



## Investigation on the Epidemiological Profile of Individuals of Venezuelan Nationality Who Use the Health Services in Tulcán

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Article History	Abstract
Received: 06 June 2023 Revised: 05 Sept 2023 Accepted: 11 Sept 2023	<p><i>In this research, we sought to improve the study of the epidemiological profile of the Venezuelan population that attends health centers in the region. A mixed approach was used that combined the quantitative and qualitative paradigms, with a non-experimental cross-sectional design that included descriptive, exploratory, and correlational approaches. Different methods were used, such as field and bibliographic research, as well as empirical and theoretical approaches, such as documentary analysis, scientific observation and the system approach. By applying a survey to a representative sample of 66 people, both foreigners and nationals, relevant results were obtained. It was found that a high percentage (80%) of those surveyed were unaware of the symptoms, while 20% were aware of it. In addition, a considerable percentage (63%) only went to health centers in times of discomfort, in contrast to 47% who did so at the right time. These results made it possible to identify important problems within the health centers in relation to the foreign population studied. To address these situations, various actions were carried out, such as informative talks and forums, as well as the distribution of educational brochures, among other strategies.</i></p>
CC License CC-BY-NC-SA 4.0	<b>Keywords:</b> <i>Epidemiological profile, health centers, symptoms, discomforts, foreigners</i>

### 1. Introduction

#### Background to the Research

Migratory movement can lead to the presence of diseases with high potential risk of rapid transmission in the countries where they migrate and that are related to the epidemiological profiles of the countries from which they carry out this migration. Thus, malaria, diphtheria and measles are diseases that could generate epidemic outbreaks in the countries receiving migrants from Venezuela. In this context, the International Health Regulations (IHR), whose purpose is to prevent the international spread of diseases and provide a public health response, while avoiding unnecessary interference with international traffic and trade, recommends improving basic capacities at border points based on the strengthening of epidemiological surveillance and disease control actions, in particular measures related to early detection of cases, timely diagnosis and immediate initiation of treatment, reducing the transition and preventing the spread of cases <sup>(1)</sup>.

In the previous quote it is not enough to say that thanks to the increase in migratory flow there could be an epidemic resurgence of several diseases already controlled, the health system, in this case the

best way to control this possible problem would be that for the entry of migrants to the country a previous medical check-up is done before entry, to avoid these outbreaks of diseases that are already minimal within our environment.

Gotuzzu in 2018, indicates in his research on migrations and the impact on health, that we have a population that does not receive medicines in their country and that goes to another to receive treatment and, as we see every week, there is a significant number of patients with HIV-AIDS who stopped taking medicines, due to shortages in their country. for several months, leading to increased care costs due to the number of patients. In addition, there is the possibility that these involuntary abandonments of their treatment lead to the generation of resistant strains and the increase of people infected with these strains will require increasingly expensive treatments <sup>(2)</sup>.

Thanks to the previous study we can make known that many of the current epidemics have been due to the entry of foreigners, since they do not receive adequate control of certain diseases nor do they take a medication prescribed by a doctor causing this a difficult treatment of the diseases with which these people enter without mentioning the contagion they can cause in the residents of the host country.

Fernández Julián in his research Human Migration and Health: An emerging field of research in Colombia indicates that from a Global Health perspective, migration should be considered as a cross-cutting determinant of health, since it constitutes the context, conditions and circumstances in which changes in transnational health-disease processes can occur, including among these: the transmission of infectious diseases, the challenges for chronic disease care, mental health and violence. In addition, the integration of migrants poses social, cultural and economic challenges for receiving societies, their political systems, and in particular for health services. Likewise, South-South migration poses logics different from the traditional South-North in which the receiving society always has a high degree of development that allows it to respond better to the needs and demands of migrants. In the case of Colombia, this process has been made visible by the massive diaspora of migrants from Venezuela, which today represent more than one million people, presenting an unprecedented scenario for the country, and a challenge considering that we are going through a process of defunding the health system <sup>(3)</sup>.

