

# Perceived discrimination as a barrier for the adequate treatment of chronic diseases in Venezuelan migrants from Peru

## *Discriminação percebida como barreira para o adequado tratamento de doenças crônicas em migrantes venezuelanos do Peru*

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**ABSTRACT:** *Objective:* To determine the association between perceived discrimination and receiving adequate treatment for chronic diseases in Venezuelan migrants. *Methodology:* A cross-sectional study was performed. This is a secondary analysis of the ENPOVE national survey from Peru. The association between the perceived discrimination and receiving adequate treatment for chronic diseases was evaluated using a Poisson regression model, considering the adjusted effect of the multistage sampling. *Results:* A total of 865 migrants were evaluated (age:  $36.6 \pm 0.7$  years and 58.2% women). Of these, 54.8% perceived discrimination, and 89.2% did not receive adequate treatment for chronic diseases. Perceived discrimination was significantly associated with a lower prevalence of receiving adequate treatment for chronic diseases ( $PRa = 0.49$ ; 95%CI 0.25 – 0.97). *Conclusion:* This study evidenced that perceived discrimination decreases the prevalence of receiving adequate treatment for chronic diseases by approximately 50% compared with those who did not perceive discrimination. *Keywords:* Emigrants and immigrants. Chronic disease. Public health. Venezuela. Peru. Therapeutics.

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**Conflict of interests:** nothing to declare – **Financial support:** none.

**RESUMO:** *Objetivo:* Determinar a associação entre a discriminação percebida e o recebimento de tratamento adequado para doenças crônicas em migrantes venezuelanos. *Métodos:* Foi realizado um estudo transversal. Esta é uma análise secundária da pesquisa nacional Venezuelan Population Residing in the Country Survey do Peru. A associação entre discriminação percebida e receber tratamento adequado para doenças crônicas foi avaliada por meio de um modelo de regressão de Poisson, considerando o efeito ajustado da amostra em múltiplos estágios. *Resultados:* Foram avaliados 865 migrantes (idade:  $36,6 \pm 0,7$  anos e 58,2% mulheres). Destes, 54,8% perceberam discriminação e 89,2% não receberam tratamento para a doença crônica. A discriminação percebida foi significativamente associada à menor prevalência de receber adequado tratamento para doenças crônicas (razão de prevalência ajustada — RPa = 0,49, intervalo de confiança de 95% — IC95% 0,25 – 0,97). *Conclusão:* Este estudo mostrou que a discriminação percebida diminui a prevalência de receber adequado tratamento para doenças crônicas em 50%, em comparação com aqueles que não percebem a discriminação.

*Palavras-chave:* Emigrantes e imigrantes. Doença crônica. Saúde pública. Venezuela. Peru. Terapêutica.

## INTRODUCTION

Venezuela has been going through an economic and political crisis since 2013<sup>1</sup>, which has led the country to continued economic inflation<sup>2</sup>, and forcing the Venezuelan population to migrate to other Latin-American countries.

In 2019, Peru was the second destination country chosen for Venezuelan migration, just below Colombia, with more than 860,000 Venezuelan migrants<sup>3</sup>. This possibly affects the deceleration of the upward trend of the average salaries and the decrease in the labor supply in the Peruvian market, especially compromising the most vulnerable sectors<sup>4</sup>, in addition to generating discomfort in the Peruvian population and triggering various attitudes of discrimination toward Venezuelan migrants.

Discrimination is the unequal and differential behavior directed to a person or group due to particular characteristics such as nationality, race, etc.<sup>5</sup>. Studies have identified that during migratory phenomena, about 4 to 50% of migrants face situations of social discrimination<sup>6-8</sup>, which have been associated with inappropriate health behaviors such as a lack of treatment and adherence to medical regimens in migrants with chronic diseases<sup>9-12</sup>. This is probably because discrimination consists in a stressful factor for migrants<sup>13</sup>, which could lead them to neglect their health, or even generate a feeling of rejection toward the destination country and consequently a distrust of access to general services such as health care<sup>14</sup>.

