Ecuador Earthquake
16 April 2016

Desk Review of Existing Information with Relevance to Mental Health and Psychosocial Support (MHPSS)

On behalf of:

IASC
Inter-Agency Standing Committee
IASC Reference Group for Mental Health and Psychosocial Support in Emergency Settings

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Executive Summary

Introduction: Why was this desk review done? (Section 1.1)

This document presents findings from a desk review that focuses on populations affected by the 7.8M earthquake that struck coastal regions of Ecuador, South America on 16 April 2016 and subsequent earthquakes that impacted nearby regions on 18 May 2016.

The purpose of a desk review is to summarize available, extant information on mental health and psychosocial wellbeing for populations affected by disasters and complex emergencies. The importance of a desk review for providing timely guidance to support organizations providing mental health and psychosocial support (MHPSS) in emergency settings was first specified in the landmark 2007 publication, *Inter-Agency Standing Committee Guidelines for Mental Health and Psychosocial Support in Emergency Settings*. The outline for an MHPSS desk review was specified in the 2012 publication, *Assessing Mental Health and Psychosocial Needs and Resources: Toolkit for Humanitarian Settings*.

Introduction: How was the desk review done? (Section 1.2)

This desk review was conducted by faculty and postgraduate students at multiple universities following the example of a similar review prepared for the 2015 earthquakes in Nepal. The lead personnel for the Nepal review provided materials and templates to allow the procedures to be rapidly reproduced for Ecuador. The collaborators worked in close coordination with the end-users of the desk review, including the Inter-Agency Standing Committee Reference Group for Mental Health and Psychosocial Support in Emergency Settings (MHPSS RG) and the Pan American Health Organization (PAHO).

Following the Nepal example, collaborators examined, classified, and summarized the academic and grey literature generated from systematic searches of research databases and perusal of earthquake-specific materials posted on websites used by the humanitarian response community. Reviewers also corresponded with contact persons from the agencies active in the field and engaged in the MHPSS response.

Introduction: What kind of information was available? (Section 1.2)

Searches identified 1,483 documents that were scanned for relevance. Among these, 195 were “screen positives” that were examined in detail. A total of 91 documents have been specifically cited in this desk review.

Very few published, peer-reviewed journal articles were identified. The highest yield sources were on the humanitarian response websites, most notably Reliefweb.int, to complete the desk review outline. Ecuador has had few major natural disasters that were of sufficient scale to be researched and to produce a published literature. The lone exception was the series of 1987 earthquakes that generated multiple publications.
General Context: What should I know about the general context of Ecuador? (Section 2.0: 2.1-2.9)

Ecuador is a highly biodiverse country located in the Andes region of South America. It borders the Pacific Ocean and is located in the denominated “Ring of Fire”, meaning it is prone to natural disasters such as earthquakes, landslides, volcanic eruptions, etc. It has four major regions: Coast, Amazon, Highlands and Insular region. Ecuador has multiple active volcanoes, which have erupted several times over the nation’s history. Ecuador’s political history is one of instability and volatility. The first national constitution was established in 1835, starting a trend of periodically changing constitutions with the current constitution, in 2008, being the nation’s 20th. Between 1996 and 2006 Ecuador had six presidents. In 2006, Rafael Correa was elected President, taking office from 2007 until the present date. He led a campaign for a “Citizens Revolution” with the aims of reducing inequality and poverty. Economically, Ecuador is classified as an upper middle income country. Major sources of income of the nation are oil exports, remittances, and primary agricultural products. Ecuador’s economy depends greatly on oil exports, facing now the consequences as dramatical decrease of oil prices.

Demographically, Ecuador has a young population mainly living in urban areas. Despite its relatively small size, Ecuador has one of the highest population densities in South America, and over 30 different ethnic groups. It is also the country with the largest number of refugees in Latin America, with the majority being Colombian. Mestizos (65%) are the prevailing ethnic group in Ecuador, followed by Indigenous (25%), white (7%), and black (3%). Spanish, Quechua, and Shuar are the official recognized languages of Ecuador, though the vast majority of the population (93%) speaks Spanish. The majority of Ecuadorians adhere to Catholicism (80%).

Average life expectancy in Ecuador is 76.36 years which is nearly 2 years older than the Latin American average. Non-communicable diseases are on the rise, contributing to the nation's global burden of disease, while communicable diseases are decreasing. The top causes of years of life lost in Ecuador are lower respiratory infections, road injury, and interpersonal violence. Alcohol use is a leading risk factor for morbidity and mortality in Ecuador, which is significantly more common among men compared to women. The five leading causes of years lived with disability in Ecuador are low back pain, major depressive disorder, iron-deficiency anemia, anxiety disorders, and neck pain. Over the last decade, government investment in the health sector has doubled, with 2013 rates of 7.5% of the GDP being spent on health compared to 1995 rates of 3.4%. Government health care is free of charge, but due to shortage of human resources, a fragmented health system, insufficient even coverage, out of pocket payment rates are high (43.9%).
MHPSS Context: What is the prevalence of mental health problems in Ecuador? (Section 3.0: 3.1.1, 3.1.5)

Neuropsychiatric disorders in Ecuador account for more than one-fifth of the global burden of disease. Major depressive disorder and alcohol use/abuse problems are the most common mental disorders. Sexual and gender-based violence occurs at high rates.

MHPSS Context: What are the cultural concepts of distress in Ecuador? (Section 3.0: 3.1.2-3.1.4)

Idioms of distress vary by population. The areas most affected by the earthquake included a combination of indigenous cultures and mestizo populations. For the predominant mestizo population, biomedical psychiatric diagnoses of the West are more accepted. Somatic expressions of mental health conditions, particularly presenting as gastrointestinal distress and headaches, are also very common in Ecuador.

In the Andes region of Ecuador the indigenous tribes utilize traditional healers called yachactaitas. Among the multiple indigenous communities of Ecuador, there are no terms that directly translate to Western psychiatric diagnoses such as PTSD, depression, or anxiety. Nervios is the closest and most common expression of distress from indigenous communities of Ecuador that usually refers to symptomatology of depression. However, nervios exists along a continuum from mild to more severe. Roots for mental health conditions are related to supernatural conditions.

MHPSS Context: What are common sources of support and care for mental health and psychosocial problems outside of the biomedical health system in Ecuador? (Section 3.0: 3.1.6-3.1.10)

There is considerable reliance on extensive, multi-generational family networks to provide social support. There is also prevalent use of herbal medications, home remedies, and traditional healers.

There are few linkages among governmental sectors. For example there are almost no public educational campaigns providing information on mental health. There are limited resources for education of special needs children. Sexual and gender-based violence (SGBV) is prevalent and not effectively addressed in some communities.

One helpful resource with considerable presence within Ecuador is the continuous presence of humanitarian aid organizations that incorporate psychosocial elements into their varied programs. Examples include UNICEF, Doctors without Borders, International Organization on Migration, and Plan International. When the 16 April 2016 earthquake occurred, these groups - already in-country - were able to pivot rapidly to disaster relief activities that also incorporated psychosocial support.
MHPSS Context: What is the structure of the formal mental health care system in Ecuador? (Section 3.0: 3.2.1-3.2.3)

Ecuador currently has two psychiatric hospitals and several private residential facilities. The nation has 45 psychiatrists, 269 psychologists, and 229 social workers.

Ecuador's mental health system is in transition. Ecuador does not currently have a mental health law. The National Strategic Plan for Mental Health focuses on mental health promotion/prevention. A major direction for Ecuador is the integration of mental health into primary health care coupled with a strong focus is on deinstitutionalization of mental patients. Networking among primary, secondary, and tertiary care is a stated priority.

Humanitarian Context: What are the prior experiences in Ecuador with humanitarian emergencies? (Section 4.0: 4.1-4.3)

Ecuador has a history of experiencing natural disasters, primarily earthquakes and volcanic eruptions. Thus, there have been efforts to strengthen infrastructure and build human resource capacity; however, these efforts have not been sufficient and Ecuador remains vulnerable to the effects of disaster. Multiple bilateral and non-governmental organizations have deployed humanitarian response teams to address the current needs of people in regions affected by the April 2016 earthquake. Structural and political barriers are currently making it difficult for humanitarian responders to deliver aid, especially in rural areas in Ecuador. Despite these challenges, a small number of agencies have reported developing and delivering psychosocial support interventions in these settings in response to the documented need for such services.
1.0 Introduction

The 16 April 2016 Ecuador earthquake occurred at 18:58:37 ECT. The earthquake was registered with a moment magnitude of 7.8. Human impact is estimated using the Modified Mercalli Intensity (MMI) Scale (http://earthquake.usgs.gov/learn/topics/mercalli.php) and the maximum MMI for the Ecuador earthquake was VIII (Severe) on a 10-point Roman numeral scale ranging from I-X.