In the quote of Fernández indicates that the excess of migrants in this case from Venezuela are those that in the health system has caused its financing capacity to decrease and to receive people with pathologies that were already believed to be controlled or eliminated; however, thanks to this the health personnel have been forced to make the attention and care of people of better quality and to have a better response to the demands for each disease presented by migrants.

Martínez Adela in the research entitled How has the epidemiological profile changed in Chile in the last 10 years? It indicates that the epidemiological profile at the global level has also been transformed, moving from a predominance of infectious diseases in the early twentieth century, to a combination of transmissible and non-communicable pathologies, with a clear predominance of the latter today. It is estimated that in 2019, a total of 41 million deaths were due to noncommunicable diseases (NCDs), equivalent to 71% of all deaths globally. From the above, it follows the need to integrate and analyze the available information on the changes that have been experienced in the main causes of mortality and disability-adjusted life years (DALYs), both globally and country-specific. This information is key to planning and implementing global and local health strategies to prevent these pathologies, as well as identifying public health priorities <sup>(4)</sup>.

In the text cited above, he tells us that the public health system with everything that is happening has been forced to improve planning and strategies at the global and local level to prevent certain pathologies, I have identified priority public health problems, since health personnel have seen the need to be informed and analyze about the new causes of mortality in the national and foreign population.

Mendoza José in 2020, in his scientific article Epidemiological profile of Venezuelan migrants treated in Rumichaca indicates that the migratory flow to Ecuador increased as a result of the sociopolitical crisis of the country of Venezuela, with this health and security problems arose; on the northern

Ecuadorian border of Rumichaca, strategies and actions were implemented to appease the emergency; as a result, The objectives sought to establish the epidemiological profile of the Venezuelan migrant. The research directed a mixed, qualitative, and quantitative methodology; oriented to characterize the phenomenon, send statistical data, and bibliographic support for its construction. The results indicate that infectious diseases, such as rhinopharyngitis and gastroenteritis, predominate in Venezuelan migrants and represent 23.3% of the causes of morbidity. Previous research has identified infectious diseases as the predominant diseases in the migrant citizen of Venezuela <sup>(5)</sup>.

In the previous quote we can take as the main problem the most common diseases in Venezuelan migrants, these diseases if they are not controlled can cause an epidemic in the sectors where they arrive, it should also be noted that the health post on the border with the neighboring country must be well prepared to avoid the spread of certain pathologies or viruses that migrants carry with them in order to avoid the spread of these.

Bonvecchio Anabelle in the year of 2017, Health System of Venezuela, Venezuela goes through an epidemiological transition process characterized by a decrease in infectious diseases and an increase in noncommunicable diseases and injuries. According to the latest mortality yearbook available, the five leading causes of mortality in women are myocardial infarction, diabetes, tumors of digestive organs, tumors of the genital organs, and hypertensive heart disease. The leading causes of death among men are myocardial infarction, homicide, motor vehicle accidents, diabetes, and tumors of the digestive organs. Particularly noteworthy is the number of deaths from homicides, which makes Venezuela one of the Latin American countries with the greatest problems of violence <sup>(6)</sup>.

In the appointment made by Anabelle, the Venezuelan health system has been characterized by the decrease in infectious diseases, however, contrary to these there is an increase in communicable diseases and injuries, but there is a problem of greater proportions in which the health system is of great importance, but must work hand in hand with other institutions, Because in her field of work according to the researcher is doing a good job, but the problem here is the increase in problems on violence where in addition to health institutions should also involve institutions such as National Police and Advisory Council for Support to Human Beings.

Miranda Jaime in her 2019 publication, Venezuelan Immigration in Peru: Challenges and Opportunities from a Health Perspective, indicates that the main challenges stem from limited access to health care. Sexual and reproductive health care shows the greatest deficits, below urban populations in Peru. The vulnerabilities of the Venezuelan migrant population are not on the margins of those already faced by the poorest urban populations in Peru, whose services also do not meet their needs and demands, neither in coverage nor in quality. However, immigration also generates opportunities, such as that represented by health professionals and technicians, which could contribute to compensating for the deficit generated by the emigration of thousands of Peruvian health professionals in recent decades <sup>(7)</sup>. Opportunity also not to lose sight of the fact that inequalities in the right to health continue to be challenges to advance towards inclusive development.

