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## Mental Health of Immigrants in a Shelter in Tabasco, Mexico During the COVID-19 Epidemic

*Salud mental de personas migrantes en un refugio de Tabasco, México durante la epidemia de COVID-19*

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## ABSTRACT

**Introduction:** Migration is a global phenomenon that must be recognized as a social determinant of health. In 2020, there were 280 million international migrants in the world. Undoubtedly, Mexico plays a fundamental role in transnational migration due to the large flow of migrants who transit through its borders. Research on mental health and migration suggests a high prevalence of mental disorders due to the conditions of the migration process; this scenario may be aggravated as result of the health contingency caused by COVID-19. **Methodology:** This research is intended to identify the relationship between the mental health of migrants, the migratory process, and the COVID-19 epidemic. Therefore, it is a qualitative study with a deductive approach. A sample evaluation of Central American migrants living in a shelter in Tabasco, Mexico in December 2020 was used. **Results:** Some factors impact the mental health of migrants in the place of origin and during transit (forced migration, persecution, and the lack of possibilities to achieve a decent standard of living...). Moreover, positive, and negative manifestations were reported in the dimensions of mental health, because of the migratory process and COVID-19. **Conclusions:** Migration has become an option for survival and well-being given the limited opportunities that exist in the regions of origin. Efforts must be made to develop migration and health policies that benefit this group. Unfortunately, some limitations of data collection emerged due to Covid 19. Finally, it is suggested to replicate the study among other areas of the southern border of Mexico with a high flow of migrants.

**Keywords:** Mental Health, International Migration, Emigrants and Immigrants, Psychological Exhaustion, Coronavirus Infections.

## RESUMEN

La migración es un fenómeno mundial que se debe reconocer como un factor social determinante de la salud. En 2020 había en el mundo 280 millones de migrantes internacionales y México juega un papel fundamental para la migración transnacional debido al gran flujo de personas migrantes que transitan por sus fronteras. Las investigaciones sobre salud mental y migración sugieren una alta prevalencia de trastornos mentales, este es un escenario que puede empeorar debido a la contingencia por la COVID-19. **Metodología:** Esta investigación tuvo como objetivo identificar la relación entre la salud mental de las personas migrantes, con el proceso migratorio y la epidemia de COVID-19. Estudio cualitativo con enfoque deductivo. Se utilizó una muestra opinática de migrantes centroamericanas que habitaban en un refugio de Tabasco, México en diciembre de 2020. **Resultados:** Se reportaron mani-

festaciones positivas y negativas en las dimensiones de la salud mental debido al proceso migratorio y COVID-19. Conclusiones: Hay factores que impactan en la salud mental de los migrantes en el lugar de origen y durante su tránsito (migración forzada, persecución, falta de posibilidades para una vida digna...). La migración se ha convertido en una opción de supervivencia dadas las limitadas oportunidades que existen en las regiones de origen. Se deben realizar esfuerzos para desarrollar políticas migratorias y de salud que beneficien a este grupo. Debido a la epidemia surgieron limitaciones para la recolección de datos pero se sugiere replicar el estudio en otras zonas de la frontera sur de México con alto flujo de migrantes.

**Palabras claves:** Salud Mental, Migración Internacional, Emigrantes e Inmigrantes, Agotamiento Psicológico, Infecciones por Coronavirus.

## INTRODUCTION

Health disasters are defined as a serious and unexpected situation that affects the population and health care processes (e.g., earthquakes, floods, and pandemics) (1). Consequently, the effects on physical health caused by these disasters have been a priority for health systems for decades. However, attention to the effects on mental health tends to be unperceived, even though it has been shown that there is an increase in psychological suffering in emergencies (2).

In January 2020, the World Health Organization (WHO) declared the COVID-19 outbreak as a public health emergency of international importance (3). In this context, the WHO Department of Mental Health and Substance Use has developed considerations to support the psychosocial well-being and mental health of the most vulnerable populations (4).

In Mexico, the Secretary of Health defines mental health as: “The state of balance that must exist between people and the socio-cultural environment that surrounds them. This balance includes emotional, psychological, and social well-being; and influences how they think, feel, act, and react to moments of stress” (5). Accordingly, this definition comprises the psychophysiological, emotional, behavioral, and cognitive dimensions of mental health.

Nowadays, migration is a global phenomenon. The migratory process is defined as the movement of a person or a group of persons, either across an international border or within a State. It is a population movement, involving any kind of movement of people, whatever its length, composi-

tion, and causes. Also, it includes migration of refugees, displaced persons, economic migrants, and persons moving for other purposes, including family reunification, which must be recognized as a social determinant of health (6). In fact, in 2020, there were 280 million international migrants in the world, 52% were men; 48% were women (7). Furthermore, for migrants the outlook for the epidemic is darker than for the general population. Because they often have limited access to health care, and it is more difficult to maintain prevention measures and social distance due to the conditions of the migration process (8).

Otto and Gould propose the “Cognitive-Behavioral Model of Panic” explaining that mental health is a process of homeostasis. On their work, it is mentioned that stressors are stimuli that can keep the individual in constant physiological activation. Relying largely on who is experiencing the stressor, for instance, a stressor is terrifying for one person, whereas for another it could be insignificant. Therefore, under the circumstances of this condition and vulnerability and/or the inability of resilience, the person can reach a phase of wasting, which leads to a chronic imbalance of the organism, conducted to hypervigilance of symptoms and serious mental illnesses (9).

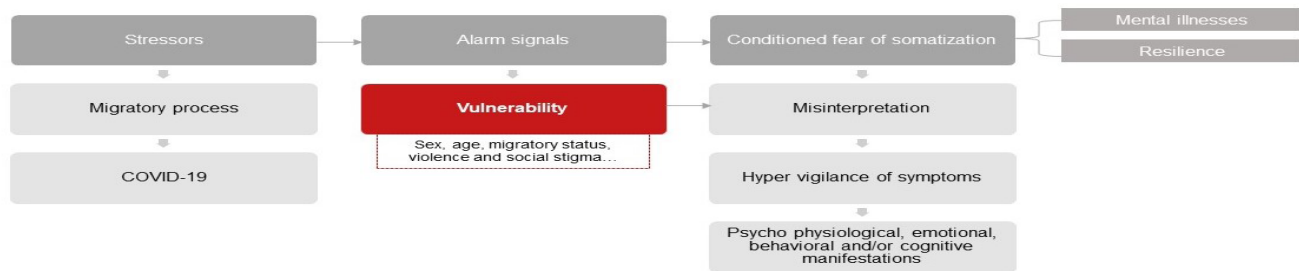
Furthermore, the application of the Otto and Gould Model is proposed for analysis of how the migratory process affects mental health. Indeed, the migratory process and the COVID-19 epidemic act as the stressor that can break the homeostasis of the organism, causing a psychosocial alteration in the individual. Being exposed to the COVID-19 epidemic and the migratory process triggers the alarm reaction. In fact, this reaction usually occurs when the subject is exposed to stressors, although in vulnerable populations such as migrants, there is a major risk because the ability to adapt can be overcome by the stressors they are faced with.