Despite the powerful magnitude, the impact occurred in an area with low population density, with the epicenter located about 29 km (18 mi) from the towns of Muisne and Pedernales. Strong ground shaking but minimal structural damage were experienced in the nation’s capital city of Quito, approximately 170 km (110 mi) from the epicenter. Areas sustaining severe damage and casualties were Manta, Pedernales, and Portoviejo. The Manabi province experienced massive structural damage.

On 18 May 2016 two strong aftershocks of moment magnitude 6.7 and 6.8 occurred in the vicinity of the original 7.8 main shock. causing additional damage.

The Government of Ecuador has issued frequent updates and situation reports available athttp://www.gestionderiesgos.gob.ec/informes-de-situacion-actual-terremoto-magnitud-7-8/. As of 19 May 2016, the cumulative numbers of deaths were 662; injuries, 6,274; and persons displaced to shelters, 28,827.

The humanitarian aid portal, ReliefWeb had 675 posts for this disaster as of mid-day 19 May 2016: http://reliefweb.int/disaster/eq-2016-000035-ecu

The Assessment Capacities Project indicated that IDPs have increased to 33,366 and persons in need to 350,000 by early May 19, 2016 (prior to the two strong aftershocks): http://www.acaps.org/country/ecuador

The UN Office for the Coordination of Humanitarian Affairs has established the following platform for Ecuador: https://www.humanitarianresponse.info/es/operations/ecuador

1.1 Rationale for the desk review

This desk review is intended to synthesize existing information related to mental health and psychosocial needs and services in Ecuador. This document will hopefully be used by humanitarian actors to plan and deliver mental health and psychosocial services to persons in Ecuador that are socio-culturally relevant and build upon existing knowledge of such services in the Ecuadorian context. Furthermore, this review is hoped to reduce the effort required to gather primary data on mental health and psychosocial well-being in Ecuador through needs assessments and other methods.

1.2 Desk review methods

This desk review is structured in accordance with the World Health Organization (WHO) and United Nations High Commissioner for Refugees (UNHCR) toolkit for mental health and psychosocial needs and resource assessments (WHO & UNHCR, 2012). The methods were implemented collaboratively between faculty and students at King's College London, University of Miami and Johns Hopkins Bloomberg School of Public Health. Information on searches, relevant publications and drafts of the desk review were shared using Google Drive.

The desk review process began with developing the desk review procedures specific to this review. This included developing the desk review structure (i.e. table of contents), determining appropriate databases and websites for searching, creating a search strategy, screening titles and abstracts, reviewing full texts of articles that screened positive and determining their relevance, summarizing included documents, and compiling the summaries into the desk review report. Further details of these steps are outlined below:

1. Developing the table of contents

The table of contents used for this desk review was created using the WHO and UNHCR toolkit (Tool #9), which can be found here (pg. 60):
http://apps.who.int/iris/bitstream/10665/76796/1/9789241548533_eng.pdf

2. Identifying databases and websites for searching

We searched the peer-reviewed and grey literature for documents that provided information on mental health and psychosocial support in Ecuador, the general context in Ecuador, or the history of humanitarian emergencies or responses in Ecuador. We also included documents that were recommended by experts that we communicated with throughout the desk review process. Websites and databases that were included for searching included ACAPS, ACT Alliance, ALNAP, CBM, Gestion de Riesgos, IFRC, IOM, LILACS, MHPSS.net, PAHO, PILOTS, Plan International, PsycInfo, Pubmed, Relief Web, Save the Children, UNICEF, Web of Science, WHO and World Vision.
3. Creating a search strategy

Due to the variety of search functionality in the databases and websites included in our searches, the search strategy varied slightly between sources. The search strategy was designed to be sensitive and inclusive given the breadth of topics included in the table of contents. Search terms included “Ecuador”, “Equador”, “health”, “salud”, “psychosocial”, “psych*”, “psico*”, “protec*”, “mental”, “mental health”. These searches produced a total of 1483 documents to be screened in step 4.

4. Screening titles and abstracts

All results initially underwent an initial title and abstract screen. If the document appeared to be relevant to any section in the desk review table of contents it was included. Of the 1,483 total hits, 195 were considered “screen positives” and moved to full text review.

5. Reviewing full texts

All documents that screened positive were reviewed in full. During this process, the reviewer identified all sections of the desk review table of contents for which the document contained relevant information. Each article that was included was indexed to one or more sections of the table of contents as appropriate in a Google Spreadsheet.

6. Summarizing included documents

Each section of the desk review was assigned to one or more members of the desk review team. The person responsible for a given section was responsible for identifying all articles that were indexed to that section. The reviewer(s) then read the documents in full and produced concise summaries of the information contained in that document that were relevant to their assigned section.

7. Drafting the desk review

Similar to step 6, each section of the desk review was assigned to one member of the desk review team for drafting. This person read the summaries of all documents that were indexed to that section and drafted the corresponding section of the desk review such that it provided a comprehensive synthesis of the documents included in this review.
References for Section 1

2.0 General Context

2.1 Geographical and climatic aspects

Summary points

- Ecuador is divided into 4 regions; of these, the coast region was hit hardest by the earthquake
- Ecuador has two seasons: dry and wet
- The climate overall is characterized by heavy rainfall, warm temperatures, and subtropical highland climate, varying according to region
- Ecuador is in the “Ring of Fire” and thus prone to natural disasters including earthquakes, volcanic eruptions, floods, and landslides
- Geography and climate plays an important role in the effects and aftermath of the earthquake, including humanitarian aid and health concerns

Geography of Ecuador

Ecuador is located in South America directly over the equator, and is neighbored by the Pacific Ocean to the west, Colombia to the north, and Peru to the south and east. It is located in the “Ring of Fire” zone in the Pacific, which is prone to earthquakes. There are also multiple volcanoes and mountains in the country’s borders, including Chimborazo (the tallest at 6310 meters) and Cotopaxi (the second highest most active volcano in the world, 5897 meters tall). Due to its location, Ecuador is prone to both earthquakes and volcanic eruptions, as well as floods and landslides. Yearly rainfall is heavier than the global average, at 1,150mm per year as compared to 300mm per year globally. Natural resources, including petroleum, are rich in Ecuador, but rates of pollution, erosion, and deforestation are increasing environmental concerns.

The climate and temperature of Ecuador varies across its regions. There are only two seasons in Ecuador: dry and wet. The total area of the country is 256,370 km$^2$, and is divided into 4 regions: the coast, highlands, Amazon, and insular regions. These are divided into 24 provinces, which are further subdivided into 205 cantons. The highest point of Ecuador is at 6310 meters above sea level, and the lowest at 0 meters above sea level; temperature in the country varies by altitude.

The coast region is divided into seven provinces including Esmeraldas and Manabí, the two hardest hit by the earthquake. The climate in this region is tropical, with temperatures around 23-26°C. It is affected by the El Niño phenomenon, which causes heavy rain and flooding in the region and also increases risk of vector-borne diseases, such as Zika and Chikungunya.

The other regions include insular region (the Galapagos Islands), which has a similar climate and temperature to the coast region, the highlands (ten provinces with temperatures around
13-16°C), and the Amazon (six provinces with temperatures around 25°C and regular heavy rainfall.

(Secretaría Nacional De Planificación y Desarrollo, 2013)

Overview of damage

(Pacific Disaster Center, 2016)

The map produced by the Pacific Disaster Center includes imaging of the earthquake intensity. The zones most affected included Manabi and Esmeraldas, with the epicenter in the city of Pedernales at 7.8 on the Richter scale. Cities including Portoviejo and Jipijapa experienced moderate intensity, and lower intensity was experienced in Quito and Latacunga (Pacific Disaster Center, 2016).

Humanitarian aid

9,500 people were displaced in Esmeraldas and at one month after the earthquake, were living in difficult conditions due to intense heat and humidity, lack of clean water, and food shortages. Because this is the second most affected province (after Manabi), the area has been receiving less governmental aid than Manabi (Action Against Hunger, 2016). Much of the humanitarian aid has revolved around establishing safe water supplies and safe points of delivery for water, as well as maintaining adequate food supplies (Action Against Hunger,
The lack of safe drinking water and exposure to dead bodies increases the environmental risk of Zika, dengue, and Chikungunya.

2.2 Demographic aspects

Summary Points

- Ecuador has a young population mainly living in urban areas
- Despite its relatively small size, Ecuador has one of the highest population densities in South America, and over 30 different type of ethnic groups
- Ecuador is the country with the largest number of refugees in Latin America
- Groups that can be potentially vulnerable include children, people with disabilities, refugees, women, and indigenous people

Ecuador has a recorded population of 16,272,968 inhabitants, with one of the highest population densities in the region (CIA, 2015). Nearly two thirds of the population resides in urban areas and there is an estimated population growth rate of 1.37% (ACAPS, 2016). Ecuador has a large young population, with 47.1% of the population being 24 years or younger with a median age of 26.7 years (CIA, 2015). Life expectancy for the overall population is 76.36 years, with women having 79.46 years and men 73.4 years (CIA, 2015). The literacy rate is 91.6% for the total population, with men having slightly higher literacy rates compared to women (93.1% for males and 90.2% for females) (CIA, 2015).