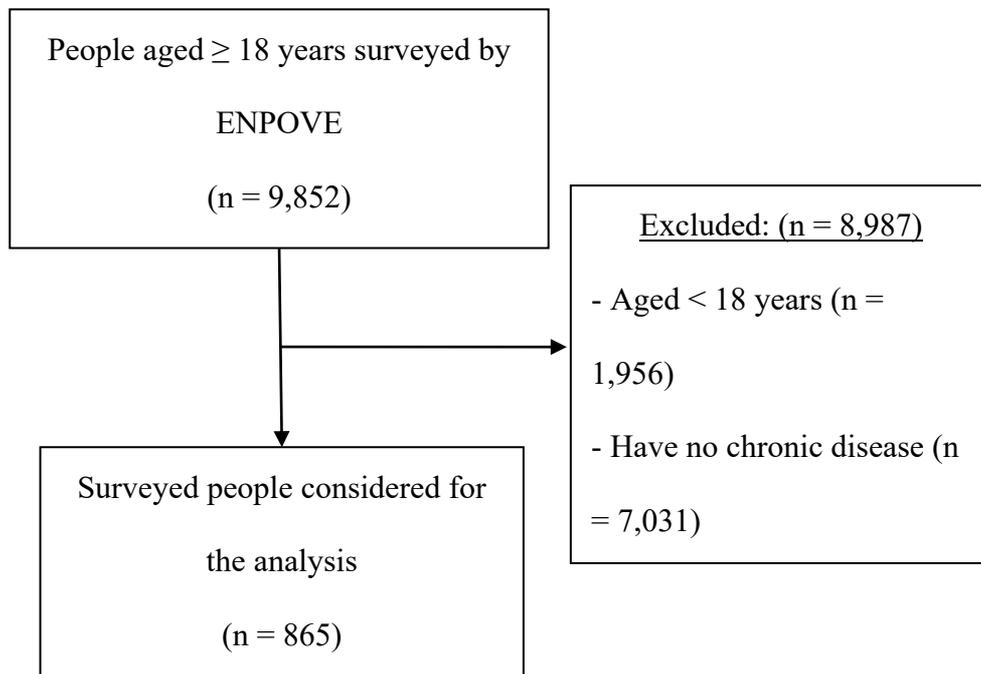
Although treatment adherence is essential for optimal management and control of illness for migrants with chronic diseases<sup>15</sup>, to the best of the authors' knowledge there are no studies that evaluated this association during the Venezuelan migratory phenomenon. For this reason, this study was performed aiming at determining the association between perceived discrimination and receiving adequate treatment of chronic diseases in Venezuelan migrants. This study may contribute to the implementation of new institutions to protect this vulnerable group, to the regulation of sanctioning rules for acts of discrimination, and to the formulation of policies to promote migrants' rights in Peru.

## METHODS

### STUDY DESIGN AND DATA SOURCES

A cross-sectional study was conducted on Venezuelan migrants who reported having a chronic disease and who lived in Peru. This study is a secondary analysis of the National Survey to the Venezuelan Population (*Encuesta Nacional sobre la Población Venezolana – ENPOVE*, 2018), performed in Peru and conducted by the Peruvian National Institute of Statistics and Informatics (*Instituto Nacional de Estadística e Informática – INEI*)<sup>16,17</sup>. The ENPOVE was carried out in five cities, specifically in urban areas of Tumbes, La Libertad, Arequipa, Cusco, Lima, and Callao. A total of 85% of the Venezuelan population residing in Peru during 2018 were concentrated in these cities. The following information was analyzed: house resident characteristics, migratory situation, health, job, and discrimination. The ENPOVE methodology is available from the technical report ([https://webinei.inei.gob.pe/anda\\_inei/index.php/catalog/692](https://webinei.inei.gob.pe/anda_inei/index.php/catalog/692)).

The sampling was two-staged (first using a block; and second, the households). The ENPOVE obtained a sample of 3,611 blocks; 3,697 households; and 9,847 interviewees. People who reported having any type of chronic disease and aged 18 years or over were included in the present study. Individuals with missing data in the exposure and outcome variables were excluded (Figure 1). Finally, data from 865 Venezuelans were used.