Moreover, the misinterpretation of the alarm signals causes conditioned fear and somatization and, eventually, it will trigger hypervigilance of symptoms and increase anxiety, causing manifestations in the psychophysiological, emotional, behavioral, and/or cognitive dimensions of mental health.

Nevertheless, not all psychological manifestations can be classified as mental illnesses, since many individuals will be able to adequately cope with psychological demands, achieving resilience. On the contrary, the effects of epidemics on mental health can have a greater impact when referring to populations that live in precarious conditions, with limited access to social and health services and under constant violation of their rights (Figure1).

The objective of this study is to identify the relationship between the migratory process, the COVID-19 epidemic, and, finally, the mental health of migrants, living in a refuge in Mexico.

Figure 1. Application of Otto and Gould Cognitive Model of Behavioral Panic in the migration process and the COVID-19 epidemic.



**Source:** Self-made, based on Otto and Gould’s Cognitive Behavioral Panic Model.

**Figure 1. Application of Otto and Gould Cognitive Model of Behavioral Panic in the migration process and the COVID-19 epidemic.**

## MATERIALS AND METHODS

Qualitative research was conducted due to its naturalistic, subjective, and holistic nature, which emphasizes a descriptive type with a deductive approach (10). Likewise, the study population included Central American migrants who lived in the “La 72” shelter, located in the municipality of Tenosique, Tabasco, Mexico. The general objective of the study was to identify the relationship between the mental health of migrants with the migratory process and the COVID-19 epidemic, during their transit through Mexico.

Consequently, fifteen interviews were conducted with Central American migrants of the following characteristics: over the age of 18 years, indistinct sex, indifferent employment situation, and who expressed their consent to participate in the study, either orally or in writing. Conversely, migrants excluded from the study included subjects in isolation due to a diagnosis of COVID-19, or being suspected of COVID-19, individuals absent due to visits to the National Institute of Migration, and people not able to leave their activities in the shelter during the scheduled visit for the interview.

Also, the semi-structured interview technique was used, which allowed a specific approach with the individuals who narrated from their perspective experiences and added meaning to the research problem. Accordingly, the script interview was created based on the “Mental health impact checklist for immigrants” designed in Colombia by Tovar-Parra et al. (11) and 4 categories were pre-established: 1) psychophysiological manifestations, 2) emotional manifestations, 3) behavioral manifestations and 4) cognitive manifestations. In addition, a pilot test was previously carried out with transnational migrants in Tabasco. The average duration of the semi-structured interviews was approximately 30 minutes.

For data analysis, a deductive process was started; the order of the narrative segments was carried out with a selective coding that allowed reducing the number of concepts and thus delimiting the theory through the 4 pre-established categories. In addition, the relationship between the mental health of migrants and the COVID-19 epidemic was inductively identified. Representative phrases were selected for analysis and comments were assigned to each quotation for interpretation. Additionally, for systematization of the information, data processing, and discourse analysis, Excel and the ATLAS.ti version 8 software were used. The translation process was initially carried out in the Google Translate program, then it was reviewed by two editors, finally underwent a back-translation process, and the text was checked in the software grammatically.

Likewise, the methods followed have complied with the principles established in the Council for International Organizations of Medical Sciences (CIOMS), founded under the auspices of WHO and UNESCO, accepted by the bioethics committee of the Universidad Juárez Autónoma de Tabasco, in México. Also, during the process an atmosphere of trust and kind was promoted, interpersonal relationships during the conversation were especially important.

## RESULTS

Specifically, fifteen semi-structured interviews were conducted with migrants who lived in “La 72 Hogar-Refugio para personas migrantes”, located on the Southern Border of Mexico, in Tenosique, Tabasco. Particularly, fifty-four percent of the interviewees were men, ranging in ages 21 to 48 years old. Almost all the migrants were originally from Honduras (93%). Overall, similarities between people were found regarding the main reasons for migration, fleeing insecurity and violence, also seeking opportunities for economic development. The discussion among the people



interviewed showed that the reasons why they left those countries have not changed. Moreover, the reasons the interviewees mentioned to cross the borders were the lack of means, the absence of opportunities for socio-economic development, and the violence and insecurity in their countries of origin. In detail, the following table presents the socio-demographic characterization of the interviewed migrants (Table 1):

**Table 1. Sociodemographic characteristics of the interviewed migrants who live in the “La 72” shelter in Tenosique, Tabasco, Mexico**

ID	Age	Sex	Scholarship	Marital status	Occupation	Country of origin	Migratory status	Reason to migrate	Length of stay in Mexico
PM-1	32	Man	Elementary school	Married	Unemployed	Honduras	Irregular	Insecurity in the country of origin	1 month
PM-2	47	Woman	Elementary school	Not married couple	Unemployed	Honduras	Regular	Insecurity in the country of origin	1 year
PM-3	21	Man	High school	Married	Informal employment	Honduras	Irregular	Socioeconomic improvement	1 year
PM-4	22	Man	High school	Not married couple	Unemployed	Guatemala	Irregular	Socio-economic improvement	7 months
PM-5	26	Man	Elementary school	Married	Unemployed	Honduras	Irregular	Socio-economic improvement	7 months
PM-6	32	Woman	High school	Not married couple	Unemployed	Honduras	Regular	Insecurity in the country of origin and socio-economic improvement	8 months
PM-7	37	Woman	Kindergarten	Single	Unemployed	Honduras	Regular	Insecurity in the country of origin and socio-economic improvement	1 month
PM-8	29	Woman	Elementary school	Single	Unemployed	Honduras	Irregular	Attempted murder and socio-economic improvement	3 months

Continue...