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A relatively significant percentage of the population lives abroad, with an estimated 2 to 3 million Ecuadorians residing in Spain, the United States, and Italy (CIA, 2015). The first large scale migration occurred in the 1980’s, when the nation’s past economic crises forced thousands of Ecuadorians to migrate to the New York and New Jersey (CIA, 2015). The second wave of migration occurred during the early 2000’s when Ecuador encountered a severe economic crisis where the national currency, sucre, was replaced by the US dollar (CIA, 2015). Since then, thousands of Ecuadorians continue migrating to the United States and Spain (CIA, 2015).
**Potentially vulnerable populations**

Within the country, there are certain groups that have been consistently identified as being vulnerable. Careful attention must be paid when considering the special needs these groups may require both after the disaster and during the reconstruction process.

**Children:** Youth make up a significant proportion of the population, with 28.5% of Ecuador’s inhabitants being 0-14 years old, and 47.1% of the population being 24 years or younger (CIA, 2015). Four hundred and two thousand children in Ecuador are chronically malnourished and 37,000 acutely malnourished. In the northern border areas, chronic malnutrition affects up to 36% of children. Initial reports estimated 250,000 children had been affected by the earthquake. At least 720,000 are in need of humanitarian assistance, and over 25,000 are living in temporary shelters (UN Children's Fund, 2016).

**People with disabilities:** As of 2016, there are 410,764 people in Ecuador classified as being disabled, representing 2.5% of the total population (CONADIS, 2016). Nearly half of people living with disabilities have a physical disability (47.52%), followed by intellectual disability (22.31%), hearing impairment (12.72%), visual disability (11.78%), psychological and psychosocial disability (4.31%) and speaking disability (1.37%) (CONADIS, 2016).

**Refugees:** Ecuador is the country with the greatest number of refugees in Latin America, taking in over 200,000 refugees and people in need of protection from Colombia. A large number of the refugees were living in the zone affected by the earthquake, together with refugees from other countries (ACNUR, 2016a).

**Women:** Divorced women and separated women experience the highest rates of gender-based violence in the country (World Bank, 2000). More than half of women in Ecuador have been victims of gender-based violence during their lifetime. Furthermore, there is high rate of sexual violence towards girls in schools. Although there are significant wage and employment gaps, sexual and gender-based violence are the biggest risk factors for poor health outcomes among women in Ecuador (World Bank, 2000).

**Indigenous:** Indigenous people in Latin America are disproportionately poor, have social disadvantages, and have higher rates of illiteracy and unemployment compared to the rest of the population. Ecuador is one of the countries in Latin America with the highest indigenous population (Kohn, 2014).

### 2.3 Historical aspects

**Summary points**

- Ecuador gained independence from Spain in 1822 to become part of La Gran Colombia
- Between 1830 and 1859 Ecuador broke from La Gran Colombia and began self rule, ridding itself of slavery and indigenous taxation
Ecuador has faced two periods of rapid economic and industrial growth; from 1875 to 1895, and from 1948 to 1960, due to export demands for cacao and bananas. Ecuador is also an exporter of oil.

Peru has been in conflict with Ecuador, including the Peruvian invasion of Ecuadorian territory in 1941, and multiple skirmishes occurring between 1979 and 2000.

A major earthquake struck Ecuador in 1987.

Rafael Correa was first elected president in 2006 running on a neoliberalist platform. He has since been twice been re-elected, and remains president to this day.

Ecuador accepts more refugees than anywhere else in the region, with 200,000 people of refugee status living within its borders. (ACNUR, 2016b; Ayala Mora, 2008).

### 2.4 Political aspects

**Summary Points**

- Ecuador is a constitutional democracy with five bodies of power: executive, legislative, judicial, transparency, and social control and electoral.
- The last constitutional revisions were in 2008, and occur periodically.
- The current president is Rafael Correa (2013-2017).

Ecuador’s political history is one of instability and volatility. In 1830 Ecuador became an independent state after its separation from “La Gran Colombia”. A Venezuelan, Juan José Flores, became Ecuador’s first president. That same year, the first national constitution was established. It was revised completely in 1835, starting a trend of periodically changing constitutions. The 2008 constitution is the most current and is the nation’s 20th (Ayala Mora, 2008).

It was not until Garcia Moreno’s presidency between 1860-1865 and 1869-1875 that the state began consolidating and centralizing government and the management of its resources. This increase in organisation resulted in improvements in education and communication. After Moreno’s term, Ecuador experienced a political power struggle between the land owning oligarchs and the Catholic church against the coastal elite who were mainly exporters (Ayala Mora, 2008).

From 1895 to 1912 the country experienced a “Liberal Revolution” under the leadership of Eloy Alfaro, which further helped to consolidate the nation. Church and State were separated, the mestizo national plan was implemented, and a national rail service was established resulting in improved economic integration of the nation (Ayala Mora, 2008).

From 1925 onward, new political parties began to emerge, reflecting the increased diversity of society. This heralded a period of great political stability under the leadership of Velasco Ibarra, who served five terms as president, from 1948 to 1960. This was followed by a
volatile period. The country did not regain stability until 1972, with the establishment of Ecuador’s last dictatorship, which ended by military coup in order to conduct democratic elections (Ayala Mora, 2008).

In 1979, Ecuador returned to democracy with the presidency of Jaime Roldós. Nevertheless, the country had political stability with all presidents finishing their 4-year terms until 1996, when Abdalá Bucarám was elected president. Six months after his election, Congress declared Bucarám mentally unfit to continue as president (Ayala Mora, 2008).

Between 1996 and 2006 Ecuador had six presidents. Then in 2006 Rafael Correa was elected as President, taking office in 2007. He led a campaign for a “Citizens Revolution” with the aims of reducing inequality and poverty (Ayala Mora, 2008). In 2015, President Correa announced his desire for presidential term limits to be removed, which would allow him to run in the 2017 presidential elections. This is yet to be decided. There are many political parties, but they have failed to nominate a single candidate as of yet. Additionally with the decline in oil prices public spending has in turn declined, provoking anti-government protests (ACAPS, 2016).

After the April 2016 earthquake, the government activated its emergency protocols. The National Operations Center (COE) has been coordinating relief efforts between all governmental institutions. Despite this, the disaster has clearly shown serious government inadequacies and major challenges in their response to this crisis, necessitating emergent international assistance (World Food Programme, 2016).

2.5 Religious aspects

Summary Points

- Ecuador is a religious country with dominant religious expression coming in the form of Christianity, specifically Catholicism
- Ecuadorian Catholicism is a mixture of Spanish Catholicism with some indigenous expression
- Religious minorities have traditionally been poorly treated in Ecuador, especially Ecuadorians who practice traditional indigenous religions

As with much of South America, Ecuador’s cultural and religious influence are a mixture of Spanish and indigenous influences, which mixed during the roughly 500 years of Spanish colonialism (Gumucio, 2002). Catholicism eclipsed Ecuador’s indigenous religions, and the majority of the religious population, 80.44%, claim it as their faith (INEC, 2012). Ecuador is a religious country in general, with 91.95% of the population claiming a religious affiliation. Of those who are not Catholic, 11.30% are Evangelical, 1.29% are Jehovah’s Witnesses, and Mormons and Jews represent less than 1% each. The remaining 5.92% of the religious population claims various minority religions (INEC, 2012).

Ecuadorian Catholicism is not a replica of Spanish Catholicism, as it has incorporated some
aspects of traditional indigenous cultures, but its essence is more Catholic than local (Gumucio, 2002). Catholicism has traditionally been used as a way to control indigenous communities within South America, and Ecuador is no exception (Gumucio, 2002). The culture and religious beliefs of indigenous communities have historically been marginalised, with autochthonous religious expression being penalised by religious authorities, though this has changed since a series of uprisings in the early 1990s. At the end of the 20th century, Ecuador separated religion and education. In the early 21st century saw local acceptance of indigenous rites and religions, including ritual healing, shamanism, and a general reaffirmation of ethnic identity.

As part of the recovery process, CIFAL, along with the Catholic Emergency Commission, are providing spiritual and emotional guidance for the earthquake victims in affected areas. Spiritual and emotional help, are part of a larger aid network that encompasses food and shelter. (UN Institute for Training and Research, 2016).

### 2.6 Economic aspects

**Summary Points**

- Ecuador is classified as an upper middle income country according to the World Bank
- Major sources of income of the nation are oil exports, remittances, and primary agricultural products
- Ecuador's economy depends greatly on oil exports, facing now the consequences of dramatical decrease of oil prices

According to the World Bank, Ecuador's GDP in 2014 was $100.9 billion and inflation a year later was 4.0%. It is characterized as an upper middle-income country (World Bank, 2016). The GDP per capita in 2015 was around $6,000. The country lacks its own currency and has a dollarized economy that has helped the financial stability (World Bank, 2016). The unemployment rate is quite high, in the last year above 5%.