In the previous quote we can identify that migration or only affects Venezuelans is not very current, since also people from other countries have emigrated for better opportunities, in addition these people are even professionals, many of them professionals in the field of health, this problem of migration of these people makes that in their places of origin there is no professional attention, of quality making users do not have a medical control over their pathologies forcing them to go to other countries for better care.

Solis Alejandro of 2019 in a WHO article indicates that there are several basic principles that intervene when adopting a public health approach with respect to migrants. The main public health objective is to avoid inequalities between migrants and the host population in terms of health status and access to health services. A second principle, closely related to the first, is the need to guarantee the health rights of migrants, for which it is necessary to limit discrimination or stigmatization and remove the obstacles that prevent migrants' access to preventive and curative interventions, which constitute the basic health benefits of the host population. The third principle, associated with disaster or conflict migration, is to establish life-saving interventions to reduce excess mortality and morbidity, and the fourth is to minimize the negative consequences of the migration process on

migrants' health outcomes. Taken together, these four principles can be seen as the basis for a policy framework for defining public health strategies for migrants <sup>(8)</sup>.

In the current appointment the problem is the inequalities that exist with the migrant population, in the 3 approaches that this appointment raises a solution is given to this problem and another one, but that are not completed as is, since in the health personnel who care for migrants there is still a lot of mistreatment by several professionals who, because they are foreigners, make them less by making these axes not fulfilled at It should be possible to evaluate these professionals in how it is an adequate treatment to users and not only migrants but locals as well.

In Mendoza Walter's 2019 study that says Venezuelan immigration in Peru: Challenges and opportunities from the perspective of health indicates that in the epidemiological study carried out in the second half of 2017 the ENPOVE, 11% of the Venezuelan immigrant population reported having some chronic health problem (not verified by examination), 12.9% in women, 9.3% in men. Among the 11% of those who reported chronic disease, the most common were asthma (39%), followed by hypertension (18.4%), arthritis (4.8%) and diabetes with 4.6%. Cancer was also reported in 2.1% of respondents with a chronic disease, 3.4% in women and 0.5% in men. <sup>(9)</sup>.

In the last quote he gives us to understand that the migrant population not only have common diseases but also chronic ones that need treatment and follow-up by health personnel, but also this person only mentions it, but it is not possible to know with certainty which one because there are several and after making a more accurate diagnosis and with the health personnel closest to their homes to be able to follow up together with Treatment to manage your chronic diseases and provide you with a better quality of life.

A look at a neglected phenomenon indicates that in recent years the immigration of Venezuelan citizens to the Republic of Colombia has increased. Although some research has shown a difference in the presentation of medical conditions in these individuals, there are still no studies evaluating the epidemiology of trauma in this population. The objective of this study was to compare the characteristics of trauma in the national population versus the Venezuelan immigrant using the Institutional Trauma Registry of the University Hospital of Santander (RITHUS) in its first year of implementation <sup>(10)</sup>.

In the appointment made in 2022, he indicates that most of the pathologies presented in migrants are different from those normally treated in the Colombian Republic, and this is due to everything that happened in their country and the living conditions they currently lead, since due to displacement they have not been able to feed themselves properly. Lack of hygiene and a number of other factors that makes this population the focus of diseases no longer so common and even with complications that have not occurred before for not taking an adequate treatment.

### **General objective**

Implement strategies to improve the study of the epidemiological profile of the population of Venezuelan nationality who attend health centres in Tulcán.

### **Specific objectives**

- To base on the health situation of the migrant population, morbidity and mortality, epidemiological profile, analysis tools and health decision-making.
- Diagnose the current health situation of the population of Venezuelan nationality attended in the health centers of the city of Tulcán.
- Define elements of the study for the development of the epidemiological profile to be developed in health centers.

