

# Forced Migration and Health Challenges: Bioanalytical and Developmental Perspectives from the Northern Border

## Migration and Forced Displacement: Perspectives from the Northern Border of Mexico

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### Summary

This article analyzes the perception of the process of migration and forced displacement from the perspective of those who have experienced this phenomenon on the northern border of Mexico. To this end, a review of the main theoretical approaches on human mobility, an analysis of emigration figures, and a general characterization of the border region were carried out. Subsequently, the qualitative analysis of border crossing experiences was addressed, identifying emotional, physical, and economic effects. The results allow us to understand the significant elements that make up the experience of forced displacement, evidencing the persistence of conditions similar to those observed in previous decades.

### Abstract

This article begins by examining the health dimension of forced migration, emphasizing challenges such as malnutrition, chronic stress, limited healthcare access, and heightened exposure to infectious diseases. To this end, a review of key theoretical approaches to human mobility was conducted, along with an analysis of emigration data and a general characterization of the border region. Applied analysis methods, including demographic health data and qualitative interviews, were used to capture both social and clinical aspects of the displacement experience. Subsequently, a qualitative analysis of border-crossing experiences was carried out, identifying emotional, physical, and economic impacts. This study highlights how forced migration generates not only social disruption but also measurable health risks, underscoring the need for integrated bioanalytical, clinical, and public health interventions. The findings carry important implications for health professionals, planners, and bioanalytical scientists seeking to design evidence-based responses to displacement.

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**Keywords:** Forced Migration; Public Health; Bioanalytical Perspectives; Healthcare Access; Development Planning; Mexico–United States Border; Forced Displacement

### Introduction

Migration is a complex phenomenon that has been conceived, in many cases, as an opportunity to enhance the processes of economic and social development in the places of destination. However, this vision has been hegemonized by the perspective of the receiving countries and international organizations, leaving aside the experiences and realities of those who migrate. In this context, forced displacement is distinguished by being a form of involuntary migration, motivated by the loss of property and the imminent risk to people's lives, due to armed conflicts, generalized violence, or natural disasters.

Beyond social disruption, forced displacement imposes profound public health burdens. Migrants and displaced persons often face malnutrition, infectious disease spread due to overcrowding, poor maternal and child health outcomes, occupational hazards in precarious labor markets, and limited access to healthcare. Reports from the World Health Organization (WHO, 2023, UNHCR (2021), and studies by Islam et al. 2022 emphasize that these health challenges, ranging from tuberculosis outbreaks to maternal mortality and mental health disorders, are central to understanding the humanitarian dimension of migration.

Forced displacement has profound consequences on the quality of life of individuals and families who are forced to leave their places of habitual residence. In

the last five years, in both Central America and Mexico, forced displacement—both internal and cross-border—has grown significantly (UNDP & UNHCR, 2021). Globally, it was estimated that, by the end of 2021, there were 53 million people internally displaced by armed conflict and violence.

In the case of Mexico, the Observatory of Internal Displacement estimated that there were approximately 379,000 people internally displaced due to violence in that same year. Starting in 2019, the Mexican State began to take the first steps towards a comprehensive approach to internal displacement, officially recognizing, for the first time, this phenomenon at the national level (UNHCR, 2022).

The recognition, definition, and characterization of forced displacement in Mexico have been complex, due to the dynamism of its causes and the tendency to include it within the broader phenomenon of forced migration (UNHCR & World Bank, 2021). The crisis of internal forced displacement has its origins in the end of the twentieth century, with a notable increase between 2006 and 2018. In this period, a "culture of fear" was consolidated in Mexico, a product of persistent violence, which has forced many people to generate adaptive responses to survive in contexts of instability, insecurity, and vulnerability. One of these responses has been forced mobility throughout the territory (Morales & López, 2020).

It is important to distinguish that a refugee is a victim of forced displacement who crosses one or more borders to flee their place of origin. In another country, this person can apply for asylum and be protected under refugee status, established by the United Nations (UN) in 1951. On the other hand, an internally displaced person does not have an international status that protects him or her, nor is he recognized by national governments, which leaves him or her in a situation of institutional lack of protection. Although the UN has expressed concern about this problem and has implemented some assistance programs, gaps in care persist (Mestries, 2014).

Violence, including that perpetrated by organized crime, is a major cause of both internal and cross-border displacement. The mobility of displaced persons is still a phenomenon that is not very visible, so it is necessary for the international community to exert pressure and adopt urgent measures to address the humanitarian crisis faced by displaced persons (Open Access Government, 2023).