ENPOVE: National Survey to the Venezuelan Population.

Figure 1. Flow diagram of the selection of study participants, ENPOVE 2018.

## PROCEDURE

The ENPOVE was performed from November to December 2018. Its objective was to provide data about the situation of the Venezuelan population living in Peru and to formulate, evaluate, and monitor policies, plans, programs, or projects directed to this population. This survey was structured in eight topics: dwelling and home characteristics, house resident characteristics, migratory situation, health, education, job and earnings, discrimination, and gender and victimization.

## STUDY VARIABLES

### Dependent variable

The study outcome was to *receive adequate treatment for chronic disease*. Data were based on participants' self-report to the following question: *Do you receive treatment for a chronic illness or experience discomforts in Peru?* The answer options were:

- Yes, with the necessary frequency;
- Yes, but without the necessary frequency;
- No, I do not receive treatment.

The variable "receive adequate treatment for chronic disease" was recategorized in two categories: *Yes* (if the person receives treatment with the necessary frequency) and *No* (if the person receives treatment without the necessary frequency or does not receive it), considering that different regimens and lack of adherence influence the effectiveness of treatment<sup>18</sup>.

### Exposure variable

The exposure variable was *perceived discrimination*. Similar to the outcome procedure, the data were obtained from participants' self-report to the question: *Have you ever perceived discrimination for being Venezuelan since you arrived in Peru?* The response options were yes/no. Thus, the variable was categorized as discriminated against and non-discriminated.

### Co-variables

The following co-variables were assessed: sex (men and women), age (categorized in tertiles), marital status (single and married/widowed), education levels (no formal education or elementary school, high school, and college), current job (unemployed and with employment), total economic income (in Peruvian monetary unit, soles), disability (without disability and with a disability), migratory situation (legal and illegal or in the process of legalization), and health insurance (without health insurance and with health insurance).

## Data analysis

The Stata v.16 software (Stata Corporation, College Station, Texas, USA) was used to analyze the data. First, an adjustment was performed for the effect of multistage sampling (using the “svy” command), taking the block as the sampling unit and the city of residence as the stratum. Then, the descriptive analysis was performed using absolute frequencies and weighted proportions. The  $\chi^2$  test was employed to assess the statistical significance of the differences between the variables of interest considering  $p < 0.05$  as statistically significant.

Finally, to evaluate the association between perceived discrimination and receiving adequate treatment, the Poisson regression model was used for robust variances considering the option “yes” as the main category of the outcome for the analysis. The association measures were reported using crude prevalence ratios (PRc) and adjusted under potential confounders (PRa), with their respective 95% confidence intervals (95%CI).

## Ethical considerations

The ENPOVE is freely available from [http://webinei.inei.gob.pe/anda\\_inei/index.php](http://webinei.inei.gob.pe/anda_inei/index.php). When exploring the database, no information that could reveal individuals' identities was found. Also, before starting the ENPOVE interview, the interviewers asked for informed consent from the participants. This study was evaluated and approved by the Ethics Committee of Universidad San Martín de Porres.

## RESULTS

In 2018, the ENPOVE surveyed 9,852 Venezuelan migrants. According to the selection criteria of the present investigation, 1,956 individuals were excluded for being under 18 years of age, and 7,031 did not report having a chronic disease (Figure 1).

A total of 865 Venezuelans (58.2% women, mean age:  $36.6 \pm 0.7$  years) were evaluated; 55.1% were married/widowed, 58.5% had a college degree, 76.2% had a job at that time, and 92.7% did not have health insurance.

Regarding chronic diseases, 34.8, 19.3, and 5.2% reported having been diagnosed with diabetes mellitus, high blood pressure, and bronchial asthma, respectively, of which 89.2% reported not receiving adequate treatment for their chronic disease.

A total of 54.8% of migrants reported perceived discrimination, and within these, 93.8% did not receive adequate treatment ( $p = 0.002$ ) (Table 1).