## **2. Materials And Methods**

### **Paradigm and type of research**

The research modality used in this study is mixed, because the quantitative paradigm was combined with the qualitative paradigm.

## Research Modality

### Qualitative modality

The qualitative modality allowed to obtain an analysis for the determination of the current situation of the problem and to verify the need to determine the health problems that this Venezuelan population has.

### Quantitative modality

The use of the quantitative modality was through the use of techniques such as tabulation of data reached with surveys applied to users attending the different health centers in the city of Tulcán, focusing directly on foreign users.

### Non-experimental research designs

**Cross-sectional design:** This design to characterize specific moments in the phenomena, to collect data and thus be able to relate the health problems generated by the migrant population during the last years.

### Scope of the research

**Scope of exploratory research:** It is exploratory in nature, because the subject to be investigated is something important in the field of medicine, since it is something of a global nature, since the problem of people of foreign nationality is affecting not only Ecuador but the whole world, in general its neighbouring countries, And the main purpose of this research is to generate an epidemiological profile in order to prevent the diseases that may cause in the coming years.

**Scope of descriptive research.** The scope of the research is descriptive and correlational because it will study the state of health of people of Venezuelan nationality compared to residents, how certain diseases affect people, taking into account age and gender, if it affects in the same way or there are variants.

**Scope of research Correlational:** The scope through the correlational study is to see how previous global problems that were of great importance are related and how they were solved with the current world problem and seek solutions to be able to act against the pathologies presented by these people.

### Another research

**Field research:** In addition, field research will be used because a study will be done in the sectors and information will be collected through surveys.

**Bibliographic research:** This type of research is constituted as necessary in the first stage of the research because providing the knowledge of existing research such as theories, hypotheses, experiments, results, this type of research reinforces the information contributing to the access of documents and studies according to the subject raised.

**Procedure for searching and processing data** Population and sample

**Population:** To make the diagnosis of the problem, a population of 100 people who are of Venezuelan nationality but live in Ecuador for approximately one year was established.

**Sample-** For the calculation of the sample, the formula was considered.

$$n = \frac{NZ^2pq}{E^2(N-1) + Z^2pq}$$

n=Sample

Z=95% confidence level (Z=1.96)

E= Margin of error (E=5%)

P= Probability of success (P=0.5%)

Q= Probability of failure (Q=0.5%)

$$n = \frac{NZ^2pq}{E^2(N-1) + Z^2pq} \quad n = \frac{100 \times 1.96^2 \times 0.5 \times 0.5}{0.05^2(200-1) + 1.96^2 \times 0.5 \times 0.5} = = \frac{96,04}{0,04975 + 0,9408} \frac{96,04}{1,4579}$$

n=66 patients

Information collection plan (methods, techniques and instruments).

Methods, techniques and instruments in research.

Among the research methods to be used, they are empirical and theoretical.

### **Theoretical Method**

#### **Analytical-synthetic method**

In the analytical-synthetic method, it was used to decompose all the events that have happened since the first people who migrated in the year of 2021 until its end, in parts and qualities that happened during those days of transfer from one country to another, needs and conditions that they lived and currently live.

#### **Logical History**

The logical history was used to project the trajectory of this migration problem, which in this case leads to poorly controlled health problems, especially in diseases such as hypertension and diabetes, etc.

#### **System approach method**

We used the systemic approach method because through the study that was carried out in the health centers of Tulcán we gave possible answers to people who travelled without documentation and for fear of discrimination were not treated in health homes.

#### **Empirical Method**

Documentary analysis. This method was used to inquire more about the state of health of people and how the environment affects physical and emotional health, through the home records kept by the health centre.

Scientific observation. This method is used to collect information on the health conditions of people who have already lived here for a long time and those recently moved to the city.

### **Techniques**

#### **Survey**

The survey will be carried out to migrants with a series of clear questions and well-structured anonymously that will only be used for the purpose of collecting information academically.

#### **Research tools**

Questionnaire.

The questionnaire is a series of questions that is used to collect true data to a specific number of people, trying to make the results true.