States, as guarantors of fundamental rights, should formally recognize forced displacement and develop policies to address it (Jiménez, 2020). This article seeks to make visible not only the crisis faced by displaced people from Honduras, El Salvador, and Mexico, but also the measurable health risks that emerge during transit and settlement in the northern border of Mexico. In doing so, it addresses a critical gap at the intersection of migration studies, public health, and bioanalytical sciences, highlighting implications for clinical practice, health planning, and applied development strategies.

## Development

### Theoretical Approaches to Forced Displacement

Theories are usually partial and limited because they serve to explain a facet or an aspect of them; they are applicable in certain contexts and not in others. Most theories only explain the dynamics of labour migration, which is a considerable limitation in a contemporary landscape in which other forms of migration converge. The function of theories and conceptual frameworks is to elevate the formal status of empirical observations (Universidad Complutense de Madrid & Arango, 2003).

In addition, the theoretical complications faced by research on forced displacement have increased, and this is manifested in the limited theoretical elaboration available, despite the growing interest in the topic. Forced displacement can be approached from different perspectives depending on the conceptual framework used to understand and analyze the phenomenon. Below are some theoretical approaches to forced displacement.

#### *Theory of push-pull factors*

Migratory phenomena can be understood from a series of factors that migrants value as positive or negative. In the areas of origin, factors perceived as negative, called push factors, predominate, while in the chosen destinations, according to the migrant's perception, positive or pull factors stand out. The push-pull theoretical model was initially proposed by Ravenstein at the end of the nineteenth century and has constituted the framework of the classical theory of migration, whose influence persists to this day (Tépach, 2018).

Expulsion factors reflect a state of relative deprivation or the inability of the environment to meet the needs of a community; In contrast, pull factors offer the possibility of finding better living conditions. The former determine the origin of migratory flows, while the latter affect their orientation and destination (Arango, 1985).

According to Leangaur and Fengler (2022), perceived insecurity and deprivation in countries of origin drive people to migrate in search of better conditions. However, upon reaching destination countries, new forms of insecurity emerge. In this sense, the so-called "Lee model," published in 1966, represented the first systematic attempt to analyze the factors influencing migration decisions, including economic, social, political, religious, family, and environmental dimensions, such as unemployment, armed conflicts, religious intolerance, famine, and drought.

The *push-pull* theory has become one of the most influential explanatory models in the scientific literature. This approach is based on the analysis of structural elements of both the place of origin and the destination, and conceives the decision to migrate as a rational action aimed at maximizing opportunities (WHO, 2025). Among the most frequent factors of expulsion are: demographic pressure, poor access to land, low incomes, precarious living standards, and lack of political freedoms or repression. Under this logic, migration is interpreted as functional and beneficial, both for countries and for migrants (Micolta, 2005).

However, this approach has also been criticized for its unidirectional and dualistic view of the migration phenomenon, which tends to idealize human progress from an ethnocentric perspective. Despite its limitations, the *push-pull* typology continues to be a useful conceptual tool for identifying structural causes and specific effects of migratory processes linked to exile and the need for integration (Díaz, 2007).

In the case of forced displacement, it is configured as a strategy of socio-political violence used by illegal armed groups to consolidate or expand territorial control, expelling (pushing) rural communities to urban centers, which particularly impacts women and children (Vanegas et al., 2011).

Crisis scenarios in places of origin force people to leave their residences in search of protection. The reconfiguration of global equilibria influences the transformation of the factors of expulsion and attraction. Among the former, institutional crises, the advance of terrorism, state deterritorialization by foreign investments, and forced evictions stand out. Along these lines, the endogenous factors of forced internal displacement are usually associated with structural violence and the exposure of subjects to growing and highly unpredictable vulnerabilities (López et al., 2019).

Push-pull *factors* express the motivations of migrants: those who push people to leave a place, as opposed to others who exert a force of attraction. This dynamic allows us to analyze migratory processes as a game of tensions between expulsion and attraction (Velázquez, 2022).

Finally, from the perspective of human security, forced displacement integrates multiple *push-pull* factors that condition mobility. Factors such as political persecution, human rights violations, institutional instability, and ethnic and civil conflict are key drivers of forced displacement (Leangaur & Fengler, 2022).