ID	Age	Sex	Scholarship	Marital status	Occupation	Country of origin	Migratory status	Reason to migrate	Length of stay in Mexico
PM-9	48	Woman	Elementary school	Not married couple	Unemployed	Honduras	Irregular	Insecurity in the country of origin	1 month
PM-10	23	Woman	High school	Not married couple	Unemployed	Honduras	Regular	Insecurity in the country of origin and socio-economic improvement	1 year
PM-11	24	Man	Elementary school	Not married couple	Unemployed	Honduras	Irregular	Socio-economic improvement	3 months
PM-12	32	Woman	Junior high school	Not married couple	Unemployed	Honduras	Irregular	Socio-economic improvement	11 months
PM-13	26	Man	High school	Not married couple	Informal employment	Honduras	Regular	Insecurity in the country of origin	7 months
PM-14	21	Woman	Degree	Not married couple	Unemployed	Honduras	Regular	Insecurity in the country of origin	1 month
PM-15	23	Man	Elementary school	Not married couple	Informal employment	Honduras	Irregular	Socio-economic improvement	1 year

**Source:** Self-made.

## 1) Psychophysiological manifestations due to the migratory process

Overall, the participants expressed that being an unintentional migrant is an extremely difficult experience. Furthermore, by questioning them about the psychophysiological manifestations they experienced from the time they left their country until they arrived in Mexico, we were able to identify responses that confirmed the presence of these somatic manifestations, whereas other answers discarded them.

Some of the participants stated the relationship between health and mental illness in terms of headache, sleep disorders, fatigue for prolonged periods, loss of reason, fatigue, suffocating sensation, and gastrointestinal disorders (involuntary weight loss and anorexia). They linked the existence of these symptoms with the uncertainty and unfavorable experiences during the migration process.



Conversely, participants who denied the presence of psychophysiological manifestations demonstrated that resilience has been a primary characteristic in them. In those cases, they were human beings who decided to migrate aware that it would not be an easy process. Also, the interviewees made it clear that no one leaves the country where they were born, with children in tow, to cross to an unknown country without a reason. However, for the migrants, it is the only option to live. Due to the desire and conviction to get ahead, they have developed the ability to adapt to adverse situations; in addition, they mentioned protective factors such as spirituality, religion, and family. Accordingly, the findings confirmed that for a migrant person the greatest challenge is presented in the emotional sphere and not in the physical dimension (Table 2):

**Table 2. Representative discourses of psychophysiological manifestations due to the migratory process.**

Psychophysiological manifestations	Physical manifestations that generate discomfort, but without an apparent organic cause, are associated with situations of psychological demand. (Headache, gastrointestinal disorders, dermatological problems, arrhythmias, sleep disorders ...)
Trigger question	Have you felt any physical discomfort from the time you left your country until you arrived in Mexico with no apparent cause of illness?
Representative discourses	<p><i>“Thank God no... I’ve been fine. We migrate due to insecurity, and sometimes we don’t have time to sleep, to eat, so we go up and down in the street, adrift; we worry, and suddenly a headache appears but thank God, I’m fine”</i>. PM-1.</p> <hr/> <p><i>“Physically yes. At first when I entered immigration, there were nights when I couldn’t sleep, for the first time I was like, locked up, and it was a bit suffocating”</i>. PM-2.</p> <hr/> <p><i>“I have had to walk several days, kilometers, with my son on my shoulders, and so has he. We have slept on the street [sighs], we come because we do not have money, because of violence, trying to find a better future for our children. More than physical, it is mental”</i>. PM-6.</p> <hr/> <p><i>“The truth is that a lot. From so much concern, even hunger is removed, this path is very difficult, and I ended up very skinny”</i>. PM-4.</p> <hr/> <p><i>“Yes, correct, more tired than normal, since I left my country”</i>. PM-5.</p> <hr/> <p><i>“Yes, I felt very bad, on the verge of going crazy. Physically and mentally. I felt like I was going to collapse due to so many unsolvable problems... I was mentally, physically, and spiritually ill. On the way, I no longer had the strength, I was exhausted. A lady helped me, she let me stay in an uninhabited house; I fell asleep in a cardboard box because I couldn’t take it anymore. The next day I came to seek help at the shelter”</i>. PM-9.</p> <hr/> <p><i>“I migrated due to the violence and insecurity in my country, but I did not feel anything physical... we were detained in migration for a month. I felt like a prisoner, we lost weight!”</i>. PM-13.</p> <hr/> <p><i>“Well, no, the truth is, I have not had any physical discomfort for no reason, the only thing is fatigue ... we have no choice because if we don’t do this, we have no resources, we can only do this”</i>. PM-14.</p> <hr/> <p><i>“No, the truth is that no, all good thanks to God.”</i> PM-15.</p>

**Source:** Self-made.

## 2) Emotional manifestations due to the immigration process

Notably, migration was a stressful situation that tested the emotional resilience of the interviewees and their families. For instance, separating from their loved ones and adapting to a new society required the mobilization of their resilience capacities and sources of social support. In cases where the absence of these resources was identified, the difficulties associated with migration raised the manifestations of negative emotions.

In fact, the migration process did not occur exclusively for economic reasons, it was also largely due to the need to escape from conditions of extreme violence. In addition, we found that the long road they traveled was characterized by constant threats to their integrity. Since they traveled under the threat of innumerable risks and the cruelty that is exerted on those who cannot defend themselves.

Also, the discussions showed that violence associated with organized crime and gangs caused traumatic experiences in some of the participants. Furthermore, the migration process became more complicated for them due to the presence of recurrent memories of dangerous situations experienced in the countries of origin. Moreover, the subjects mentioned criminal organizations, such as “Las Maras”, which profit from the lives of migrants.

In general, the participants feared uncertainty while facing a strange and hostile environment, especially due to the unsafe conditions to which they were exposed during the journey and their arrival in Tabasco. They faced attempted kidnappings, rapes, extortion, human trafficking, assaults, vandalism, sexual abuse, xenophobia, and even experiences where there were attempts against their lives.

In addition, sadness was one of the emotions that predominated in the conversations. It was associated with the loneliness forced by family fracture, the presence of constant thoughts about the loss of their loved ones, and the concern for the family they left behind. In the case of migrants who traveled with their minor children, they reported that children were exposed to suffering a little more than adults, due to the difficulty of managing their emotions and adaptation process. Consequently, for the children, sadness was a feeling that appeared after the radical change in their world, due to personal and material losses.

Additionally, other emotions they experienced were deep homesickness, pain, guilt, melancholy, complicated grief, decay, and low self-esteem due to loneliness, feelings of failure, the constant struggle for survival, and the bitter experience of being an irregular migrant seeking opportunities to have a decent life.

Despite the obvious negative and emotional manifestations that predominated in the participants' stories, sensations of relief, freedom, happiness, security, tranquility, relaxation, peace, and hope were also noticed among participants.