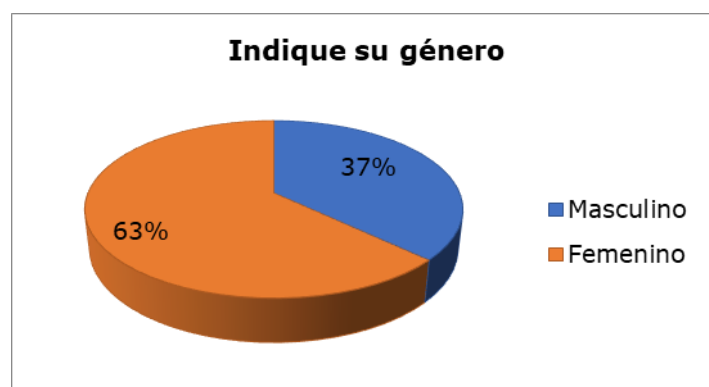
### **3. Results and Discussion**

#### **Validation**

The survey to confirm its validation and reliability pilot tests were carried out on 66 people who come to the San Francisco health centre that thanks to the help of the workers of the same we were able to identify the people and families who were isolated and with the test see their veracity of the possible results, for our research.

#### **Results of the diagnosis of the current situation.**

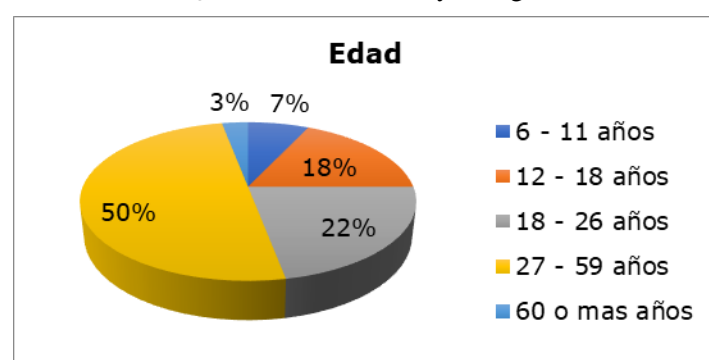
**Question 1:** Indicate your gender?



**Figure 1.** Gender of users

**Interpretation:** Users who approach the operating unit on a larger scale are female because they are more aware of their physical well-being and mostly present problems such as infections, breast cancer, etc., while in male people the amount is lower, since many prefer to be cured in alternative ways and do not approach until the health problem is truly serious.

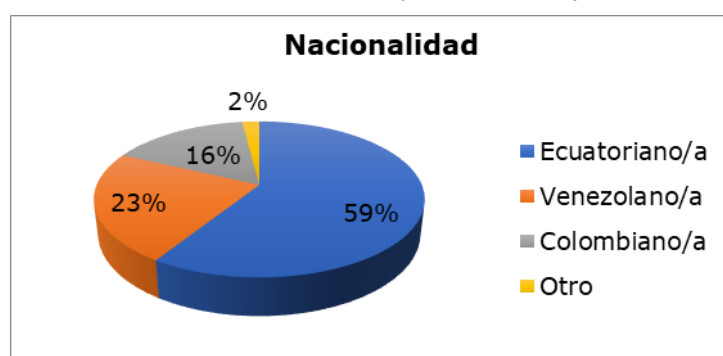
**Question 2:** Indicate your age?



**Figure 2.** Age of users

**Interpretation:** In the health centers of the city of Tulcán the largest number of population attending are adults and young adults, since they are more commonly diseases, we have several cases of sexually transmitted infection, in mental health, chronic diseases, nutritional disorders, the rest of the population that attends is not as significant as the others, but they still go for other types of health problems.