Two of the biggest sources of Ecuador's income are oil exports and remittances from abroad along with some primary agricultural products such as exportation of bananas and shrimp (Ray & Kozameh, 2012). The Ecuadorian economy relies heavily on the revenues from oil exportation. For example, in 2006 the income was $4.283 million, 53% of which was destined to the state’s budget. Additionally, oil money is the first source for paying external debt. Between 1994 and 2003 the income coming from oil represented 24% of all that the state received. In recent years, that percentage has increased (FLACSO, PNUMA & MAE, 2008).

Since 2006 Ecuador has experienced significant economic progress. The GDP increase averaged 4.6 percent due to high oil prices and finance from abroad. This allowed an increase on social spending. Moreover, the poverty rate and Gini index declined from 37.6 to 22.5 percent and 0.54 to 0.47, respectively (World Bank, 2016). Poverty is especially high...
in rural areas and indigenous populations.

Nevertheless, oil prices have dramatically decreased since 2016, and this has started to affect the population as the public investment has shrunk (World Bank, 2016). Along with a more complex road to new sources for funds and the recent earthquake, the outlook is not so bright for Ecuador’s economy.

### 2.7 Gender and family aspects

**Summary Points**

- Family structure has changed dramatically over the past decade due to migration and globalization
- After the 1987 earthquake, weak family ties were associated with higher rates of emotional stress
- Children are most vulnerable as a result of the earthquake with over 150,000 children left unprotected and disoriented in camps and shelters
- Ecuador faces several gender-related problems as gender violence, wage-gaps and higher education access gaps for young women and girls
- Women’s vulnerability to gender based violence has resulted in prevention workshops in camps, however there is a need for medical care and psychosocial support for women who may experience violence in shelters and camps
- Poor sanitary conditions after the earthquake increases pregnant women’s exposure to Zika virus

**Family Structure**

For over a decade, family structure in Ecuador has been influenced largely by migration, economics, religion, globalization and education; resulting in a major evolution of the concept of family. Most families have diverted from the traditional familial structure of two parents and children. Families often are missing one or more parents and include other members in the household structure, such as aunts, uncles, cousins, grandparents, or grandchildren. This drift in family structure is closely linked to a decrease in average number of people living in household. The decrease has been posited to be a result of a migration boom that began in the early 2000’s when Ecuador went through a huge economic crisis, and over 1 million Ecuadorians left to live and work abroad. Migration and globalization’s impact on family, will affect post-earthquake recovery more. For instance, following the 1987 earthquake in Ecuador, individuals with higher rates of emotional stress were single with weak family ties.

Since the earthquake, there has been great concern over children left on their own due to missing or deceased parents and relatives. In the weeks following the earthquake, an estimated 8,444 families were in shelter facilities, with many more left homeless, and these numbers are expected to further increase. As a result of familial displacement, over 150,000
children have been left unprotected and disoriented in makeshift camps and shelters. This displacement and lack of protection raise two major concerns—children’s’ vulnerability and a decrease in access to education. According to UN Children’s Fund, the earthquake left more than 120,000 children without access to education. Mostly, schools in affected areas were destroyed or damaged and children are not regularly attending primary and secondary education (UN Children's Fund, 2016b). According to locals and aid volunteers, children may be endangered and vulnerable in camps and some towns (UN Children's Fund, 2016c).

**Gender**

The role and status of women in Ecuador is complex and nuanced. In some regions of Ecuador, such as the mestizo communities which form the majority of the population, women have extensive access to education, jobs and careers. Despite access to education and jobs in these regions, many women (about 25.34%) work in low paid service jobs that also constrain them. In other regions, women are limited and confined by gender roles. For instance, in the Napo River basin women’s status is regarded as necessary for only reproduction, and thus women here are confined to domestic and child rearing. Along the Ecuadorian coast groups known as Montubio have strictly defined gender roles within their communities, women and girls are raised to be wives and to serve men (World Bank, 2000).

In Ecuador, women’s status and beliefs about their role is believed to be a serious contributor to widespread gender based violence. Six out of ten women in Ecuador suffer from gender based violence during their lifetime. Divorced women and separated women hold the highest rate of gender violence in the country (World Bank, 2000). There is also a high rate of sexual violence towards girls in schools. Women in Ecuador are mostly vulnerable through sexual and gender related violence; the earthquake increases women’s vulnerability, especially for women in shelters and camps (World Bank, 2000). Post-earthquake efforts have strove to prevent increased high levels of violence in camps through coordinated workshops that aim to prevent violence towards women and girls (Plan International, 2016). However, more work needs to be done to help deliver effective medical treatment and psychosocial support for women who experience gender based violence while in camps and shelters.

In Ecuador, teenage pregnancy has increased in the past decade. Most teenage mothers have either formed new families with their partners, or stayed with their nuclear families. Most teenage mothers have a high school education (56%), however the majority are economically inactive/without work (75%). This puts young mother at risk for displacement and health issues. Almost 20,000 pregnant women are in risk of developing diseases, like Zika, due to the poor sanitary conditions after the earthquake. In the midst of mud, mosquitoes, heat and destroyed structures; pregnant women and babies are in need of specialized medical care.
2.8 Cultural aspects

Summary Points

● Ecuador is a plurinational and intercultural state which recognises its multiple rich nationalities, even those which have historically been oppressed and neglected, such as the indigenous and Afro communities.
● Social classes are grouped by rural and urban, as well as most prominently by race, which is historically rooted in colonial traditions in which indigenous peoples had less access to social, economic, and political resources.
● This fragmentation disrupts formation of a unified national identity by creating ambivalence towards the state. Identity is more strongly connected to independent local communities.

Overview

Ecuador, a former Spanish colony, is located on the equator, on the Pacific Ocean. It is bordered by Colombia and Peru. In the last decade, Ecuador has recognised itself to be a plurinational and intercultural state that recognises its diversity amongst indigenous nationalities that have been historically neglected and oppressed by the white and mestizo population (Altman, 2013). For detailed information on demographics see section 2.2 Demographics. For cultural aspects related to gender see section 2.7 Gender and Family Aspects. For cultural aspects related to understandings of mental health see sections 3.1.2, 3.1.3, and 3.1.4. For cultural aspects related to help seeking section 3.1.10 Help Seeking Patterns.

Social identity among Ecuadorians is delineated along racial lines, reflecting their colonial past. There is a social hierarchy between the three main races: white, mestizo (mixed white and indigenous in varying degrees), and indigenous. Indigenous peoples often faced discrimination under Spanish colonial rule, and this attitude persists in modern society.

There is geographic polarity in attitudes about race between the two largest cities in Ecuador, Quito and Guayaquil. Guayaquil maintains this attitude of inferiority of indigenous peoples. Mestizo, who are white and indigenous mixed race, are further delineated into ‘cholo’ and ‘longo’. This is based upon their skin colour and the prominence of their indigenous features, with more prominently indigenous features considered inferior (Roitman, 2008).

This lies in contrast to the capital city, Quito. Here, being indigenous is viewed as being more racially pure, while mestizo comprise the majority of the population. This is an attempt to diminish or hide racial discrimination by promoting a more egalitarian attitude towards race (Roitman, 2008).
Furthermore, mestizo in the two cities hold disconnected identity narratives. These issues point to the complexity and diversity of identity and why a single national mestizaje is an inadequate oversimplification (Roitman, 2008).

Beyond race, identity also fragments along rural versus urban lines. Consequently, a cohesive national identity is lacking among Ecuadorians, particularly among provincial indigenous peoples, thus creating an ambivalence in a sense of community. The Confederation of Indigenous Nationalities of Ecuador (CONAIE) appeals to people more than a national community. This is poorly recognized in social movements or by national analysts (Radcliffe, 1998). The implications post-earthquake are that relief efforts and projects must be focused around local community structures, such as religious or civil associations and ethnoracial groups, including CONAIE.

2.9 General health aspects

2.9.1 Mortality, threats to mortality, and common diseases

Summary Points

- Life expectancy in Ecuador is 76.36 years, almost two years greater than the Latin American average
- Non-communicable diseases and injuries are on the rise in contributing to DALY’s; while communicable, neonatal, maternal, and nutritional causes are declining
- A leading risk factor in Ecuador is alcohol use, which is significantly higher in men compared to women
- An estimated 700 deaths are attributable to the 2016 Ecuador earthquake with over 1.9 million being affected
- An estimated 720,000 were in need of help following the earthquake on April 16, 2016
- The top priorities in the aftermath include enforcing epidemiological surveillance, reestablishing health services, vector control, and access to clean drinking water
- Stagnant water is a breeding ground for vector-borne, waterborne diseases, and foodborne diseases
- There is a high risk of gastrointestinal diseases, respiratory illnesses, Zika virus infection, Dengue, Malaria, and Chikungunya

According to the 2010 figures of global burden of disease, the top causes of years of life lost in Ecuador are lower respiratory infections, road injury, and interpersonal violence (WHO, 2015). Alcohol use is the leading risk factor in the country, with males having higher consumption rates compared to females (WHO, 2015). Following alcohol use, leading risk factors include dietary risks and high blood pressure (WHO, 2015). The five leading causes of years lived with disability in Ecuador are low back pain, major depressive disorder, iron-deficiency anemia, anxiety disorders, and neck pain (WHO, 2015). Road injury, lower
respiratory infections, low back pain, and interpersonal violence are the three leading causes of DALY’s, or disability adjusted life years, which are calculated by quantifying both disability and premature mortality (WHO, 2015).