Accordingly, the desire to continue their journey finds its origin in the search for better living conditions for themselves and their families. Most of them considered that the act of migrating was the only option to solve their problems and needs. An admirable strength was identified in the face of adversity, a conviction to move forward through the ability to make decisions and recovery from the misfortunes they have experienced during the immigration process. The following testimonies were registered as examples (Table 3):

**Table 3. Representative discourses of emotional manifestations due to the migratory process**

Emotional manifestations	Sensations arise when the body detects dangers, threats, or imbalance to put in place the resources available to control the situation. (Nostalgia, indifference, guilt, fear, sadness, anxiety, anhedonia)
Trigger question	Have you noticed any difference in your mood during your trip compared to the way you felt in your country?
Representative discourses	<i>“Memories of family. With so many days of hell, without children, one suddenly falls apart... Thank God I already feel a little better, I am already assimilating. God is always encouraging... but I remember my wife and sometimes I feel guilty.”</i> PM-1.
	<i>“My daughters are still in my country, and it is a bit worrying, but here I feel very happy, relaxed. As if I were a little bird that was locked up and they opened the cage, and I can fly free... I have no threats... Here I am calm, relaxed, and at peace and I like being here”</i> PM-2.
	<i>“My emotions, my self-esteem, everything changed a lot. My self-esteem was lower, without work, without resources, without anything... here I am more positive”</i> PM-3.
	<i>“When we got to Tabasco, they tried to assault my husband and cut off his arm with a machete. It is the most horrible situation we have experienced here... I left my country because of the violence. How are you going to leave your family, your home? You are risking your life, but it is a risk that must be taken. There, if you have a job, you must pay “war taxes”, we have no options, it’s sad...”</i> PM-6.
	<i>“I was mugged when I was looking for work. I was a happy boy, I am still happy, but not like before. I feel like trash... Maybe I’m guilty of the things that are happening, but we still can’t work because we don’t have papers”</i> PM-4.
	<i>“I always think about what I left behind, I have cried when I remember ... but thank God, since I arrived here, I have felt peace. Here I have peace and people help me. I have smiled again.”</i> PM-5.
	<i>“I left my country because the gangs threatened me, I came with two of my children ... I was afraid because they had told me that something could happen to me because of the danger of the roads ... but I already feel calmer, at peace, a little safer. But I would like to leave the shelter, here, it is complicated with children.</i> PM-9.
	<i>“Sometimes I get nostalgic and fearful ... Several friends wanted to rape a woman and tried to stab me for defending her. Women have been raped; they have been murdered. I have seen Honduran women murdered; they are killed on the road... they have no way of defending themselves. It is the terror, the bitter experience of being a Honduran immigrant. My heart softens when I think about it.”</i> PM-11.
	<i>“It has hit my children more, they miss the beach a lot, grandmothers, friends. Not so much for us adults, but they do ... I miss my mother at times, when we talk, it does make me nostalgic”</i> PM-12.
	<i>“I have felt stressed but thinking about my family gives me a little more strength, motivates me to seek a better future ... Also fear, on the road, there are vandalism or racist people, but we always ask God to clean our way to continue...”</i> PM-13.

Source: self-made.

### 3) Behavioral manifestations due to the migratory process

Furthermore, for the interviewees, it was normal to feel a certain fear of change during this process. Since they must adapt to new roles, skills, responsibilities, discover a new environment, and interact with strangers. In general, most considered that there were no significant changes in their behavior. Also, the interviewees commented that they are people with the same attitudes and actions, and some related their stability to spiritual factors. Indeed, many avoided changing their personality traits and reinforced their confidence in themselves and their way of acting to get ahead and perform in the new society. Moreover, they relied on their family to increase their resilience, accordingly day by day they work on meaningful actions to improve as people. Additionally, they also experienced positive changes in behavior related to patience, learning, and personal growth. On the contrary a few referred to experiencing negative behavioral changes such as aggressive behaviors, indications of delusions of persecution due to post-traumatic stress disorder that has marked their lives, frustration related to conflict, and anger associated with lifestyle changes were shared.

In this category, the presence of suicidal thoughts or suicidal attempts were also intentionally explored. The exposition to many unrewarding experiences that could trigger thoughts of self-harm became evident. However, even with the psychological and social losses that the migratory act brought within it, almost everyone agreed that committing a suicidal act is not an option and that the sacrifices and challenges they have endured will have tangible rewards for the well-being of their family members, especially their children. Some individual protective factors were found such as the existence of a life project, sense of hope, and adaptability; also, family protective factors (family support, solidarity marriage, and having children), along with spirituality and religious beliefs that were present again.

Finally, some of the participants claimed to be aware that suicidal attempts and acts were performed by known migrants due to the hopelessness and adversities they faced during transit. On this matter, the individuals recognized the importance of facing the suicide risk factors (physical dangers, forced loneliness, abuse, lack of support, the separation experienced when migrating in irregular conditions) to continue with their journey (Table 4):



**Table 4. Representative discourses of behavioral manifestations due to the migratory process**

Behavioral manifestations	Set of responses and actions that a person expresses about their environment and stimuli. (Violence, anger, delusions of persecution, suicidal thought, or attempt).
Trigger question	<p>1. Have you experienced changes in your way of being or acting since you migrated?</p> <p>2. At some point during your trip, have you thought that it would be better to end your life than to continue?</p> <hr/> <p><i>"I feel normal thank God, I am still the same. I have never thought to end my life. My country is in a fight with the gang members, we have been fleeing so that they cannot kill us."</i> PM-1.</p> <hr/> <p><i>"No, I'm still the same. I love life and I want to continue living and go as far as God wants. I don't think about suicide. I love life because life is beautiful, and we have to know how to live it, and by faith continue to live with the grace of God"</i>. PM-2.</p> <hr/> <p><i>"If I hear someone screaming here, I think someone is being killed, because that is what happens in my country... I have never thought of taking my own life. I feel like this sacrifice is going to give good rewards at some point, maybe not for me, but my children..."</i> PM-6.</p>
Representative discourses	<p><i>"Well yes, here my partner and I have argued so much. Those lawsuits have made me change; I am more temperamental. Well, the road has been hard, but many things still motivate me to keep going. I have not thought about hurting myself, that is not a solution."</i> PM-4.</p> <hr/> <p><i>"It had been 3 years without socializing with other people. There was a sect that was keeping an eye on me and had no communication with other people until I came here. My dream was not to migrate, it was a forced flight, but here I feel good; I share with people, I am no longer afraid. There, my world was not my world, everything had turned upside down, now I am feeling myself..."</i> PM-9.</p> <hr/> <p><i>"I am the same. I have seen migrants who kill themselves, who no longer find their way out. But we need to move on, take one more step, to see if we can achieve something in life or not"</i>. PM-11.</p> <hr/> <p><i>"It affected my children a lot because they weren't used to it. At home, the ones who work are the parents, now we all had to go out. At first they felt annoyed"</i>. PM-12.</p> <hr/> <p><i>"End my life, no, how do you think?! During the journey you see very ugly things on the train, "The beast", you come alone, you have no one, you have no family, you have no friends, you are separated, and I have seen people who are traumatized, who want to kill themselves or who prefer to return."</i> PM-15.</p>

Source: Self-made.