**Question 3:** Indicate your nationality?

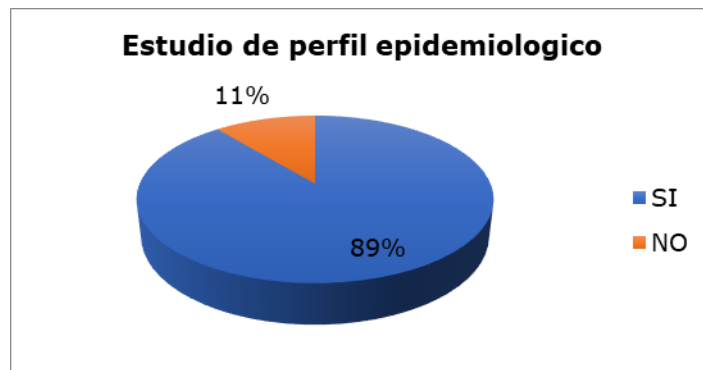


**Figure 3.** Nationality of users

**Interpretation:** The study carried out in the health centres we discovered that the majority are Ecuadorians, but also attend in minimal numbers people of another nationality, but the case of the Venezuelan population is surprising, since it is a considerable number and mostly without documentation and arrived in the country by illegal steps which complicated several of their

pathologies that they already suffered and in other cases, Diseases appeared that did not have them and this makes it difficult to care for them in primary health care centers.

**Question 4:** Do you think it is important to study the epidemiological profile of the population of Venezuelan nationals who attend health centers in Tulcán?



**Figure 4.** Epidemiological profile study

**Interpretation:** The population attending health centers agrees to carry out the study of an epidemiological profile for several reasons and reduce the spread of communicable pathologies, but there is a minimum percentage, especially of the foreign population, which indicates that this study is not necessary.

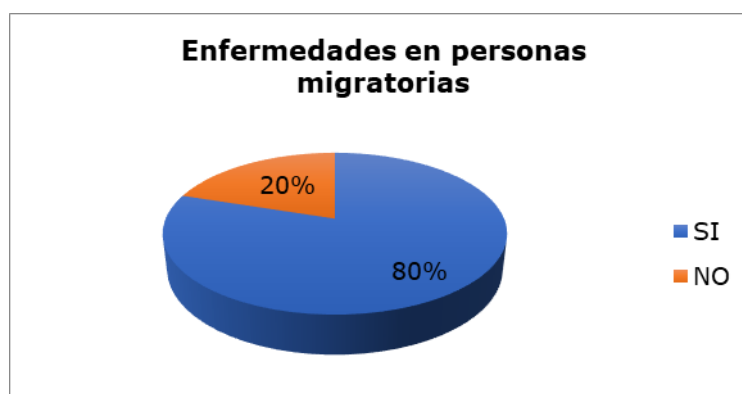
**Question 5:** Do you regularly attend medical check-ups offered by the health home closest to your home?



**Figure 5.** Assistance to medical check-ups.

**Interpretation:** With the collection of the data, it was determined that the population has not undergone an almost complete medical examination, and therefore, has some diseases that require permanent control and medication, while the other percentage is small, almost insignificant and have much more complex health problems.

**Question 6:** Do you know about the main diseases that a person who is migratory can have?

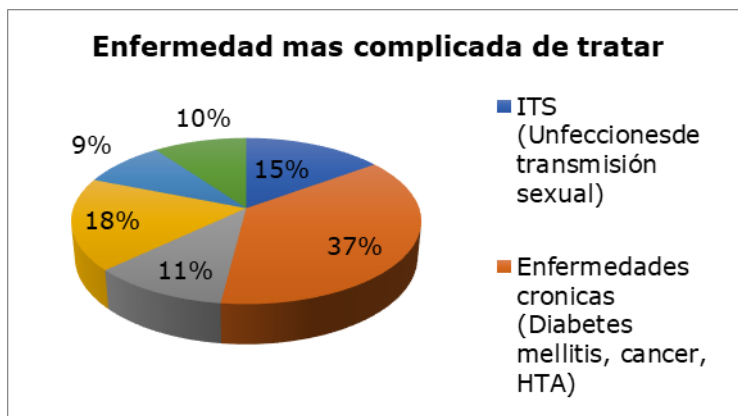




**Figure 6.** Health problem of a migrant.

**Interpretation:** Through data collection it has been determined that the majority of the population is aware of the diseases suffered by immigrants, through news, newspapers, radio or any other media, but do not know their symptoms or how to deal with these diseases, but other percentages, on the other hand, have no knowledge of the diseases of immigrants and even less of their symptoms.