#### *Theory of conflict and violence*

However, conflict is the consequence of a certain state of affairs, of a situation of social divergence, that is, of contradictory relations between people or social groups that have different interests or values. Conflict manifests itself when one group tries to displace another from access to or possession of goods, resources, rights, values, or positions. Interests and values are essential elements of conflict, especially in those of a social nature and of great magnitude. Social relations are also a fundamental component in conflict theory, since they involve social actions that affect other subjects. The participants in social conflicts are individuals or groups, the latter being the main form of social organization; they are the focus of larger-scale social conflicts (García, 2008).

The Norwegian sociologist and mathematician Johan Galtung, a pioneer in studies on peace and social conflict, introduced the concept of structural violence. He distinguishes between visible and invisible violence. The first usually corresponds to direct violence, expressed in specific behaviors. However, there are also forms of violence that are not directly observable, such as structural violence and cultural violence. Galtung developed the triangle of violence as a tool to represent the dynamics of generating violence in social conflicts (Zamora, 2018).

Galtung believes that a theory of conflict is essential for both peace and development studies. This theory contemplates a negative version – focused on violence – and a positive version – aimed at its

transformation. From this perspective, a theory of conflict must not only classify conflicts as good or bad, but also provide analytical tools, scientific criteria, and methodologies for their transformation (Concha, 2009).

Conflict has been identified as one of the underlying causes of forced displacement. It can manifest itself through real or perceived threats, instability, armed conflict, lack of security, inter-community clashes, or indiscriminate attacks on civilians. Often, these outbursts of violence coincide with political transitions. The decrease in forced displacement is associated with political stabilization and the consolidation of democratic systems (Leangaur & Fengler, 2022).

Conflict studies usually focus on conflict resolution through techniques such as mediation or problem-solving workshops. However, it has also been argued that violent conflicts arise when institutions prevent the satisfaction of basic needs, especially non-material needs such as identity, security, and justice. These needs are considered non-negotiable. The deprivation of such rights generates grievances that lead to the emergence of conflict. In this framework, conflict is triggered when a group mobilizes its collective identity in search of two fundamental needs: freedom and physical well-being. Identity, therefore, emerges as a transversal axis in the genesis and dynamics of conflicts (Mouly, 2022).

For Galtung, a theory of conflict must be accompanied by a theory of violence. This manifests itself in three dimensions: direct, structural, and cultural. Direct violence is usually physical, verbal, or psychological. Structural violence is present in the social, political, and economic systems that govern societies. Cultural violence is expressed in symbolic aspects – such as religion, ideology, language, art, or science – that can be used to justify direct or structural violence (Concha, 2009).

Direct violence is visible: there is an aggressor, a victim, and clear damage. However, there is violence that is more difficult to detect, where the aggressor and the victim are not easily identifiable and where the mechanisms that produce unacceptable living conditions are not evident. This invisible form is known as structural violence. It does not require direct violence to generate negative effects on the chances of survival and well-being (La Parra & Tortosa, 2003).

When migration is not voluntary, it becomes forced, regardless of context or human intervention. It is not correct to qualify a forced migration as voluntary, even if it is planned, as in the case of the caravans of Central American migrants that entered Mexico in October 2018 and April 2019. These people fled their countries due to two types of violence: direct, mainly exercised by gangs or through domestic violence, and structural, related to the lack of job

opportunities to meet their basic needs and develop a life project (Rabasa, 2021).

Forced displacement is a specific form of forced migration caused, to a large extent, by the action, presence, or interaction of armed actors in areas of violence. This phenomenon is not limited to the abandonment of the territory; this is just one of the critical moments within a much broader and more complex process (Vanegas et al., 2011).

Galtung depicts violence through the image of an iceberg: visible violence is just the tip, while most of the phenomenon is submerged. Structural violence refers to situations in which the satisfaction of basic human needs such as survival, well-being, identity, or freedom is impeded. This form of violence results from social processes that produce inequality, stratification, and exclusion from access to essential resources, without requiring direct violence (Zamora, 2018).

The sociological theory of conflict studies social structures, that is, the institutions that organize life in society: culture, economy, law, the State, among others. These structures represent a network of social relations between individuals. Social conflict can be addressed and resolved through negotiation, which is only viable when there are similar power conditions between the parties. Power, understood as the ability to impose one's will despite resistance, is a key element of the conflict. This is unevenly distributed in society: everyone has power, but to very different degrees (García, 2019).