Compared to 1990 figures of the global burden of disease, new additions contributing to DALY’s are interpersonal violence, lower back pain, and diabetes mellitus. Overall, non communicable diseases are on a rise, contributing to the nation’s global burden of disease, while communicable diseases are decreasing (WHO, 2015). For instance, Ecuador achieved the targets outlined by the sixth Millennium Development Goal (MDG 6), by decreasing the cases of Malaria from more than 100,000 cases in the previous decade to less than 3,000 cases in 2010 (WHO, 2013). HIV incidence rates have also significantly been reduced, dropping from an estimated 36.2 per 100,000 inhabitants in 2009 to 5.3 per 100,000 inhabitants in 2014 (WHO, 2015).

After the devastating earthquake in Ecuador approximately 700 people were found dead, 8,340 were injured, and more than 29,000 were displaced (UNHCR, 2016; UNICEF, 2016). Infrastructure was destroyed including 35 health establishments, 14 hospitals, school buildings and houses (Care International, 2016; PAHO, 2016). Areas with inadequate access to clean water prior to the earthquake were exacerbated by heavy rainfall and environmental damage that followed the earthquake (Secretaría de Gestión de Riesgos, 2016; UNICEF, 2016).

The province of Manabi in particular is at a high risk for dengue, Zika and chikungunya due to stagnant contaminated water and a shortage of clean water supply (UNICEF, 2016). Diarrheal diseases, respiratory infections, and foodborne diseases are also on the rise due to the lack of clean water (UNICEF, 2016). The displacement of large numbers of people to temporary high population density locations, combined with the degradation of environmental conditions, is increasing the risk of transmission of communicable diseases and other conditions and leading to increased mortality (UNICEF, 2016).

People are more vulnerable to mental health conditions like depression, anxiety, alcohol and substance abuse, and violent behaviors that were associated with traumatic events (UNICEF, 2016). 95 cases related to zika virus, or other similar viruses, were detected in pregnant women by the Local Health Ministry, and 20,000 pregnant women are estimated to be at risk after the earthquake (El Comercio, 2016). Thus, keeping in mind the major burdens of mortality and morbidity in the community, increased access to clean drinking water, improved sanitation and hygiene, epidemiological surveillance, immunization efforts for children, vector control, health promotion, and support for vulnerable populations like pregnant women, elderly, and people with chronic conditions are top priorities for Ecuador (IFRC, 2016; Secretaría de Gestión de Riesgos, 2016; UNOCHA, 2016).
2.9.2 General health system

Summary Points

- Over the last decade, government investment in the health sector has doubled, with 2013 rates of 7.5% of the GDP being spent on health compared to 1995 rates of 3.4%
- Government health care is free of charge, but due to a shortage of human resources, a fragmented health system, insufficient even coverage, out of pocket payment rates are high: 43.9%
- Mental health care was already insufficient and concentrated in urban areas prior to the earthquake
- Health infrastructure has suffered as a result of the earthquake, particularly in Manabi
- The Ministry of Health is collaborating with various agencies in response to the earthquake, and is prioritizing disease surveillance, vaccinations, and restoring hospital supplies

Ecuador’s Health System

Ecuador’s health system has gone through a series of changes during the last decade, principally due to increased government investment to the health sector (WHO, 2013). For instance, 7.5% of the GDP was spent in the health sector in 2013, compared to the 3.4% spent in 1995 (WHO, 2013). The 2008 New Constitution supports these investments made to the health sector, as it promotes a National Social Inclusion and Equity System, as well as providing the features of a National Health System based on the principles of universality, equity and free-of charge services (WHO, 2013). There is also a National Development Plan, named the 2009-2013 National Plan for the Good Way of Living, which has contributed to priority setting given by the government to increase social and health investment by reducing the amounts aimed at paying the country’s debt (WHO, 2013). Despite the significant progress, Ecuador still is far from having an equitable working health system, as nearly half of the population have out of pocket payments in health. This is mainly due to shortage of human resources, a fragmented health system, and insufficient equitable coverage.

Water, Sanitation, and Hygiene

According to the 2010 Ecuadorian Census, 45.9% of people boil their water, 38.7% purchase water, and 13% drink it as is (INEC, 2010).

Mental Health

Mental disorders make up 21.7% of the disease burden in Ecuador, but received less than 1% of the Ministry of Health budget in 2007 (WHO, 2008; WHO, 2011). There is currently no National Mental Health law in Ecuador; a Mental Health Plan was created in 1999 but
has not been implemented (WHO, 2008). There is an emergency mental health plan in place (PAHO, 2013).

Mental health care is concentrated in urban areas, with all five of Ecuador’s mental hospitals located in cities and little mental health care available outside of Quito, Guayaquil, and Cuenca (WHO, 2008). There are 11.87 psychiatric beds in psychiatric hospitals and 0.36 in general hospitals per 100,000 people and only one psychiatrist, 1.29 psychologists, and 0.91 nurses per 100,000 people. Primary health doctors and nurses also receive mental health training and have established referral pathways (WHO, 2011). Ecuador has no mental health day facilities (PAHO, 2013; WHO, 2008), however, and 60% of the mental health budget goes to psychiatric hospitals (WHO, 2008). Sixty-four percent of inpatients remain in the hospital for more than ten years, the longest average duration in South America (PAHO, 2013). Fewer than 1% of patients receive psychiatric medication for free through the Ministry of Health, so most who continue with medication spend 20% of their income on psychiatric medications (WHO, 2008).

Effects of the earthquake on health infrastructure

Health infrastructure in Ecuador suffered as a result of the earthquake. Seven hospitals and seven health centers have shut down, and eight additional hospitals and thirteen health centers were damaged (Cruz Roja Española, 2016; PAHO, 2016). Manabí was particularly affected, with 74% of its hospitals suffering damage (PAHO, 2016).

Health response to the earthquake

The Ministry of Health has prioritized disease surveillance, vaccinations, and restoring hospital supplies in response to the earthquake. The MOH has established a “Plan de intervención para la prevención y control de enfermedades transmitidas por vectores en las zonas afectadas por el terremoto” (Intervention plan for the prevention and control of vector-borne diseases in the areas affected by the earthquake). There is concern about pregnant women and vector-borne diseases, particularly Zika, and the government has identified the 20,000 pregnant women potentially at risk after the earthquake as a priority focus group for human assistance (El Comercio, 2016).

The Ministry is collaborating with agencies such as PAHO/WHO, UNICEF, and the Spanish Red Cross on these priorities as well as rescue missions, water and sanitation, and psychosocial services (Cruz Roja Española, 2016; PAHO, 2016; UN Children’s Fund, 2016a). They have received in-kind donations from Brazil and Spain, and are applying for funding through the Central Emergency Response fund (PAHO, 2016).
References for Section 2


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3.0 Mental health and psychosocial support context

3.1 Mental health and psychosocial problems and resources

3.1.1 Epidemiological studies

A study done in 1992 evaluated the role of the primary care sector in providing mental health and psychosocial support after natural disasters. In this study, patients that visited the primary care clinic after a natural disaster were asked to fill out a self reported questionnaire, (SRQ), which aimed to identify those patients that may need mental health and psychosocial support. In Ecuador, 150 patients were screened and 60 of them were classified as a “probable case.” Of those 60 people, 37 were given a psychiatric interview to determine mental health status. Out of the 37 people given psychiatric interviews, 29 (78%) were given a formal psychiatric diagnosis, 8 were not. The breakdown of diagnoses was: 17 with post traumatic stress disorder, 7 with major depressive disorder, 2 with generalized anxiety disorder, 1 with panic disorder, 1 with alcohol abuse, and 1 had psychological factors complicating physical illness. This study reveals a significant amount of psychiatric morbidity among patients who attended primary care clinics in the months following a natural disaster (Lima, 1992).

According to the 2013 WHO AIMS Report on Mental Health Systems in Latin America and the Caribbean, the region has as a high risk area for mental health disorders, especially after disasters. Neuropsychiatric disorders in Ecuador account for more than one fifth of the global burden of disease (21.7%). The most common neuropsychiatric disorders are the unipolar depressive disorders (13.2%) and those produced by excessive use of alcohol (6.9%) (PAHO, 2013). These statistics show that even though mental health disorders are a known problem, the treatment gap is still extremely large.