#### 4) Cognitive manifestations due to the migratory process

Also changes in the cognitive functions of thinking were identified due to the migratory process. Since the interviewees referred to the importance of staying focused to perform the necessary activities that will lead them to achieve their goals. Likewise, the establishment of daily goals is a quality that they have adopted for the fulfillment of their purposes. Concentration and perseverance are vital for them; they are focused on getting the most out of migration. Additionally, the perception that they can face the challenges of migration as opportunities emerged, for instance, they looked for different options to solve their problems and they learned consciously from the facts they have lived.

Unfortunately, the appropriation of the present has been difficult for some of the interviewees, especially for those who faced situations of violence and abuse in their country of origin, however they have found refuge in mental health care services offered by the shelter and improved day by day in the process of adaptation and integration.

On the other hand, the presence of people coming from the south of the continent through Mexico exposed harsh features of Mexican society. The migrants had to face situations of discrimination, classism, and xenophobic behavior from the local community. However, adaptive processes related to the principles and values that characterized the individuals were identified, highlighting gratitude, spirituality, reasoning, and learning skills. On this matter the migrants took bad experiences as a reality that they had to live and face but tried to extract life lessons that helped them navigate their way. Also, they valued the support offered by people who did understand the reasons for their migration (Table 5):

**Table 5. Representative discourses of cognitive manifestations due to the migratory process**

Cognitive manifestations	Mental processes that allow an active role in the processes of reception, selection, transformation, storage, preparation, and retrieval of information, which allow the individual to function in their environment. (Concentration, language, adaptation, memory, attention, reasoning, or values).
Trigger question	<p>1. Considering the experiences you have lived and the people you have met: What have you done to adapt to this way of life?</p> <p>2. Considering the jobs you have done in Mexico: Have you noticed any changes in the way you perform at your jobs?</p>
Representative discourses	<p><i>“You have to adapt because there is no other way. Coming here costs a lot, and adapting to life, focusing on what I must do, is what gets you ahead. Thank God some people offer us their hand, and some people do not, who are left looking at us as if we were criminals; I don’t come here to do bad things, I just want to get ahead.”</i> PM-1.</p> <hr/> <p><i>“At the beginning it was difficult, getting to a place you don’t know ... but starting to interact with others is much easier, and you find friendly people and that makes you feel at home. It has been easy to integrate, here there are no selfishness or envy, and they make us feel good in our tasks, with enthusiasm, we try to do our best”.</i> PM-2.</p> <hr/> <p><i>“The food, the culture, everything is different... For my child it has been more difficult, he does not adapt to the meals, also the schedules. Here we go with the will of God. I have my frustrations, but people have been benevolent towards us...”</i>PM-6.</p> <hr/> <p><i>“I prefer to stay away from people, since I was shot in Honduras, my nerves have remained, and I am not very close to approaching people and talking to them. It has cost me work, I go to therapy with the psychologist, and I am trying...”.</i> PM-8.</p> <hr/> <p><i>“In my country, it was hard for me to concentrate, I couldn’t even wash my clothes, it was hell. Here the psychologist helped me a lot, she listened to me, what I went through was very painful, and she dedicated her time to me... Others have also been good, I wanted to share, integrate myself as a human being...”</i>PM-9.</p> <hr/> <p><i>“I have adapted quite well. Some Mexican people have given us their support, financially and emotionally. I know it is not easy to see us reaching out, asking for help, thank you for understanding...”</i> PM-13.</p> <hr/> <p><i>I have mentalized myself, I must do it, there is no other way ... There are good people here, and others who make a bad gesture at us, but I thank all those who have supported us greatly ... we do not do it because we want to, it is an obligation”</i> PM-14.</p>

Source: Self-made.

## 5) Mental health and COVID-19

Furthermore, the people interviewed live the migration process during the COVID-19 epidemic and this has represented a threat to their vital projects, has made the adaptation process more challenging, and has had repercussions for them in all dimensions of mental health. Additionally, during the interviews, it was noticed that, in addition to the challenges they faced before the pandemic, they now had to deal with the inability to generate income and delays to continue with the immigration permit procedures due to the closure of immigration offices, also, the fear of continuing their transit by the country due to exposure to contagion risks and the difficulty in complying with preventive measures. Accordingly, these new stressors caused them to worry, and fear, and generated a state of prolonged stress.

Although the refuge facility is receiving migrant population with an isolation protocol to avoid possible contagion of coronavirus within the facilities, sometimes it opted for the suspension of admissions. Some of the participants expressed how difficult the asylum and refugee status application processes were, the bureaucratic processes became inefficient due to the difficulty in managing the response to the COVID-19 epidemic.

Moreover, the measures of physical isolation in the shelter represented a challenge for the mental health of the migrants, reasonably, the aggravating factor was identified as being away from their environment and their support networks. Furthermore, prolonged isolation caused them stress, exhaustion, irritability, insomnia, anxiety, poor concentration and indecision, deterioration in work performance, demotivation to work, and/or bad mood. In general, everyone experienced uncertainty about their future, concern for their well-being, difficulties in accessing basic services, and guilt for leaving family members behind during a health crisis. Consequently, the environment in the shelter has become hostile due to the isolation, it was mentioned that for minors it has been more complicated and that the best option would be to continue with the displacement as soon as the health situation improves.

Despite migrants recognizing the alarming implications for individual and collective health due to COVID-19, they do not consider the disease as a decisive factor to modify their migration plans. Even facing the epidemic and the risks of migrating in a state of health emergency, their main motivations were the socioeconomic improvement, reaching a place free of violence, achieving a better quality of life for themselves and their families, and having a new opportunity to live free. Also, spirituality and traditional medicine were basic tools to face the challenges of being a person who migrates during a global health crisis. Accordingly, the following testimonies represent the co-occurrences between the dimensions of mental health and the COVID-19 epidemic (Table 6):

**Table 6. Representative discourses of the relationship between the dimensions of mental health of migrants and COVID-19**