According to Leangaur and Fengler (2022), at the end of 2019, there were 79.5 million people forcibly displaced due to wars, conflicts, persecutions, human rights violations, or serious disturbances of public order. The two main groups under the mandate of the UN Refugee Agency (UNHCR) are refugees and internally displaced persons.

The figures associated with forced displacement demand urgent measures. In addition to political initiatives to maintain peace, UNHCR proposes three durable solutions: voluntary repatriation, local integration, and resettlement. The latter involves the transfer of refugees to a State that agrees to receive them and provide them with permanent settlement. However, few States participate in this program, with the main recipient countries being located in North America, Europe, and Australia (Leangaur & Fengler, 2022).

### **Mexico's Northern Border: The World's Busiest Border**

On the other hand, the strategic importance of Mexican territory is widely recognized, both for its geographical location and for its abundance of natural resources. In this context, the migratory phenomenon also contributes to its relevance, given its link with the border country: the United States,

one of the main destinations for both Mexican and other migrants. For decades, Mexico has been a country of origin for migrants seeking better economic opportunities, mainly in the U.S. territory. Mexican migration to the United States has been a prominent feature of migration dynamics in North America. Although Mexico has traditionally been identified as a country of origin for migrants, in recent decades it has experienced an increase in immigration flows. People from Central America and other regions have sought refuge or better living conditions in Mexico. In this regard, joint efforts between Mexico and the United States to address irregular migration—especially along their shared border—have been the subject of debate and controversy.

Currently, on Mexico's northern border, it is common for migrants to arrive reporting having been victims of criminal groups, gangs, organized crime, or acts of discrimination and persecution based on gender, sexual orientation, armed conflict, or religion, especially in the case of migrants from other continents. Migrant groups that arrive as families are generally less visible, have fewer care options, and are also the most known in terms of number and characteristics (Fernández & Juárez, 2019).

The International Organization for Migration (2022) points out that, by their very nature, the complex dynamics of migration and international mobility cannot be fully measured, understood, or regulated. Many migrants do not cross international borders, but remain within their countries. In 2009, it was estimated that there were around 740 million internal migrants, while only a small proportion of the world's population is international migrants.

The conditions of vulnerability in which undocumented foreign migrants move, as well as their limited capacity to access justice in the face of risks and threats, reveal an absence of rights. This situation reinforces negative perceptions and forms of symbolic violence exercised by society on migratory phenomena and on people on the move (Barrios de la O et al., 2023).

Globally, there are about 514,864 refugees and asylum seekers from El Salvador, Guatemala, and Honduras. Since 2018, in Nicaragua, thousands of people have fled violence and human rights violations; most have gone to Costa Rica or Panama. In total, an estimated 833,274 people from northern Central America and Nicaragua have been displaced and have sought refuge. The case of Venezuela is especially significant: 5.4 million people have fled the country as a result of the political, economic, and social crisis (UNDP & UNHCR, 2021).

Forced displacement from Central American countries to or through Mexico has historical antecedents linked to civil wars in the region.

Between 1979 and 1992, in El Salvador, thousands of people fled to Mexico and the United States. In the case of Honduras, its insertion into the dynamics of international migration began in the last decade of the twentieth century. However, in the last six years, in addition to the traditional factors associated with human mobility—such as job search, better income, or family reunification—a climate of exacerbated and generalized violence in Central America has been added as a central factor in the expulsion of the population (Gómez & López, 2022).

One of the events that has evidenced the persistence and magnitude of Central American flows to Mexico is that of the so-called migrant caravans. One of the most relevant expressions took place in 2018, when more than six thousand people crossed the country with the intention of reaching the United States and requesting asylum. According to a survey conducted by El Colegio de la Frontera Norte in Tijuana, almost half of the people who participated in this caravan joined it in Honduras, El Salvador, and Mexico (EMIF, 2019).

### Research method

The present analysis involved the development of explanatory research that includes an inductive and interpretive design. The object of study is to understand the interpretation and assessment that the interviewees have in relation to the phenomenon of forced displacement. Particular emphasis was placed on documenting migration–health linkages, such as access to healthcare services, nutritional status, psychological stress, maternal and child health concerns, and exposure to communicable diseases during displacement. The collection of information that includes heterogeneous discourses was obtained through in-depth interviews carried out in the city of Tijuana with a total of 20 people of Honduran, Salvadoran, and Mexican nationality. The intentional sample was established, taking into consideration the concept of intentional snowball, given the complexity of the object of analysis and the ease with which this type of sample can provide flexibility to the inquiry (Sorzano et al., 2024), on the process of forced displacement, and with emphasis on elucidating the damage and effects suffered. Conversations were collected from these people between January and April 2024.

