾.

The number of migrant students, both national and international, living alone is approximately six times higher than non-migrant students, and they were also more likely

to fail, which is associated more with living alone than with migration per se. Migrants are more likely to face loneliness and mental health problems^(8,14-17), which could be associated with unfavorable academic results⁽⁹⁾. Hunh D *et al.* observed that indigenous medical students from Germany had higher academic outcomes compared to non-European migrants⁽⁹⁾. In contrast, another study made⁽⁶⁾ in Peruvian health science students found that being a migrant was not associated with depressive symptoms, but was associated with being unhappy with the current economic situation.

Migrants face various challenges in the process of acculturation, mainly social loneliness (subjective feelings of loneli-

ness) and living alone^(15,16), the latter due to the distance from family and social circles. Despite the fact that no other factors associated with academic results are reported in this study, it is a reality that various problems arise from living alone, such as the risk of affecting mental health⁽¹⁷⁾, eating disorders and economic concerns, since they do not have constant family support. However, to establish limits in the relationship between living alone and migrants having less satisfactory academic results would be to fail to observe the whole paradigm. The acculturation of the national and international migrant student is complex and multifactorial, for example, it has been shown that frequent problems in this process are the language barrier (especially in the informal language of young people) and insufficient support⁽¹⁸⁾. In addition, it is important to consider the school academic profile, as it could act as a protective factor for academic failure.

In the context of this study, it is important to mention Beca 18 program. Since its foundation (2011), it has aimed at subsidizing higher education, housing, food, transportation, among other conditions, of young applicants with good academic performance, who are in condition of poverty or extreme poverty⁽⁴⁾, additionally, four out of ten scholarship holders are migrants⁽¹⁹⁾. As of 2019, the career of human medicine is eligible. It is necessary to consider the implementation of accompaniment programs for these students, evaluating their well-being and the factors that could generate unfavorable academic results, particularly for those students who live alone.

This study has certain limitations. The sample is not representative of the countries studied (only in Peru was it a

census) and only enlisted 1st and 5th year students. On the other hand, the definition of migrant may incorrectly classify migration patterns, especially for older participants or those who moved to study in school (primary or secondary) and return to their hometown to study the career. However, these cases are relatively rare. A more precise analysis of the dynamics of mobilization, i.e. between which cities the population moved, was not carried out; this information may be valuable to corroborate the hypothesis that some students choose nearby provinces to migrate in order not to move too far from their families.

In conclusion, Peru had the lowest proportion of migrant human medicine students, compared to the other Latin American countries in the Red-LIRHUS study. Approximately one out of four students was a migrant, and there was a higher proportion of migrant students in provincial universities compared to those from universities in Lima. Migrants were more likely to live alone and to have failed courses. The possibility of implementing programs or interventions for the well-being of people who migrate for medical training should be evaluated.

Authorship contributions: PMT had the research idea and performed the study design and data analysis. CEMM, DLC, FLJ, MOS and RPE participated in the data collection. PMT, DCM and RPE wrote the manuscript. CEMM, DLC, MOS, FLJ critically reviewed the manuscript. All authors approved the final version for publication.

Funding sources: This study was self-funded.

Conflicts of interest: RPE and CEMM migrated to study medicine.

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