Regarding the main association of perceived discrimination and receiving adequate treatment for their chronic disease, a statistically significant association was found both in the crude analysis (PRc = 0.38; 95%CI 0.20 – 0.73) and in the adjusted analysis (PRa = 0.49; 95%CI: 0.25 – 0.97) (Table 2).

Table 1. Population characteristics and factors associated with receiving adequate treatment for chronic diseases in Venezuelan migrants (n = 865).

Variables	Total n (%)	Receive adequate treatment for chronic disease		p-value
		No 762 (89.23) n (%)	Yes 103 (10.77) n (%)	
<b>Sex</b>				
Men	431 (41.82)	309 (93.21)	27 (6.79)	<b>0.016</b>
Women	606 (58.18)	453 (86.37)	76 (13.63)	
<b>Age (years)</b>				
18–26	233 (25.60)	217 (95.90)	16 (4.10)	<b>&lt; 0.001</b>
27–34	217 (26.34)	202 (92.42)	15 (7.58)	
35–93	415 (48.07)	343 (83.92)	72 (16.08)	
<b>Marital status</b>				
Single	426 (44.88)	329 (87.68)	51 (12.32)	0.334
Married/Widowed	486 (55.12)	433 (90.49)	52 (9.51)	
<b>Education level</b>				
No formal education or Elementary school	232 (9.98)	83 (82.12)	19 (17.88)	0.084
High school	260 (31.49)	221 (92.82)	22 (7.18)	
College	520 (58.52)	458 (88.51)	62 (11.49)	
<b>Current job</b>				
Unemployed	321 (23.79)	168 (82.98)	36 (17.02)	<b>0.008</b>
With employment	672 (76.21)	594 (91.18)	67 (8.82)	
Total economic income (in Peruvian monetary unit, soles)	897.39 ± 33.63	905.39 ± 34.67	831.11 ± 125.23	0.570
<b>Disability</b>				
No disability	974 (94.21)	722 (89.93)	96 (10.07)	0.090
With disability	63 (5.79)	40 (77.87)	7 (22.13)	
<b>Migratory situation</b>				
Legal	641 (55.94)	475 (92.26)	42 (7.74)	<b>0.014</b>
Illegal	396 (44.06)	287 (85.38)	61 (14.62)	
<b>Health insurance</b>				
Without health insurance	940 (92.71)	709 (90.37)	82 (9.63)	<b>0.003</b>
With health insurance	97 (7.29)	53 (74.69)	21 (25.31)	
<b>Perceived discrimination*</b>				
Non-discriminated	525 (45.21)	370 (83.70)	68 (16.30)	<b>0.002</b>
Discriminated	468 (54.79)	392 (93.79)	35 (6.21)	

The highlighted results indicate statistical significance ( $p < 0.05$ ); \*exposure variable.

Table 2. Association between perceived discrimination and receiving adequate treatment for chronic diseases in Venezuelan migrants, in a regression model.

Variables	Crude analysis			Adjusted analysis		
	PRc	95%CI	p-value	PRa	95%CI	p-value
Sex						
Men	Ref.			Ref.		
Women	2.01	1.12–3.60	<b>0.02</b>	1.50	0.81–2.79	0.195
Age (years)						
18–26	Ref.			Ref.		
27–34	1.85	0.76–4.52	0.178	1.91	0.79–4.59	0.150
35–93	3.92	1.73–8.88	<b>0.001</b>	3.24	1.45–7.20	<b>0.004</b>
Marital status						
Single	Ref.			Ref.		
Married/Widowed	0.77	0.46–1.31	0.335	0.78	0.45–1.36	0.384
Education level						
No formal education or Elementary school	Ref.			Ref.		
High school	0.40	0.18–0.91	<b>0.028</b>	0.61	0.27–1.37	0.230
College	0.64	0.35–1.18	0.152	1.01	0.53–1.92	0.979
Current job						
Unemployed	Ref.			Ref.		
With employment	0.52	0.32–0.84	<b>0.008</b>	0.78	0.44–1.39	0.396
Total economic income (in Peruvian monetary unit, soles)	1.00	1.00–1.00	0.612	1.00	1.00–1.00	0.290
Disability						
No disability	Ref.			Ref.		
With disability	2.20	0.91–5.29	0.079	1.28	0.66–2.50	0.467
Migratory situation						
Legal	Ref.			Ref.		
Illegal	1.89	1.13–3.16	<b>0.016</b>	1.49	0.88–2.52	0.140
Health insurance						
Without health insurance	Ref.			Ref.		
With health insurance	2.63	1.41–4.89	<b>0.002</b>	1.94	1.05–3.56	<b>0.034</b>
Perceived discrimination*						
Non-discriminated	Ref.			Ref.		
Discriminated	0.38	0.20–0.73	<b>0.004</b>	0.49	0.25–0.97	<b>0.039</b>