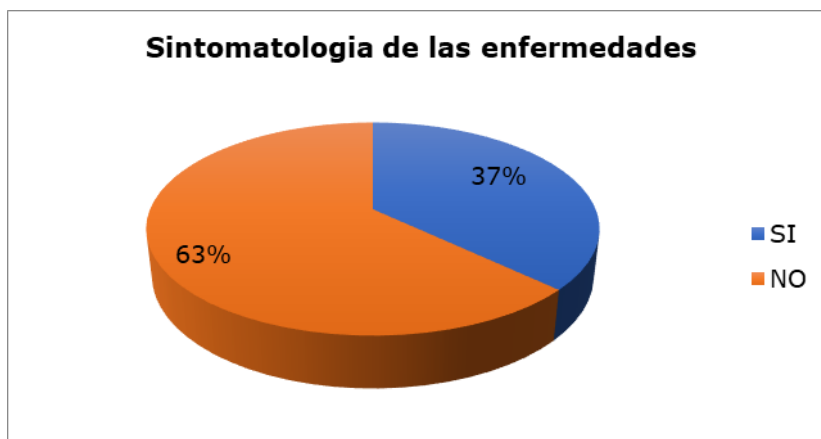
**Question 7:** Of the following diseases, which do you think is the most difficult to treat?



**Figure 7.** More complicated disease to treat.

**Interpretation:** Through data collection, it was determined that the most complex diseases to be treated in health homes are chronic diseases such as diabetes, cancer and hypertension, which are the diseases most consulted by users, as well as other diseases that occur in residents and immigrants, who come to their health centres with medical problems, such as acute diarrhoea, which is very common among those arriving due to insufficient dietary intake, and also sexually transmitted diseases caused by many people who do not have a stable home and have chosen to provide sexual services without a prior medical examination, and others who suffered from eating disorders due to malnutrition.

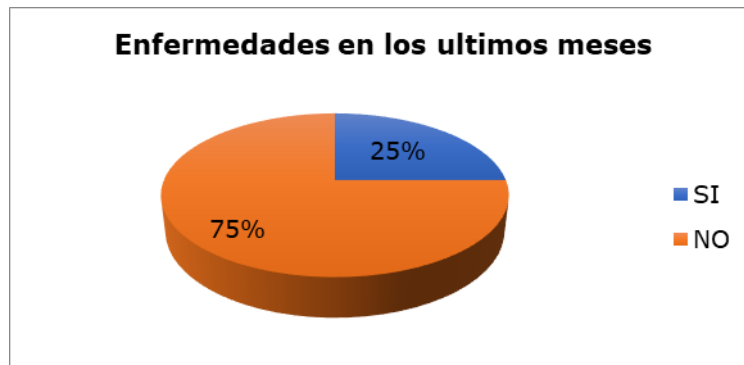
**Question 8:** Do you know the symptoms of the aforementioned diseases?



**Figure 8.** Symptomatology of diseases.

**Interpretation:** With the collection of the data, it was determined that a small part of the population knows the symptoms of these diseases, since they are more common in all people, whether they are infected or affected. Relatives or acquaintances of these cases and both pass. Among foreigners and local residents, but there is also a large percentage who are unaware of the symptoms of these diseases and usually go only to the medical center when they feel bad health.

**Question 9:** Has anyone in your family suffered from any of the diseases mentioned above in the last six months?



**Figure 9.** Illnesses in recent months

**Interpretation:** Through data collection it has been determined that in health homes the highest percentage that attends is for medical controls or for some other pathology or physical discomfort that needs to be treated by one of the professionals of the health homes, the remaining percentage that attends health centers are also approached by a discomfort, but presenting symptoms of these diseases already mentioned such as HT, STIs, nutritional disorders, etc.