Mental health and COVID-19	Manifestations in the mental health of migrants that were caused by the health emergency (COVID-19).
Representative discourses	<p><i>“Before the pandemic started, we went to sign a register at the INM offices, we only have permission to be in Tabasco ... due to the pandemic, the process to keep moving has been delayed ... my husband asked for a job, but they told him to come back when COVID cases drop...”</i>PM-6.</p>
	<p><i>“Everything is more difficult because of COVID. In the shelter, we work on activities, but it is difficult to carry them out, we get stressed from being locked up, and from so many problems. Two girls recently tested positive for COVID, so we all had to isolate ourselves. The hardest thing has been for my children who are not used to it. I'd rather keep moving than stay here. We are not afraid of the epidemic...”</i> PM-7.</p>
	<p><i>“I have not been able to work, with the epidemic it is more difficult, and I want to move forward for my children... I got COVID in Guatemala when I was migrating, I had all the symptoms! the “stuffy nose”, headache, fever. I could put a handful of salt in my mouth and didn't feel it. We cooked herbs; we even drank our urine. There in Guatemala and Honduras, we use a lot of herbs. We took ginger, lemon, the guava leaf, the bud of izote, honey and that's how I was cured ... I say that I already had COVID, and it will not hit me again, I never worried.”</i> PM-8.</p>
	<p><i>“The person who was on duty at the shelter would not let me enter, because it was prohibited by COVID and I asked him to subscribe, that I needed asylum and then he let me in ... I was afraid of migrating with the pandemic but if I stayed in Honduras, they would have killed me, and if I came here, I was also in danger, but I preferred to die on the way to ending my life there ... I was recently in isolation, but I was not afraid, I prayed and thought that I had to be healthy. Here we have material to protect ourselves, COVID is an exterminating disease, but I have felt good, lighter ...”</i>PM-9.</p>
	<p><i>“I have felt quite concerned because my family and I are exposed to catching the virus but thank God we have not felt bad at all. We are always with prevention measures, with face masks, with antibacterial gel, and we also make homemade medicines to avoid getting infected.”</i> PM-13.</p>
	<p><i>“The pandemic has only come to damage everything, we feel bad, with fear, with fear of catching any disease, of being affected by this pandemic. My son is already at the age to start studying, however, he cannot, due to the pandemic and another because here we have no way to put him to study.”</i> PM-14.</p>
	<p><i>“The pandemic is a complicated situation, it is dangerous. I have had many sick friends, and some have already died of it. According to what they tell me, it's very ugly ... well, the truth is, right now I'm not worried, everything is fine.”</i> PM-15.</p>

Source: Self-made.

## DISCUSSION

Certainly, the present work aims to explain the effect of the migration process during the COVID-19 epidemic on the mental health of migrants. As previously mentioned, it is based on the Conceptual Model from Otto to Gould, since they establish the basis of the reaction when there is a stressor, emphasizing that the body receives an alarm signal that breaks the homeostasis of the organism. Accordingly, it was noticed that the interviewees faced stressors (migration process, covid-19) that triggered alarm signals. In addition, some factors that increased the vulnerability of migrants were identified, such as age, immigration status, violence, lack of opportunities, and stigma. The combination of these stressors and vulnerability factors triggered the hypervigilance of symptoms and manifestations in the psychophysiological, emotional, behavioral, and cognitive dimensions. However, the answers showed that resilience is a primary characteristic of this vulnerable group, respectively most migrants developed the ability to adapt to adverse situations and continue their journey seeking to achieve their goals. Sajquim and Lusk affirm that resilience is in the hands of the migratory context, and it is expressed differently between individuals and groups of migrants, but it is always focused on overcoming the difficulties of life (9, 12).

The migratory process implied a series of changes and adjustments for the migrant person and their families. Since they must adapt to new cultures, traditions, and social functioning systems. In addition, when the migratory process happens during a crisis, such as the one we are currently experiencing due to COVID-19, the migrants adaptation process is more challenging and might include negative psychosocial consequences.

In the case of the psychophysiological dimension, it was observed that being physically well is related to spiritual well-being. Additionally, those religious beliefs can be comforting, provide strength, and willingness to face the challenges of the migratory process. Some people find refuge in such beliefs, and in many cases consider it as important as the medicine itself. For instance, Mallimaci considers that the religious beliefs of migrants are a central part of the set of goods that are mobilized together with the people during their journey and provide them with a sense of identity (13).

Furthermore, Martínez-Moneo and Martínez-Larrea commented in their study: “Psychiatric pathology in immigrants” that the combination of insomnia-headache-fatigue is one of the most



prevalent symptoms associated with somatizations in migrants (14). Moreover, in this study, the presence of some symptoms was observed, such as fatigue, suffocating sensation, and gastrointestinal disorders, involuntary weight loss, and anorexia. Consequently, the signs and symptoms described have a strong association with the most common mental disorders that affect migrants such as stress disorder, post-traumatic disorder, depression, Ulysses syndrome, and generalized anxiety disorder (15).

To continue with the case of the emotional dimension, De la Revilla et al. mention that there are difficulties that arise along the way, and those can lead to the failure of the migration process. Also fear of a strange, unexpected, and hostile environment can be the triggers of great distress over losing everything (16). Although, most the interviewees who experienced these emotions have decided to empower themselves to achieve the goal of a better future. According to Escobedo, some migrants develop internal strength, determination, and perseverance to achieve their goals (17). Therefore, this shows that, despite the difficulty of the migration process, arriving in a new place with new opportunities generates peace in the individuals who decide to migrate, with the hope of leaving behind the precarious conditions in which they lived in their country.

From the psychosocial point of view, the complex interaction that people establish with the environment causes a strong influence on their behavior, either positive or negative. Consequently, anger and frustration were some of the behavior modifications we found in our sample. On this matter, Páez mentions that during the process of incorporation into the new social and cultural environment, migrants find themselves forced to face an intense process of learning new codes that could make them react negatively (18).

Likewise, Calvo comments that overcoming the migratory grief is accompanied by personal evolution (19). Some migrants start a new life and make changes in the way they function in society to maintain meaningful relationships with people they know in the host nation, also rely on their family to increase their resilience, make significant changes to improve their attitudes and behaviors and increase confidence in themselves to get ahead and perform in the new society.

In addition, suicidal behavior is one of the main risks for this vulnerable group. However, there are protective factors for suicide (individual, family, community, and institutional) that reduce the probability of a mental disorder arising like mitigating such risk factors, providing security

and peace of mind to the individual (20). It is important to acknowledge that migrants are people in a state of vulnerability and adversity, the risks they challenge during the migration process, and the loss of protective factors can trigger the appearance of these suicidal thoughts (21). Most of the interviewees denied having experienced these suicidal thoughts or attempted against their lives, since their judgment relied on family and personal protective factors such as self-confidence, a personality open to new experiences, and goal-oriented reasoning.