The highlighted results indicate statistical significance ( $p < 0.05$ ); \*exposure variable; Ref: reference.

Likewise, a statistically significant association was found between receiving adequate treatment and being a woman (PRc = 2.01; 95%CI 1.12 – 3.60), high school education level (PRc = 0.40; 95%CI 0.18 – 0.91), having a job (PRc = 0.52; 95%CI 0.32 – 0.84), and living in the country as illegal immigrant (PRc = 1.89; 95%CI 1.13 – 3.16); in all cases, in the adjusted regression model, such aspects lost their statistical significance. However, people aged between 35 to 93 years (PRc = 3.92, 95%CI 1.73 – 8.88; PRa = 3.24, 95%CI 1.45 – 7.20) and having health insurance (PRc = 2.63, 95%CI 1.41 – 4.89; PRa = 1.94, 95%CI 1.05 – 3.56) were significantly associated with the outcome, both in crude and adjusted regression analyses (Table 2).

## DISCUSSION

### DESCRIPTIVE RESULTS

Of 9,852 participants surveyed by ENPOVE (n = 9,852), only 865 reported having chronic diseases, representing less than 10% of the population. This low proportion of individuals with chronic diseases is probably because, during the migration phenomenon, migrants who have a better health condition are usually people who can move and travel to another country, especially to work and to assist with the economic necessities of their family<sup>19</sup>. However, the collapse of medical care in Venezuela could also lead migrants with poor health conditions to search for health systems from other countries to meet their medical needs such as reproductive health, contagious diseases, chronic diseases, mental disorders, among others<sup>20</sup>.

The most frequent chronic disease reported by Venezuelans were high blood pressure and diabetes mellitus. This result is similar to findings of reports from the World Health Organization and the Pan American Health Organization (WHO/PAHO), in which high blood pressure and diabetes mellitus were the most prevalent chronic diseases in the world, including Latin America and the Caribbean<sup>21,22</sup>.

Approximately 97% of the migrant population was concentrated in Lima and Callao probably due to the development and urbanization of the capital<sup>23</sup>, and also because they would have better opportunities for business and higher salaries compared with other cities in the country.

### ADEQUATE TREATMENT OF CHRONIC DISEASES

In the present study, 11% of Venezuelan migrants received adequate treatment for their chronic disease. Similar findings have been reported in Chile<sup>24</sup>, where 13% of migrants received some long-term treatment for their medical condition.

The interruption or noncompliance of treatment may have started during the migration phenomena<sup>13</sup>, requiring health care and access to permanent treatment for their control, management, and prevention of complications during their stay at the destination country<sup>25</sup>. However, in the absence of treatment, the chronic disease will progress and worsen<sup>9</sup>,

causing a decrease in the quality of life in immigrants and an increase in healthcare demand in the local health sector<sup>26</sup>.

In many cases, noncompliance of treatment occurs due to irregular documentation, which limits the migrant-free access to healthcare services, in such a way they are forced to pay for their medical needs<sup>24</sup>, in addition to having a bad economic situation<sup>19,27</sup>, which leads them to prioritize spending on other basic needs, leaving aside their medical care. However, in this study, almost 56% of migrants had valid immigration documents, in such a way other possible factors may have caused this noncompliance of treatment. Some studies mention that behavioral and idiosyncratic factors<sup>14,28,29</sup>, such as discrimination, lack of support, ignorance about the healthcare system of the destination country, and others, make migrants less likely to demand healthcare services<sup>30</sup>.