The situation of the Venezuelan population in Tulcán, Ecuador, presents similarities with that of other countries, as can be seen when compared with the "Survey Directed to the Venezuelan Population Residing in the Country" (ENPOVE) carried out in Peru by the National Institute of Statistics and Informatics in 2018. This survey was intended to provide information on the living conditions of Venezuelans residing in Peru, and for this, a probabilistic sample of people over 12 years of age was obtained in five Peruvian cities: Metropolitan Lima, Tumbes, Trujillo, Cusco and Arequipa. Public access to the database of this survey has allowed various research groups to analyze the situation of Venezuelan migrants in Peru and suggests that other countries that also conduct surveys of this population could consider releasing databases without identifying variables to encourage the generation of evidence and support informed decision-making.<sup>(11)</sup>

In the studies found on the migrant population, a focus on issues related to public health, mental health and infectious diseases has been evidenced. This approach reflects an interest in understanding the determinants of migration from a public health perspective, as well as the impact of the migration process on mental health and the risk of infectious disease transmission during this transition<sup>(12)</sup>. However, there has been limited attention to other priority topics in research on migrants, such as sexual health, occupational health and chronic diseases. This situation resembles the reality in Tulcán, where the migrant population shows a diversity of situations, some settle in the city, others are passing migrants, and in many cases, they have gone to health centers, where the presence of chronic disease problems has been identified, such as hypertension, diabetes, as well as cases of HIV or cancer. These conditions are worrying, as many of them do not have a stable place for their recovery and the support provided by NGOs is limited in duration.

It is imperative to address these health problems in a comprehensive manner, taking into account the specific needs of the migrant population in Tulcán, and developing policies and programs that guarantee their access to adequate and sustainable health services. Research applied to this population plays a crucial role in identifying their needs and challenges, enabling the formulation of effective interventions that improve their overall well-being and facilitate their integration into the host society. Likewise, greater thematic diversity is required in research on migrants in order to comprehensively address the various aspects of the health and well-being of this vulnerable population in the migratory context. With these efforts, it will be possible to move towards a more inclusive and respectful attention to the human rights of migrants in Tulcán and in other localities affected by Venezuelan migration.

#### 4. Conclusion

The research carried out was of vital importance to understand in an exhaustive and precise way the causes and factors that contribute to the morbidity and mortality of the foreign population, thus allowing a detailed analysis of its epidemiological profile. Through the use of the right tools and the

collection of reliable data, a clear and comprehensive picture of the health challenges faced by migrants was achieved.

Thanks to the findings and conclusions of this research, there is now a more solid and evidence-based knowledge about the main health problems affecting the foreign population. This provides a solid basis for informed decision-making in the field of migrant health, allowing the design of more effective strategies and policies adapted to the specific needs of this vulnerable population.

In addition, by analyzing the epidemiological profile of migrants, the incidence of certain diseases and health conditions prevalent in this group has been identified, which allows better planning of the health resources and services necessary to adequately address their medical needs. It has also been possible to identify the social, economic and environmental factors that influence the health of migrants, which provides a more complete picture of the determinants of their well-being and allows these aspects to be addressed in a comprehensive manner.

The results obtained in this research are also relevant to sensitize the community and health policy makers on the importance of addressing the specific needs of the migrant population. This can lead to greater resource allocation and the implementation of more inclusive and equitable health programs that promote the protection and well-being of migrants.

With the diagnosis that was executed in the population of Venezuelan nationality it was possible to conclude that the most common diseases in the foreign population are high risk due to the long distances, illegal passages and damages caused to the health of the migrant population and these are manifested in the short or long term, With degrees of severity that generate complications that in several cases have required hospitalization, for the minimization of this problem the talks and workshops given will serve to make the quality of life in the individual, family and community better and a little more bearable.

With the study of the epidemiological profile in the foreign population that attends the different health centers of the city of Tulcán, elements have been defined to educate about certain issues that are important and how to act against these diseases: route of care in health units, prevention of health problems that occur in the foreign population and damage to the body of users; In addition to exposing the most frequent diseases, to generate a criterion of self-care in each of the people involved

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