It is important to note that the interviewees authorize the disclosure of the information based on informed consent, taking into consideration the safeguarding of the identification and confidentiality of the data. Consequently, the information collected, in audio files, was transcribed in its entirety. The transcripts and notes from the field notebook were analyzed through the methodological tool grounded theory, generating analytical codes that were later related to the theory (Strauss & Corbin, 2002).

Health-related themes (nutrition, mental health stressors, disease exposure, and healthcare-seeking behavior) were integrated as analytic codes to ensure that the intersection between displacement and health outcomes was systematically captured.

To obtain solid results, the proposed methodology was followed, developing each of its phases. First, the problem was conceptualized based on the definition of the study. Subsequently, fieldwork was carried out, followed by the analysis of the data, which included its preparation, integration into conceptual categories, theorization, and, finally, the writing of the report. This approach allowed not only the identification of social and institutional dimensions of forced displacement but also the detection of health risks and care gaps, providing applied insights for health professionals and policy planners. All this was done by contrasting the results with the literature of the context, as evidenced below:

#### *Stage 1. Data preparation*

As mentioned, between January and April 2024, fieldwork was carried out, in which attention brigades were carried out in collaboration with the International Organization for Migration (IOM), aimed at displaced people seeking political asylum. In this context, 24 interviews were conducted, of which 20 were considered relevant to the study. All interviews had signed informed consent, as well as their respective recording and validated transcription, guaranteeing the quality and reliability of the data collected.

This sample was made up of an equal gender distribution (50% women and 50% men), which allows a balanced representation of experiences and perspectives. The age of the interviewees ranged from 21 to 77 years, covering various stages of the life cycle. In terms of marital status and family structure, nine were single with economic dependents, eight were married, and three were widowed, which offers a diverse picture of the dynamics of vulnerability and resilience within the displaced population.

Participants also belonged to three nationalities, reflecting the composition of migration flows in the region: 80% were displaced persons from Mexico, 15% from El Salvador, and 5% from Honduras. This distribution allows for a comparative analysis of their migratory trajectories and conditions of vulnerability. It should be noted that all the interviewees had a brief stay in Tijuana (less than six months), although some had been displaced from their places of origin more than a year ago and had transited through various cities before reaching the border.

Once the fieldwork was completed, the qualitative data were systematized and processed. Initially, a comprehensive review of the interviews was carried



out, and sociodemographic files were prepared for each participant. The audios were then transcribed using the Trint software, followed by a validation process in which the transcripts were compared with the original recordings to correct possible errors. With this procedure, the data is organized and ready for analysis using the MAXQDA software.<sup>5</sup> At this stage, particular attention was given to coding health-related details (e.g., nutritional insecurity, untreated illness, mental health distress) as part of the socio-demographic profiles, strengthening the applied health focus of the study.

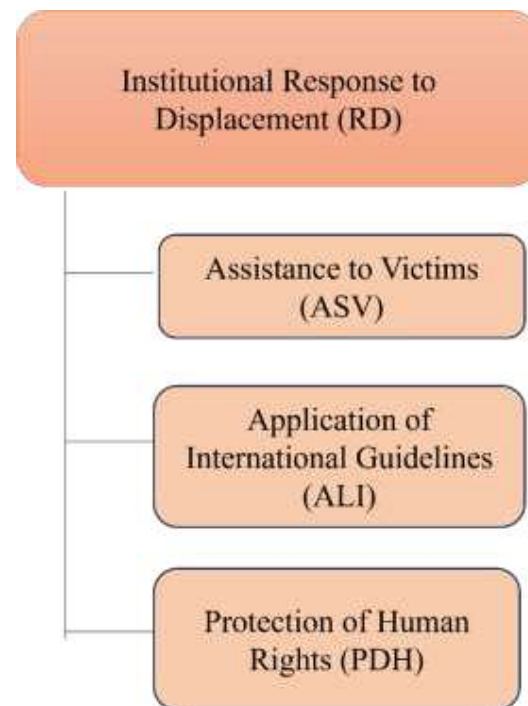
#### *Stage 2. Conceptual ordering and integration of data into categories*

In accordance with the provisions of the methodological design of this research, MAXQDA is used for coding and focuses on the central areas of the interview script, in order to meet the proposed objectives. The selected categories include: reasons for displacement, human rights situation of displaced persons, intervention by international organizations, care provided to victims at the place of destination, and contact networks. Additional health-related categories were also incorporated, including access to healthcare, disease exposure, maternal and child health conditions, and psychological well-being during displacement.