## PERCEIVED DISCRIMINATION

Over 50% of the surveyed migrants claimed to have been victims of discriminatory acts. These figures are similar to those reported in previous studies conducted on the migrant population in Korea<sup>31</sup> and the Netherlands<sup>32</sup>, with prevalence around 50 and 55% of discrimination in migrants, respectively. It is common to detect discriminatory attitudes during a migratory phenomenon, whether in healthcare professionals or the general population, as a result of the indifference to the circumstances and conditions that caused migration<sup>33</sup>. This event probably changes the behavior of migrants themselves, being more permissive as they are in a different country and society, which contributes to an imbalance in their biopsychosocial wellness, making them vulnerable to discrimination<sup>34</sup>. Likewise, these discriminatory acts become more frequent because they are allowed by the migrants themselves due to the fear of the authorities, employers, and society in general<sup>35</sup>, causing the normalization and underestimation of this act.

The behavior of rejection or discrimination against migrants is the consequence of the fear of the society because of a probably negative burden on the country's economy, risk of substitution by a Venezuelan worker, and especially the reduction of salary<sup>19</sup>. However, in Peru, according to statistics from INEI, the economically active migrant population is less than 1% of the Peruvian labor market. This means that migrants would not have any negative effect on the local economy, and there is even reported evidence that the migratory phenomenon has a positive long-term effect on the economy of the destination country<sup>4</sup>.

Even if the Peruvian Law No. 28,867<sup>36</sup> from the penal code establishes sanctions against discriminatory acts, many of these were not reported or were underestimated by the affected population<sup>34</sup>. For this reason, national authorities of the destination country must start considering the development of preventive strategies for discrimination such as a communicative campaign to inform the benefits of a systematic migration process and corrective strategies against xenophobia. Similarly, they could implement organizations to take care of these vulnerable migrants, to collaborate with national and international initiatives in order to provide effective protection and assistance.

It must be considered that perceived discrimination is a stressful factor for the migrant, promoting unhealthy behaviors, such as abandonment of pharmacological treatment, and also physiological changes (neuroendocrine, autonomic, and immune)<sup>37</sup>, all of them changing the course of chronic diseases, and even generating acute episodes<sup>38</sup>. The present study found that perceived discrimination was associated with less prevalence of adequate treatment for their chronic diseases. A similar situation was observed in Italy<sup>39</sup>, where it is reported that migrants have a lower probability of being treated in the primary health-care centers. This could be explained in different ways. First, it could be postulated that the observed association is due to the close relationship between discrimination and depression<sup>40</sup>, the latter being considered as a mediating variable for the causal pathway between discrimination and the adequate treatment of a chronic disease, as it has been previously reported in different studies<sup>41</sup>. In this case, discrimination would be a stressful factor that probably worsens mental health, due to the stigma created in the migrant of feeling socially rejected, and decrease in self-esteem<sup>40</sup>, producing depressive symptoms and consequently generating feelings of hopelessness and abandonment of their health, resulting in the non-treatment of their affections<sup>42</sup>.

However, it is also possible to postulate that social discrimination is directly related to the adequate treatment of chronic diseases for migrants, because discrimination generates low self-esteem that, in turn, can predispose them to feel not accepted in the country of residence and consequently not to opt for essential services such as access to health care offered by the country<sup>43</sup>. Likewise, having perceived a discriminatory act, migrants are likely to suppose that these acts can occur even in the healthcare sector, which could lead to medical malpractice<sup>44</sup>, in such a way they may infer that it is not necessary to seek a healthcare facility to receive adequate treatment for their illness and neither follow specific treatment regimens. Finally, it can be postulated that people who migrate from a country, especially due to economic and social issues, tend to focus on saving money and working to subsidize their family members, who could be in their country of origin, thus not prioritizing the correct management of their health and consequently producing an inadequate treatment of their chronic disease. It is necessary to carry out qualitative studies for evaluating the reasons for the low access and nontreatment of diseases by migrants to know their perspectives on this phenomenon.