In the case of the cognitive dimension, Quijano, Aponte, and Salazar, comment that mental illness is the cause of many cognitive dysfunctions and that these alterations become a primary symptom in affective and emotional disorders (22). Sajquim de Torres, M. and Lusk mention the importance of optimism, concentration, and a future orientation for the migrants (12). Participants in our sample emphasized the desire to improve through planning, the reasoning of the events they experienced, goal setting, and conscientious work to achieve goals.

Similarly, the importance of maintaining family relations was observed to better cope with the change in life experienced by migrants. The National Human Rights Commission in Mexico affirms that for most people who migrate, communication with their relatives during their journey is of vital importance since this act represents the union with their nation of origin and facilitates the adaptation process (23).

Finally, various studies have shown that COVID-19 has a negative impact on the mental health of people in the general population, and, on the most vulnerable population groups. The uncertainty associated with this disease, plus the effect of social distancing, isolation, and quarantine, can exacerbate mental health risks (24, 25, 26)

Accordingly, Ozamiz et al. assert that psychological well-being is key to face COVID-19, manage emotions and prevent mental disorders (27). Also, the preparation process before migration and contingency was more complicated for migrant children. According to the narrations of their parents, factors that altered the adaptation process became evident, such as the need to remain in constant hypervigilance to avoid contamination. Even with these difficulties experienced by migrants, they expressed that the epidemic is a secondary risk since their main motivation is to have the opportunity to live a dignified life.

## CONCLUSION

The findings of this study allowed to identify how migration manifests in the mental health of migrants. In that matter positive and negative manifestations were found in the psychophysiological, emotional, behavioral, and cognitive dimensions of mental health due to the migratory process and COVID-19.

Likewise, factors that impact the mental health of migrants in the place of origin and during transit include forced migration, persecution in their own countries, and the lack of possibilities to achieve a decent standard of living. Additionally, symptoms of depression, anxiety, and stress are observed due to stigma and attitudes of discrimination, violence, barriers to accessing services, and the perception of lack of social support.

Regarding COVID-19 was identified that migrants, particularly those in irregular immigration status, present stress, fear, anguish, and anxiety, because of to the uncertainty about their future, barriers to access health services in time, and the challenges of staying healthy. However, the willingness of better living conditions motivates them to continue their journey.

Also, it was noticed that as the level of social support increases in the host country, the stress during their stay in the host country decreases. In addition, a better adaptation for the migrant was made possible when they were invited to form meaningful relationships with the people who gave them support.

According to the findings there is no doubt that the relationship between mental health and the migration process is a very complex issue that requires greater attention. It is necessary to ensure that migrants are included in comprehensive health promotion programs. Moreover, it is imperative that not only immigration, but health policies are considered to guarantee social conditions that allow the migrant to carry out their migration process and achieve their social goals.

## Limitations

Initially the purpose of this study was to interview all the migrants, nevertheless, due to the presence of COVID-19 cases in the facilities, it was not possible to have contact with all of them. In spite this limits the generalizability of the results of this work, the findings are not lacking in

depth. Therefore, we suggest future research with broader samples of the Central American migrant community.

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## REFERENCES

- Narayanan N, et al. Disaster Preparedness: Biological Threats and Treatment Options. *Pharmacotherapy* 2018;38(2):217–234. doi:10.1002/phar.2068
- León-Amenero D, Huarcaya-Victoria J. Salud mental en situaciones de desastres. *Horiz. Med.* [Online]. 2019; 19(1): 73-80. Available from: [http://www.scielo.org.pe/scielo.php?script=sci\\_arttext&pid=S1727-558X2019000100012&lng=es](http://www.scielo.org.pe/scielo.php?script=sci_arttext&pid=S1727-558X2019000100012&lng=es). <http://dx.doi.org/10.24265/horizmed.2019.v19n1.12>.
- OMS. COVID-19: cronología de la actuación de la OMS [Online]. Abril 2020. Available from: <https://www.who.int/es/news-room/detail/27-04-2020-who-timeline---covid-19>
- OPS. Consideraciones psicosociales y de salud mental durante el brote de COVID-19 [Online]. Marzo 2020. Available from: <https://www.paho.org/es/documentos/consideraciones-psicosociales-salud-mental-durante-brote-covid-19>.
- Secretaria de Salud de México. Guía de cuidado para la salud [Internet]. *IMSS*. 2018. Available from: [http://www.imss.gob.mx/sites/all/statics/salud/guias\\_salud/2018/guia-salud-mujer-2018.pdf](http://www.imss.gob.mx/sites/all/statics/salud/guias_salud/2018/guia-salud-mujer-2018.pdf)
- Cabieses B, Gálvez P y Ajraz N. Migración internacional y salud: el aporte de las teorías sociales migratorias a las decisiones en salud pública. *Revista Peruana de Medicina Experimental y Salud Pública* [online]. 2018;35 (2): 285-291. <https://doi.org/10.17843/rpmesp.2018.352.3102>
- Organización Internacional para las Migraciones (OIM). INFORME SOBRE LAS MIGRACIONES EN EL MUNDO 2020. Ginebra. 2019. Available from: [https://publications.iom.int/system/files/pdf/wmr\\_2020\\_es.pdf](https://publications.iom.int/system/files/pdf/wmr_2020_es.pdf)