It is then that it can be pointed out that the resulting codes are: organized crime, relocation, support from religious civil associations (AC Religiosa), interaction with Customs and Border Protection (CBP), contact in the United States, institutions involved in the immigration process, interaction with the police, arrival in Tijuana, place of origin of the migrants, reasons that prompted their displacement, experiences of return, participation in informal work, migratory trajectory followed by participants, use of coyotes, victimization by crimes, reported health risks (malnutrition, stress, infectious disease), and the presence of international organizations in support of migrants.

In this context, the analysis of the codes in this research has made it possible to identify the key category: the institutional response to displacement (see graph 1), which is structured in three subcategories. The first, victim assistance, covers support measures provided to displaced persons. The second application of international guidelines examines adherence to international standards in the protection of displaced persons. Finally, the third subcategory, protection of human rights, refers to institutional actions aimed at safeguarding the fundamental rights of persons in situations of displacement. Within these subcategories, attention was also directed to the adequacy of health responses, such as emergency medical care, psychosocial support, and vaccination access for displaced communities.

**Graph 1** *Central category emergency*



**Note:** Authors' elaboration based on the analysis

#### *Stage 3: Theorizing*

In this stage, the information obtained in the interviews was cross-referenced, triangulating the theoretical data with the participants' responses. This process made it possible to identify patterns in the stories and structure the information accurately. The analysis showed a saturation in certain codes, highlighting the recurrence of issues such as the support provided by civil and religious organizations, intervention in the migration process, and the role of international organizations in the protection of displaced persons. From a health perspective, theorization also revealed recurring vulnerabilities: persistent stress symptoms, inadequate access to medical treatment, and nutritional insecurity. These findings strengthen the relevance of this methodology as an applied tool for health professionals and policy planners seeking to design integrated migration–health interventions.

#### **Institutional Response to Displacement (DR)**

Within this category, displacement is a determining factor, where it is possible to obtain experiences such as that of interviewee 11, originally from Guerrero, Mexico, who evidences the lack of attention to victims of forced displacement. This individual, owner of four hectares of land, was displaced in 2024 along with his family and a community of thirty people. Her case has been classified within the subcategories *Victim Assistance (ASV)* and *Protection of*

*Human Rights (PDH)* due to the absence of institutional support.

The interviewee's account describes his attempt to notify the local authorities in Tamarindo about the situation, without obtaining an effective response, as follows:

"I did warn, but it was of no use. I went to the city, to Tamarindo, to say that my lands were left alone, that we had been forced to leave. I went to the police station, and there I told them what was happening. They said they were going to see what they could do, but they never did anything. I waited, but no one helped us. In the end, the best thing was to forget the matter, because we didn't know anything anymore. We did not raise any investigation folder, nothing at all. That's how everything remained, abandoned, just like our lands." (Interviewee 11).

This testimony reflects a structural problem in the government's response to forced displacement, evidencing the lack of protection mechanisms and the vulnerability in which displaced people are left. The absence of assistance and concrete actions by institutions reinforces impunity and the lack of protection for those who have been forced to leave their homes. From a health perspective, such institutional neglect exacerbates stress-related disorders, loss of access to preventive healthcare, and nutritional insecurity as families abandon their means of subsistence. The absence of coordinated health and social services reinforces the cycle of vulnerability.

The Application of International Guidelines (ALI) *subcategory* is represented by interviewee 9, who left his home in Santa Ana, El Salvador, due to violence and death threats derived from his refusal to give in to criminal extortion. According to his account:

"Here I am with the minutes, with the entire file. My son was not involved in anything, but he did not want to give them money, and that is why they killed him. He left me seized, with debts in the bank and the house. While some of those who killed my son fled, others are in prison, but the heaviest are still there, in the same area, robbing banks, doing what they want. And if I come back, they can kill me too, because the only thing they care about is the ticket. If you don't pay them, they kill you. I'm afraid, of course I'm afraid. I am the owner of the land, the father of my son, but you cannot live there. That's why I left, because if I stayed, I would surely not be telling this" (Interviewee 9).