<table>
<thead>
<tr>
<th>Disorder</th>
<th>Average prevalence (per 100 adult population)</th>
<th>Treatment gap (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-affective psychoses</td>
<td>1.0</td>
<td>37.4</td>
</tr>
<tr>
<td>Major depression</td>
<td>4.9</td>
<td>58.9</td>
</tr>
<tr>
<td>Dysthymia</td>
<td>1.7</td>
<td>58.8</td>
</tr>
<tr>
<td>Bipolar disorder</td>
<td>0.8</td>
<td>64.0</td>
</tr>
<tr>
<td>Anxiety disorder</td>
<td>3.4</td>
<td>63.1</td>
</tr>
<tr>
<td>Panic disorder</td>
<td>1.0</td>
<td>52.9</td>
</tr>
<tr>
<td>Obsessive-compulsive disorder</td>
<td>1.4</td>
<td>59.9</td>
</tr>
<tr>
<td>Alcohol dependence and harmful alcohol use</td>
<td>5.7</td>
<td>71.4</td>
</tr>
</tbody>
</table>

3.1.2 Concepts of self/person

Summary points

- Amongst the multiple indigenous communities in Ecuador, each human being is seen in a holistic way, recognising physical, mental, nature and community identities as being part one complete entity. Spiritual external forces are also part of concepts of self amongst indigenous communities.
- Family ties are present amongst Ecuadorians, forming part of their concepts of self.
- Strong Catholic religious component exists in Ecuadorian concepts of self, even when not being fully recognised or apparent.

In order to fully comprehend Ecuadorian concepts of self, a revisit to Ecuador’s history, demographics, culture, politics (see sections 2.2; 2.3; 2.4; 2.8). The recognition of a plurinational and intercultural state recognises the richness and diversity amongst multiple indigenous communities in Ecuador, influencing the way concepts of self are perceived (Altmann, 2013).

Within the diversity of indigenous communities in Ecuador, respect to family and nature or pachamama, are extremely important and form part of the concept of self (Leon & Lozano, 1997). Each person is seen in a holistic way, recognising mental, bodily, nature, spiritual, and community identities as being one complete entity.

Strong ties to family are also part of Ecuadorians concepts of self, as strong interdependent ties with extended and nuclear family is very common amongst Ecuadorians (Cruza-Guet et al., 2009). Religion is also present as concepts of self in Ecuadorians, as it has been an element that has historically shaped Ecuadorian culture (see section 2.5 for further detail). A mixture of Roman Catholic and Incasic polytheistic is enrooted and part of Ecuadorians concepts of self (Cruza-Guet et al., 2009).

3.1.3 Local expressions (idioms) for distress, trauma, loss

Summary points

- In the Andes region of Ecuador the indigenous tribes utilize traditional healers called yachactaitas.
- Amongst the multiple indigenous communities of Ecuador, there are no terms that can directly be translated to Western psychiatric categories of mental disorders such as PTSD, depression, or anxiety.
- Nervios is the closest and most common expression of distress from indigenous communities of Ecuador that usually refers to symptomatology of depression. However, nervios exist in a spectrum, not in a absolutist yes/no biomedical criteria.
Amongst the rest of the prevailing mestizo population, biomedical psychiatric diagnoses of the West are more accepted. Idioms of distress for mental health conditions are related to supernatural conditions. Somatic presence of mental health conditions is very common in Ecuador, with gastrointestinal disturbances and headaches being the main ones.

For the prevailing majority of mestizo population in Ecuador, the Western biomedical diagnoses of mental disorders is common to explain mental health conditions. However, a significant amount of stigma and discrimination comes alongside with having such a diagnoses. This is why, despite not totally forming part of indigenous communities but with ancestral roots from them, still many mestizos in Ecuador refer to nervios, mal de ojo, susto, amongst others, to describe and explain mental health conditions (Armijos & González, 2014).

The formal Western diagnoses of depression, anxiety or other mental disorders is unknown to indigenous communities in Ecuador. Instead, local expressions or idioms of distress exist to describe these types of conditions. Each indigenous community will have its own system of treating health conditions and their own idioms of distress.

Amongst the Saraguro Indigenous community of Ecuador, an indigenous community composed of over 60,000 people spread mostly in the South of Ecuador, there are five main types of distress that can be classified as local expressions of distress. They are classified as supernatural diseases, being illnesses that are caused by the unknown. The following table presents the main health conditions related to mental wellbeing according to the Saraguro community (Armijos & González, 2014).

<table>
<thead>
<tr>
<th>Disease</th>
<th>Definition</th>
<th>Symptomatology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Susto</td>
<td>A disease that is produced by unpleasant experiences, accidents, violent</td>
<td>Nervousness, lack of appetite, sleep</td>
</tr>
<tr>
<td></td>
<td>episodes, or moments of distress that produce an emotional impact on the</td>
<td>loss.</td>
</tr>
<tr>
<td></td>
<td>patient.</td>
<td></td>
</tr>
<tr>
<td>Vaho de agua</td>
<td>This disease occurs when the person is exposed to water mist, for example,</td>
<td>Severe pain in the extremities,</td>
</tr>
<tr>
<td></td>
<td>when crossing a bridge. People who have been beaten or injured or women</td>
<td>wounds, or strokes that arise from</td>
</tr>
<tr>
<td></td>
<td>who have recently given birth are more susceptible to this disease.</td>
<td>time to time.</td>
</tr>
<tr>
<td>Mal de aire</td>
<td>A disease caused by strong winds experienced while the person walks down a</td>
<td>Dizziness, headache, vomiting,</td>
</tr>
<tr>
<td></td>
<td>hill, by contact with cold air when the person leaves a sheltered place,</td>
<td>stomach pain. The patient suffers</td>
</tr>
<tr>
<td></td>
<td>or when a person walks.</td>
<td>body deterioration.</td>
</tr>
</tbody>
</table>
through cemeteries or places where there are hidden treasures.

<table>
<thead>
<tr>
<th>Mal hecho</th>
<th>This disease is caused by damage that a person intentionally inflicts on another individual. The diseases that are manifested are organic and psychological, emphasizing envy and jealousy.</th>
<th>The patient suffers personal misfortunes, accidents, death of loved ones, and financial losses. This leads to depression.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shuka</td>
<td>This disease is the so-called mal de ojo. It is caused by a person directed a forceful gaze toward someone else. In this case, the disease occurs without maliciousness. Otherwise, shuka occurs with bad intention.</td>
<td>Fainting, nervousness, pale face, headache, sadness, behavioral, and personality changes. Children are more prone to this disease.</td>
</tr>
</tbody>
</table>

(Armijos & González, 2014).

Another common way of expression of idioms of distress comes from the Quichua community, which is the largest indigenous group in Ecuador. The \textit{yachactitas}, or traditional healers, identify \textit{llaqui}, as a complex category of symptoms of sadness, life events, and causal factor of the illness (Incayawar, 2008). \textit{Llaquis} are divided into four subcategories: \textit{mancharisca}, \textit{wairasha}, \textit{shungu nanay} and \textit{rurascha}. The first two, mancharisca and wairasha, can be translated to “victim of malignant spirits” and refer to presentation of both psychological and physical symptomatology which in Western biomedical terms can be similar to infectious diseases (Incayawar, 2008). \textit{Rurascha} refers to being a victim of sorcery and expression of malignant spirits. \textit{Shungu nanay} is the most similar to expression of mental health conditions as its translation is shattered heart or heart pain and refers to symptomatology similar to depression and anxiety (Incayawar, 2008). All of these four categories can exist simultaneously, as comorbidity is very common.

Nervios is the most common expression of idioms of distress amongst indigenous communities in Ecuador. Multiple authors have described it as the Western equivalent of depressions as it shares many similarities with regards to its symptomatology. However, it must be emphasized that indigenous communities do not see it as an illness but rather as it existing in a spectrum, where one can have nervios and be it due to a non-pathological response to everyday stressors, or severe to even fatal in some individuals. Nervios is highly accepted within communities, since there is no stigma or discrimination towards it, being that it is a daily stress condition instead of the Western view of biomedical diagnosis of depression (Yusim et al., 2009).

### 3.1.4 Explanatory models for mental and psychosocial problems

**Summary points**

- The majority of the Ecuadorian mestizo population (85% of the total population) see mental health and psychosocial problems explained through
a mixture of western biomedical diagnosis and indigenous supernatural conditions

- Mental health and psychosocial problems amongst indigenous communities are explained by supernatural conditions caused by malignant forces
- Explanatory models for mental and psychosocial problems amongst the afro descendant population in Ecuador could not be found

Ecuador is a country composed by a rich mixture of cultures due to its history of miscegenation (see section 2.2; 2.3; 2.8 for more detail). This is why, explanatory models for mental and psychosocial problems are described differently depending on the group of the population.

Indigenous

For the multiple indigenous communities that exist in Ecuador, models for mental and psychosocial problems are explained by supernatural conditions and malignant forces (Incayawar, 2008; Yusim et al., 2009).

Mestizo

For the 85% of the Ecuadorian population identified as mestizo, there is a mixture of explanatory models for mental and psychosocial problems. Since mestizos have cultural baggage from their Iberian and Indigenous ancestors, a mix of Western biomedical psychiatric diagnosis and indigenous supernatural conditions, explain mental health and psychosocial problems (Armijos & González, 2014).