- OPS. Guía práctica de salud mental en situación de desastres [Internet]. 2009. Available from: [https://www.who.int/mental\\_health/publications/guide\\_mental\\_health\\_disasters/es/](https://www.who.int/mental_health/publications/guide_mental_health_disasters/es/)
- Otto MW, Gould RA, McLean Ry. The effectiveness of cognitive-behavior therapy for panic disorder without concurrent medication treatment: a reply to Power and Sharp. *Journal of Psychopharmacology* 1996;10(3):254-6. Doi: 10.1177/026988119601000314.
- Luque, V., & Herrera, I. Investigación cualitativa en el estudio de la aculturación de la población inmigrante marroquí en Andalucía. *Revista De Antropología Experimental*. [Online] 2015; 15, 553-565. Available from: <https://revistaselectronicas.ujaen.es/index.php/rae/article/view/2628> {<https://doi.org/10.17561/rae.v0i15.2628>
- Tovar-Parra, MC, Rodríguez- Garavito A. Lista De Chequeo Para Determinar El Impacto En La Salud Mental De Inmigrantes Venezolanos Que Ingresan A Colombia. [Tesis de grado]. Colombia: Universidad Católica de Colombia facultad de psicología. 2019. Available from: <https://repository.ucatolica.edu.co>.
- Sajquim de Torres, M., & Lusk, M. Factores que promueven la resiliencia de las mujeres inmigrantes mexicanas en los Estados Unidos: Aplicación de un enfoque de desviación positiva. *Estudios fronterizos*, 2018; 19. Available from: <http://www.scielo.org.mx/pdf/estfro/v19/2395-9134-estfro-19-e005.pdf>
- Mallimaci-Barral AI. Prácticas religiosas en contextos de migración. Algunas articulaciones entre transnacionalidad, localidad e identidades. Papeles del CEIC. *International Journal on Collective Identity Research* [Online]. 2016; (1):. Available from: <https://www.redalyc.org/articulo.oa?id=76544802010>
- Martínez-Moneo, M., y Martínez-Larrea, A. Patología psiquiátrica en el inmigrante. In *Anales del Sistema Sanitario de Navarra*. 2006; 29: 63-75. Gobierno de Navarra. *Departamento de Salud*. Available from: [http://scielo.isciii.es/scielo.php?script=sci\\_arttext&pid=S113766272006000200006&lng=es&tlng=es](http://scielo.isciii.es/scielo.php?script=sci_arttext&pid=S113766272006000200006&lng=es&tlng=es).
- Vilar-Peyrí, E, Eibenschutz-Hartman, C. Migración y salud mental: un problema emergente de salud pública. *Revista Gerencia y Políticas de Salud*. 2007; 6(13), 11-32. Available from: [http://www.scielo.org.co/scielo.php?script=sci\\_arttext&pid=S1657-70272007000200002&lng=en&tlng=es](http://www.scielo.org.co/scielo.php?script=sci_arttext&pid=S1657-70272007000200002&lng=en&tlng=es).
- De la Revilla et al. Estudio del duelo migratorio en pacientes inmigrantes que acuden a las consultas de atención primaria. Presentación de un cuestionario de valoración del duelo migratorio. *Aten Primaria*. 2011;43 (9):467—473. Available from: <https://www.sciencedirect.com/science/article/pii/S0212656711000485>

- Escobedo-Rivera, J. Adiós a la tierra prometida: Crónicas de migrantes latinoamericanos que retornan a su País de origen. *Revista de Investigaciones Altoandinas*. 2016; 18(4), 507-518. Available from: [http://www.scielo.org.pe/scielo.php?pid=S2313-29572016000400014&script=sci\\_arttext](http://www.scielo.org.pe/scielo.php?pid=S2313-29572016000400014&script=sci_arttext)
- Páez, A. Inmigración y salud: consecuencias del proceso migratorio. 2015; Argentina: N/A. Available from: [https://gredos.usal.es/bitstream/handle/10366/128584/TG\\_PaezAlcarria\\_Inmigracion.pdf?sequence=1&isAllowed=y](https://gredos.usal.es/bitstream/handle/10366/128584/TG_PaezAlcarria_Inmigracion.pdf?sequence=1&isAllowed=y)
- González-Calvo V. El duelo migratorio. *Trabajo Social*. 2005 (7): 77-97. Available from: <https://revistas.unal.edu.co/index.php/tsocial/article/view/8477/9121>
- Corona, B. Hernández, M, García, R. Mortalidad por suicidio, factores de riesgos y protectores. *Revista Habanera de Ciencias Médicas*. 2016; 15(1) Available from: [http://scielo.sld.cu/scielo.php?script=sci\\_arttext&pid=S1729-519X2016000100011&lng=es&tlng=es](http://scielo.sld.cu/scielo.php?script=sci_arttext&pid=S1729-519X2016000100011&lng=es&tlng=es).
- Castillo, C. Maroto, A. El suicidio desde un enfoque psicosocial y de salud comunitaria: los resultados del diagnóstico en Santa María de Dota, Costa Rica. *Anuario de Estudios Centroamericanos*, 2017; 43, 447-472. <http://dx.doi.org/10.15517/aeca.v1i1.28856>.
- Quijano MC, Aponte HM, & Salazar-Uricoechea, C. Cambios cognoscitivos en la enfermedad mental de pacientes que asisten al Programa de Hospital Día del Hospital Psiquiátrico Universitario del Valle. *Diversitas*, 2008; 4(1), 113-121. Available from: [http://pepsic.bvsalud.org/scielo.php?script=sci\\_arttext&pid=S1794-99982008000100010&lng=pt&tlng=es](http://pepsic.bvsalud.org/scielo.php?script=sci_arttext&pid=S1794-99982008000100010&lng=pt&tlng=es).
- Comisión Nacional de Derechos Humanos. Los desafíos de la migración y los albergues como oasis. Encuesta nacional de personas migrantes en tránsito por México. México: Universidad Nacional Autónoma de México. *Instituto de Investigaciones Jurídicas*. 2019. Available from: <https://www.cndh.org.mx/sites/all/doc/Informes/Especiales/Informe-Especial-Desafios-migracion.pdf>
- Ramírez-Ortiz J, Castro-Quintero D, Lerma-Córdoba C, Yela-Ceballos F, Escobar-Córdoba F. Consecuencias de la pandemia de la COVID-19 en la salud mental asociadas al aislamiento social. *Rev. colomb. anestesiol.* [Online]. 2020; 48(4): e301. Available from: [http://www.scielo.org.co/scielo.php?script=sci\\_arttext&pid=S0120-33472020000400301&lng=en](http://www.scielo.org.co/scielo.php?script=sci_arttext&pid=S0120-33472020000400301&lng=en). <https://doi.org/10.5554/22562087.e930>.
- Lozano-Vargas A. Impacto de la epidemia del Coronavirus (COVID-19) en la salud mental del personal de salud y en la población general de China. *Rev Neuropsiquiatr* [Online]. 2020; 83(1):51-56. Available from: [http://www.scielo.org.pe/scielo.php?script=sci\\_arttext&pid=S0034-85972020000100051&lng=es](http://www.scielo.org.pe/scielo.php?script=sci_arttext&pid=S0034-85972020000100051&lng=es). <http://dx.doi.org/10.20453/rnp.v83i1.3687>.



Huarcaya-Victoria J. Consideraciones sobre la salud mental en la pandemia de COVID-19. *Rev. Perú. med. exp. salud pública* [Online]. 2020; 37(2): 327-334. Available from: [http://www.scielo.org.pe/scielo.php?script=sci\\_arttext&pid=S1726-46342020000200327&lng=es](http://www.scielo.org.pe/scielo.php?script=sci_arttext&pid=S1726-46342020000200327&lng=es). <http://dx.doi.org/10.17843/rp-mesp.2020.372.5419>.

Ozamiz-Etxebarria N et al. Niveles de estrés, ansiedad y depresión en la primera fase del brote del COVID-19 en una muestra recogida en el norte de España. *Cadernos de Saúde Pública* [Online]2020; ;36(4): 1-9. <https://doi.org/10.1590/0102-311X00054020>