This story reflects a situation of extreme violence and the lack of protection by the Salvadoran State, which triggered the forced displacement of a representative percentage of the population to Mexico. Despite having documentary evidence that validates her situation, such as the record and the file related to her son's death, she did not receive an adequate response from the local authorities in El

Salvador. For health systems, such contexts mean that displaced persons often carry trauma-related mental health conditions, untreated chronic illnesses, and are excluded from basic clinical services in both origin and destination countries.

Once in Tijuana, Mexico, interviewee 9 tried to access international protection mechanisms, looking for a solution that would allow him to live without the constant fear of being killed. However, the response she received from international organizations was limited: she was recommended to apply for asylum in the United States through the CBP One application before January 21, 2025, the deadline for its use, which shows a possible gap in international protection mechanisms. The lack of effective alternatives to access protection outside of this system raises questions about the fairness and accessibility of the process. This gap also reflects the absence of coordinated health referral systems for displaced persons in transit, leaving them dependent on fragmented or emergency-only services.

In this same sense, the experience of interviewee 14 highlights the lack of access to justice and effective protection mechanisms for migrants, underscoring the importance of adequate implementation of the *International Guidelines (LI)* for the protection of persons in transit and *Victim Assistance (VA)* of violence. The story highlights the urgent need to strengthen international and local efforts to ensure the safety and well-being of migrants, who often face situations of extreme vulnerability during their transit.

Interviewee 14, a 29-year-old from Atlántida, Honduras, tells a story marked by violence and desperation.

"I was coming from working with my brother when we were assaulted. They killed him and shot me. I ran out because I was afraid they would kill me, too. I didn't report anything because I knew that if I did, I would endanger my mom. I decided to leave Honduras and arrived in Tapachula, Mexico. There I was stopped by immigration and taken to the 'Siglo 21' center, where I stayed for 45 days. The Honduran Consulate offered me to return, but I did not accept because I could not return to my country after everything that had happened. Then I arrived in Tijuana, but they stole everything I brought. I didn't report the theft for fear that they would do something worse to me. I rented a room in El Pipila, but I had barely been there for three days when some armed and hooded men arrived. They said they were from the 'maña', but well, I had to leave, no one helped me, and here I am, trying to move forward" (Interviewee 14).

This narrative reflects the extreme hardships faced by forcibly displaced migrants, highlighting their vulnerability to violence and fear of reprisals. The young man did not denounce the crimes he suffered,



both in his country and in Mexico, for fear of putting his family's safety at risk and suffering more violence. Despite the assistance offered by the Honduran Consulate, he chose not to return due to the imminent danger posed by returning to his country. From a health lens, this testimony also illustrates untreated gunshot trauma, long detention without adequate medical supervision, persistent anxiety, and loss of protective factors such as stable housing. These findings demonstrate the critical importance of integrating health, psychosocial, and planning interventions into institutional responses to displacement.

## Results and Discussion

Conflict theory has been developed by various theorists to explain structural, direct, and cultural violence as underlying factors in forced displacement. This theory allows us to understand forced displacement as a consequence of unequal power relations and the absence of effective protection mechanisms, which is later evidenced through the experience of the interviewees.

In addition, the push-pull theory explains migration based on a series of factors that drive individuals to leave their places of origin (push factors) and others that attract them to their places of destination (pull factors). Ravenstein, Lee, and other theorists have developed this approach by considering economic, social, political, and environmental aspects. However, this theory can be criticized for its limitation in explaining complex migratory phenomena, such as forced displacement, which is the subject of this study.

Fieldwork made it possible to identify codes that highlight the central role of the actors involved in the assistance and accompaniment of the displaced population. The articulation between government institutions, civil society organizations, and community support networks is crucial to guarantee an effective and humanitarian response. However, significant challenges remain in terms of coordination and strengthening of protection mechanisms. At the same time, the results clearly demonstrate that displaced persons face acute health vulnerabilities, including malnutrition due to food insecurity, occupational risks linked to precarious labor, poor sanitation in shelters, and untreated mental health conditions related to trauma and stress. Women and children, in particular, face heightened risks of maternal complications and child malnutrition, which require targeted health interventions.

In this sense, it is essential to move towards comprehensive strategies that not only address the immediate needs of the displaced but also address the structural causes of forced displacement in Mexico, Honduras, and El Salvador. Equally

important is strengthening border healthcare systems, which often struggle with overcrowded emergency rooms, limited supplies, and a lack of specialized staff to address migrant health needs. Testimonies revealed cases of untreated gunshot wounds, infectious disease exposure in detention centers, and interruptions in medication for chronic illnesses, all of which highlight systemic strains on local clinics and hospitals in Tijuana and surrounding regions.