Afro Ecuadorians

No literature was identified regarding explanatory models for mental health and psychosocial problems amongst the Afro community in Ecuador. Despite the lack of existing information, it should be noted that Afro Ecuadorian culture can be very different than the mestizo and indigenous, so explanatory models for mental health and psychosocial problems are expected to vary from the two models described above.

3.1.5 Major sources of distress

Summary Points

- Most articles related to sources of distress in Ecuador emphasize a common theme in which the very basic needs of the population are widely unmet – either as a consequence of the natural disaster or resources are regularly unavailable
- To reduce the level of emotional distress in the population, there is an urgent need to provide clean potable water, temporary shelters, food, healthcare, and
special protection to vulnerable populations such as children and disabled individuals

- The vast majority of mental health interventions are done immediately following the natural disaster, but very few long-term mental health services are available to victims afterwards

**Natural Disasters**

Various consequences of natural disasters are significant sources of distress to the population in Ecuador, especially for those individuals who are responsible for supporting and protecting their family. For instance, the primary source of income for many families was lost due to land damages caused to shrimp farms by the earthquake (CARE, 2016). In addition to loss of income, a great number of basic needs remains unmet. Many of these needs must be urgently met in order to maintain a humane quality of life, such as: clean potable water, temporary shelters, food, healthcare, and special protection to vulnerable populations such as children and disabled individuals (UNOCHA, 2016). There is a tendency to provide immediate mental health relief following a natural disaster, but there is very limited long-term specialized care available for people living with mental health conditions (Lima et al., 1989).

**Displacement**

Due to extensive damage to infrastructure in the affected areas, there is a significant number of people displaced, and unable to return home since the earthquake. In the province of Esmeraldas alone, an estimated 9,500 people have been forced to seek temporary shelter. Elements such as heat, lack of clean water, food shortages, overcrowding, and recurrent mosquito bites result in an extremely difficult living situation (Action Against Hunger, 2016a). Even more unfortunate, in other provinces such as Manabí, thousands of people have been left homeless and sleeping on the side of the roads or in the countryside with little or no protection from the elements. The risk of disease is extremely high in this population due to the lack of access to clean drinking water and sanitation facilities (CARE, 2016) (IFRC, 2016). The living conditions at the few shelters are less than ideal since oftentimes more than three people share the same mattress, which makes it truly uncomfortable for children and individuals with illnesses especially. It was also reported that candles are needed to provide light at night time and rain falling inside the shelter gets the few belongings of earthquake survivors’ (MSF, 2016a).

**Human Rights Violations**

Indigenous Peoples of Latin America lack specific mental health services designed for their population group. According to the World Bank, geographic regions of poverty in Latin America are precisely those in which they live, and the use of an indigenous language in a household closely associates with poverty. As of this century, an estimated 48 million Indigenous Peoples remain poor, powerless, and excluded from a society that consistently neglects their healthcare needs. The Indigenous Peoples have learned, through a history of
social exclusion, racial discrimination, dispossession, and violence, to be suspicious of the dominant society's intentions in their regard. They view governments as entities that do not represent their interests, but rather that perpetuate a policy of colonial oppression. Their views and health seeking behavior is probably the result of these historical experiences. As of 1986, Quichua people in northern Ecuador have an infant mortality rate of 211 per 1000, while it was 38 per 1000 for the country as a whole. The pervasive neglect of their mental health raises concerns of human rights violations and illustrates the failure of Latin American countries to address the Indigenous People's' basic right to receive health and mental health services (Incayawar, 2009).

*Sexual and Reproductive Health Issues*

Pregnant women have endured extenuating circumstances following the natural disaster that are not healthy for the growing fetus. For instance, a woman, who was 3 months pregnant on the day of the earthquake, almost suffered a miscarriage from having to carry her two other infant children as she ran from their collapsing home. She sought medical care at a local hospital where they stabilized her condition since she was in severe pain and would not keep food down. However, upon her return to the shelter, she has been unable to receive her much needed medical checkups (MSF, 2016a).

*Age-Related Issues*

Efforts must be quick and efficient in helping children and adolescents stay safe and cope with the emotional stress. Some organizations are setting up child friendly spaces and temporary learning centers in which they can relax and take part in activities such as sports, music, and art. These spaces will ultimately bring back a sense of normality into their lives and may also serve as training space for parents who desire to learn about health and hygiene, sanitation and safety, and security for their children (Crook, 2016; Plan International, 2016). It was noted that a significant number of educational institutions were destroyed by the earthquake, preventing children from attending school (CARE, 2016).

*Socio-Economic Status*

Many individuals have lost their source of income due to damages caused by the earthquake as in the case of shrimp farming which is the occupation of a significant portion of the population. In addition to destruction of the land, many have suffered monetary losses since their boats and equipment were destroyed (Action Against Hunger, 2016). Individuals of lower socioeconomic strata are more likely to be affected by natural disasters and less likely to access general health care and mental health services especially (Lima et al., 1989; Lima, 1992).

*Disease, Disability and (Mental) Illness*

Due to an increase in stagnant bodies of water and lack of vector control following the earthquake, vector borne diseases such as Zika, dengue, and chikungunya will pose a great
risk to the population. They have reported a surge in episodes of diarrhoea in people living in shelters probably due to drinking contaminated water, over-crowded conditions, and lack of adequate sanitation facilities (IFRC, 2016). Similarly, other patients with chronic conditions such as hypertension and diabetes or patients who suffered injuries as they ran outside their homes during the earthquake have been unable to access the regular health care they need to continue leading normal lives (MSF, 2016a).

3.1.6 Role of the educational sector in psychosocial support

Summary Points

- There is no coordinated general public education on mental health (even unrelated to the earthquake)
- No documents were discovered that outlined psychosocial support programs coordinated by schools or educational institutions following the earthquake
- Humanitarian aid organizations established child-friendly spaces and activity programs to help children feel safe and re-engage in normal routines. However these tended to be more oriented to recreation than education.

General population education on mental health.

Ecuador does not have a national coordinating body to oversee education and awareness campaigns for the general public regarding mental health and mental health disorders. In the last five years some government agencies and international organizations like UNICEF and UNWomen have sponsored campaigns to prevent alcohol and substance abuse, child abuse and gender-based violence. However, there have been no initiatives specifically addressing health and mental health disorders.

Earthquake-specific psychosocial support

There is limited documentation regarding the role of the formal educational sector providing psychosocial support. Instead, some humanitarian response agencies created educational offerings in the context of providing child-friendly and safe spaces for youth. As one example Plan International set up temporary learning centers where youth could relax and participate in sports, music, art and play activities in a safe space to help them regain a sense of normality.

3.1.7 Role of formal social sector in psychosocial support

Summary Points

- Government spending on mental health care is currently focused on psychiatric hospitals, while Ecuador has not developed a robust community-based mental health model, contrary to WHO recommendations
● The Pan-American Health Organization is defining a strategy for mental health intervention in the Manabi Province
● The International Organization for Migration (IOM) is working with shelters to prevent Gender-Based Violence (GBV) and trafficking while raising its own funds to support these efforts and GBV or trafficking victims, as well as its public campaign to raise awareness of these issues
● Christian Blind Mission (CBM) will provide Psychological First Aid (PFA)
● Colombian Red Cross recognizes the need for psychosocial intervention following the trauma the earthquake
● Key barriers include insufficient human resources and funds, lack of support from national policy, inadequate number of organisations providing mental health care (especially in rural areas), lack of linkages between the mental health and social sectors, weak referral pathways, stigmatization of people with mental health disorders and political instability

What is Currently Available?

The Ecuadorean health budget allocates 1.2% of spending for mental health services, 59% of which goes toward inpatient psychiatric hospital care. While Ecuador is the only South American country with an official mental health plan, the mental health care system is highly centralized compared to other South American countries, and is inconsistent with the WHO-recommended model favoring community-based mental health care. Uniquely, Ecuador does not divide government mental health care resources by service area and has developed no community residential mental health facilities that serve as a supportive alternative to inpatient psychiatric hospital care (compared to Costa Rica’s 0.8 residential facilities per 100,000, Chile’s 0.6, and Paraguay’s 0.1). As a consequence, Ecuador has the highest rate of psychiatric hospital patients who have been hospitalized for more than ten years among all countries of South America. However, Ecuador is one of only three South American countries that uses social security funds to cover mental health care (PAHO, 2013).

Public Health Coordinator of the Colombian Red Cross, Dr. José Leber Imbachi, warns that mental illnesses and psychosocial problems will increase following the earthquake, as people have lost everything and are experiencing high levels of anxiety arising from fear of aftershocks and also from uncertainty about their futures (IFRC, 2016).

Currently, the Pan-American Health Organization (PAHO) is the main actor working to develop a strategy for a mental health intervention in the Manabi Province following the earthquake. Its strategy team includes multiple agencies, including the UN Population Fund and UNICEF (OPS, 2016).