## **OTHER ASSOCIATED FACTORS**

Only 7.3% of the migrant population has health insurance, and the prevalence of receiving adequate treatment for these migrants increases to 94% compared with those without health insurance. Possible causes for migrants to not have a health insurance include lack of knowledge of the policies that benefit them, discrimination, and immigration irregularity, due to the fear that healthcare providers will report them to the authorities<sup>19</sup>. In Peru, the Emergency Decree No. 017-2019 was issued for establishing access to Comprehensive

Health Insurance (*Seguro Integral de Salud – SIS*) with coverage for all citizens of the country, including Venezuelan residents, who work, got married, or have an immigration card. This affiliation to SIS guarantees free coverage of the Essential Health Insurance Plan (*Plan Esencial de Aseguramiento en Salud – PEAS*), which includes insurance for chronic diseases, cancer, emergencies, etc., and provides the necessary free access to healthcare services<sup>45</sup>. Taking into account that, among the study population, approximately 44% have a situation of illegal immigrant, a low proportion of Venezuelans is expected to have access to free insurance in Peru. However, according to the “International Convention on the Protection of the Rights of All Migrant Workers and Members of Their Families,” whose objective is to protect the migrant rights, documented or undocumented migrants have the right to access medical care in the country<sup>19</sup>. Moreover, it is expected that migrants who have no access to health insurance, as in this population, probably do not have the financial means to cover the costs for consultation and treatment of their illness, as reported in previous studies<sup>46</sup>, being an additional barrier to access to health. Authorities in Peru must formulate strategies for this vulnerable population to access free insurance, probably with the alliance of world organizations for financing aid.

On the other hand, the prevalence of receiving adequate treatment among migrants aged 35 to 93 years substantially increased compared with migrants aged 18 to 26 years. This result may be due to a higher prevalence of chronic conditions at that age, requiring greater disease control and adherence/compliance to treatments<sup>47</sup>. In contrast, people aged 18 to 26 years prioritize work, exposing themselves to occupational diseases and unhealthy environments, or risking their safety<sup>48</sup>, thus neglecting their health care. However, overall, prospective studies should be carried out for evaluating these variables with a bigger sample to confirm the associations found.

## LIMITATIONS AND STRENGTHS

This study may have limitations that must be considered. First, a low percentage of participants with chronic diseases was observed, compared with other populations, probably because the evaluation of chronic diseases of Venezuelan migrants was carried out through self-report, and there may be an underestimation of data in case the participant has a chronic disease but has not sought a healthcare center to be diagnosed. Second, perceived discrimination is a variable that is subjective of participants. There are probably immigrants who consider an act that does not fall within the definition of discrimination and may overestimate the results, or, on the other hand, underestimate them, considering that the continued exposure to discrimination (of any type) can normalize future discriminatory acts. Also, the small number of participants in some strata of the evaluated variables may have had an impact on the statistical power of the adjusted model. Finally, because this is a secondary analysis of data recollected with different study purposes, some important variables are lacking to explain the phenomenon such as time of migration.

Nevertheless, there is little evidence about migratory phenomena and their consequences on migrants' health, and this study includes Venezuelan migrants in more than one department of Peru. Likewise, the present study evidences a common social problem that must be addressed because of its consequences on the migrants' mental health and interference in health access.

In the study population, the prevalence of receiving adequate treatment for chronic diseases in Venezuelan migrants who perceived discrimination has decreased compared with unperceived discrimination by approximately 50%. New studies with a larger population of Venezuelan migrants residing in Peru are necessary to evaluate the consistency of the results. Likewise, it is necessary to implement preventive strategies and create institutions to protect migrants and reduce their vulnerability.

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Received on: 09/21/2020

Revised on: 03/03/2021

Accepted on: 03/11/2021

**Authors' contribution:** OSC and WNG participated in the study conception or design. CDF and CVA participated in the data analysis and interpretation. All the authors equally participated in the drafting of the manuscript or critical review of the article for important intellectual content, and gave their final approval of the version to be published. The author's agreement to be accountable for all aspects of the study in ensuring that questions related to the accuracy or integrity of any part of the research are appropriately investigated and resolved.