As for its application to case studies, in Mexico, the testimony of displaced persons shows the lack of government assistance in the face of forced displacement. Violence and lack of institutional protection act as push factors, while the hope of security in other regions is a pull factor. However, this is unknown due to push-pull theoretical elements that do not explain the absence of guarantees in the destination. In Honduras and El Salvador, gang violence and political persecution have been major drivers of forced displacement.

In Mexico, the structural violence of drug trafficking and the weakness of the state to protect the displaced reflect Galtung's postulates. Impunity and lack of access to justice perpetuate displacement. In El Salvador and Honduras, direct gang violence and the structural violence of poverty and social exclusion drive displacement. Conflict theory allows us to understand why these displacements are not simply a matter of individual decision, but a consequence of power structures that restrict options. These findings also confirm that violence and displacement are inseparably tied to health crises, reinforcing the argument that migration studies must integrate bioanalytical and epidemiological perspectives.

While push-pull theory provides an initial framework for analyzing forced displacement, its limitations become apparent in contexts of extreme violence, where individuals have no real choice. Conflict theory allows these displacements to be addressed from a structural perspective, highlighting power relations, systematic violence, and impunity as key elements. However, both theories need to be expanded with applied health planning practices: for example, screening programs for infectious diseases at border shelters, laboratory-based surveillance to monitor outbreaks (e.g., tuberculosis, respiratory infections), and the deployment of mobile clinics offering maternal and child health services. These applied interventions not only address immediate risks but also create bioanalytical data streams essential for evidence-based policymaking.

The findings of this research show that internal displacement in Mexico is not a homogeneous phenomenon, but rather presents patterns of expulsion concentrated in certain states, particularly Michoacán and Guanajuato. The arrival of displaced people in Tijuana underscores the complexity of the

migratory phenomenon, where forced mobility becomes a survival strategy in contexts of violence and lack of institutional protection. From a health systems perspective, this inflow increases demand for preventive care, vaccination, emergency medical attention, and psychosocial support. Strengthening collaborations between local clinics, international NGOs, and bioanalytical laboratories is therefore critical to managing these pressures.

These results reaffirm the need to continue documenting and analyzing the dynamics of internal displacement to generate knowledge that contributes to the design of effective and evidence-based public policies. Equally, they underscore the necessity of integrating public health planning and bioanalytical science into migration research—ensuring that displacement is not only understood as a social crisis but also as a measurable health emergency requiring coordinated medical, epidemiological, and policy responses.

### Conclusions

Migration and forced displacement in Mexico and Central America are not only social phenomena but also critical public health challenges. They are driven by structural violence, organized crime, and the lack of institutional protection. Despite the fact that Mexico officially recognized the phenomenon in 2019, there is still a marked distance between legal recognition and the implementation of effective policies to care for displaced people.

The testimonies collected in Tijuana, from Mexicans, Salvadorans, and Hondurans, reveal trajectories marked by insecurity, uncertainty, and the absence of minimum guarantees during transit and stay in border contexts. These experiences show a fragmented institutional response, with limited capacity to offer comprehensive and lasting protection. They also highlight measurable health risks, including malnutrition, infectious disease exposure, untreated injuries, and psychosocial stress, which are insufficiently addressed by current systems.

In conclusion, the push-pull theory is useful to identify factors of expulsion and attraction, but insufficient to explain forced displacement in contexts of extreme violence. In contrast, conflict theory allows displacement to be analyzed from a structural perspective, emphasizing violence as the main driver. The cases of Mexico, Honduras, and El Salvador show the need for theoretical models that integrate structural aspects and power dynamics in the explanation of forced displacement. Yet these models must also be connected with public health frameworks and bioanalytical evidence to fully capture the lived risks of displaced populations.

To advance the analysis and management of forced displacement, it is essential to broaden theoretical

frameworks by incorporating elements of health vulnerability, structural violence, and social exclusion. There is also a need to strengthen protection mechanisms and health systems for forcibly displaced persons in countries of origin, transit, and destination. Finally, addressing this crisis requires integrated public policies that combine social science insights, applied bioanalysis, and healthcare planning to mitigate risks and improve outcomes for displaced communities.

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