The International Organization for Migration (IOM) has reiterated that mental illnesses and psychosocial problems will increase following the earthquake due to increased anxiety and uncertainty. IOM is raising awareness in selected Ecuadorean communities regarding the national emergency shelter system and supporting them to implement mechanisms for the
prevention of gender based violence (GBV), in particular sexual violence, and access to care for survivors of GBV, and has published a Gender Alert. IOM is also supporting Child Protection and has appointed a Counter Trafficking (CT) specialist to Ecuador who will support the development of a referral pathway for trafficking incidents. IOM has developed products and communication materials, including t-shirts with the text “safety, dignity and privacy in sites”, to disseminate key protection messages focusing on GBV and CT prevention and mitigation. IOM is raising funds to initiate case management and supportive services for individuals and communities exposed to trafficking as a result of the earthquake (IOM 2016a; IOM, 2016b).

Christian Blind Mission (CBM) will provide Immediate Psychological First Aid (PFA) through its Emergency Response Unit by setting up focal points at the community level and distributing assistive services, including to persons with disabilities. CBM will also provide neurological evaluation and physiotherapy to affected persons and recreation activities for children in shelters (Valle Trabadelo, 2016).

**Barriers and Challenges**

Multiple barriers and challenges exist that limit the capacity of the formal sector to provide psychosocial support. These barriers include: destruction of local infrastructure (including roads, health centers and telecommunications), a highly centralized existing mental health care system, high population density of cities affected (such as Guayaquil), political instability and poor economic growth (due to drop in oil prices)(ACAPS, 2016; PAHO, 2013).

### 3.1.8 Role of informal social sector in psychosocial support

**Summary Points**

- The informal sector includes families, friends, neighbors, local religious and cultural assemblies, and community-based organizations (CBO) including women’s and mother's groups, child clubs, youth groups, child protection committees, political parties and sister organizations
- Informal social sector support often focuses on what is perceived to be the root causes of distress unique to each province’s canton and works to build strategies based on these needs
- Key issues addressed by the informal social sector for psychosocial support include constant fear, loss of primary income measures, safety for vulnerable populations such as women and children, and recuperation of normal daily living

**The Current Situation**

Although hard to believe, the informal social sector does not play such a large role as the formal sector (MOH, NGOs, government and private agencies) in the psychosocial support
response. Organizations such as MSF and Accion Contra el Hambre are collaborating with local leaders in the hardest-hit regions of the Esmeraldas and Manabi provinces to assess the unique needs of each individual region.

According to the April 26, 2016 Situation Report by the Secretaria de Gestion de Riesgos, there are a total of 103 active shelters and refuges in the Cantons of Santa Elena, Santo Domingo, Pichincha, Manabi, Los Rios, Esmeraldas, and Bolivar (Secretaria Nacional de Riesgos, 2016). 6,804 families have resorted to shelters even though some houses remain standing due to losses of primary income resulting in the inability to provide basic nutrition and security to their loved ones. The loss of infrastructure and industrial capacity has caused a large unemployment problem, contributing to the overcrowding of these shelters.

Accion Contra el Hambre, an independent humanitarian organization that combats childhood malnutrition, reports that the shrimping agriculture industry has been completely disrupted, which is the main source of income for 50% of Muisne’s residents (MSF, 2016b). Aquaculture has also been paralyzed since the quake, leaving a high percentage of the population unemployed (MSF, 2016c). This issue is of central importance to the social support sector, and leaders urge that special attention should be paid to those that lost their principal way of making a living as well as how to generate mechanisms of social protection that alleviates the worsening unemployment situation (MSF, 2016c).

Psychosocial support and recuperation of normal daily living for affected populations are key issues that local groups and organizations are focusing on. Accion Contra el Hambre is working on putting into place a system of basic social support in money transfers and finance (MSF, 2016c). They have also collaborated with local groups to create “Babytents”, centralized safe havens for expectant mothers, children and mothers with infants in which they can receive psychosocial care (MSF, 2016b). MSF has 6 psychosocial care points in Pedernales, one of the most badly hit regions by the earthquake. These care points have been established within shelters, are carried out as home visits and are also organized for women and children (Acción Hambre, 2016a). MSF has also been in collaboration with local psychologists and support groups, but even they have found themselves delivering humanitarian aid rather than psychosocial activities (Acción Hambre, 2016b; Acción Hambre, 2016c). In the few cases where psychosocial support is being provided, it is disorganized and lacking follow up care.

Leaders in MSF state that it is important to create committees on key issues in each region hit by the earthquake, especially in psychosocial support and water and sanitation efforts as these are the largest needs of the populations (Acción Hambre, 2016a).

3.1.9 Role of non-allopathic health system in MHPSS

Ecuador has a long history of using natural herbs and home remedies produced locally as well as importing natural medicines, which are believed to be of higher quality relative to local natural medical products. The rapid expansion in uptake of these products is believed to be partially due to the massive promotional campaigns through radio programs and other
outlets (Miles, 1998). Furthermore, there are numerous non-allopathic clinics and independent non-allopathic providers (i.e. medicine men) that operate primarily in parallel to hospitals throughout the country (Caselli, 2012; Where International, 2013) however seeking care from a non-allopathic provider is particularly common in indigenous communities (Chelala, 2009). Medicine men are trained through an apprenticeship model and typically acquire clients through word of mouth within their own ethnic communities (Pederson & Coloma, 1983). There remains a lack of evidence in the published literature suggesting that these natural remedies and non-allopathic health strategies are used to address psychological and psychosocial problems.

3.1.10 Help-seeking patterns

There are numerous barriers to accessing mental health care in Ecuador. Persons of lower socioeconomic status are less likely to utilize health services. There are also ethnic differences in rates of general health care utilization (Lopez-Cevallos & Chi, 2010). There is a lack of research on mental health help-seeking patterns in Ecuador; however, among Ecuadorian, Dominican and Colombian immigrants in the United States, mental health care utilization was more common in females, people experiencing functional impairment, greater somatic symptoms, more severe depression, poor or fair self-rated mental health and in people that have had others tell you that you have an emotional problem (Caplan & Buyske, 2015).

3.2 Mental health system

3.2.1 Mental health policy and legislative framework

Summary Points

- Ecuador’s mental health system is currently in transition
- Ecuador does not currently have a mental health law
- The National Strategic Plan for Mental Health focuses on mental health promotion/prevention
- A major direction for Ecuador is the integration of mental health into primary health care
- A strong focus is on deinstitutionalization of mental patients
- Networking among primary, secondary, and tertiary care is a stated priority

Ecuador’s National Strategic Plan for Mental Health 2015-2017 was approved in July 2014. This new regulation establishes a vision, mission, objectives, principles and strategic guidelines, with the aim of improving the mental health of the Ecuadorian population. It is a significant improvement from the last National Mental Health Plan in 1999 because a community focus is now one of the primary dimensions around which mental health programs and policies are organized.
Strategic guidelines for reorganizing the mental health system

1. **A new focus on mental health promotion and prevention of mental disorders.**

This focus area includes mental health promotion, advancement of human rights, gender equity, and social participation using a community approach and integrating intercultural elements. This focus area also champions human rights through empowerment of the population affected by mental illness coupled with emphasis on reducing stigma and discrimination. Active involvement of family members of persons with mental disorders is also promoted.

2. **Strengthen and transfer mental health services into primary health care.**

This strategy is intended to treat mental health issues within primary care while simultaneously decreasing the institutionalization of patients with a psychiatric diagnosis. This entails expansion of community-based outpatient mental health services. Also proposed is the training of technical support teams to link primary care providers to consultation/liaison provided by specialized mental health professionals. The ideal would be to create a seamless network of care with increased response capacity. The newly devised Mental Health Network would include well-defined mechanisms for patient referral to the appropriate level of mental health care required. Following treatment, including inpatient care, this strategy supports community services to efficiently reintegrate patients into the community. Also part of this strategy is the goal of discharging many patients who are currently receiving long-term psychiatric care and generally, minimizing the lengths of stay for inpatient psychiatric care.

3. **Strengthen the leadership of the Ministry of Public Health for reformulating the mental health system.**

This strategy includes the establishment of a legal body to represent mental health. The Ministry should lead the initiatives to deinstitutionalize psychiatric patients, transfer mental health care to community settings, and advocate for financial investment in mental health.

4. **Promote research in community mental.**

This strategy is intended to treat mental health issues within primary care.

The Strategic Plan does not make specific mention of financing, timing of implementation of proposed changes, human resources management and evaluation. Also mentioned only briefly is specialty (psychiatric) care of patients with mental disorders. The WHO recommends creation of 1) mental health units in general hospitals and 2) community mental health centers.
Ecuador’s model of mental health care is a component of the Model of Integrated Health Care (MAIS) that includes a family, community and intercultural approach. MAIS considers mental health as a priority area. MAIS guidelines “mainstream” mental health planning and services organization into primary health care. The Care Model identifies several obstacles to achievement of full mental health integration: limited financing (with much funding still going to the traditional hospital-centered model), limited access to mental health services due to stigma and discrimination, lack of mental health professionals at all three levels of care, and lack of community mental health services. The IASC MHPSS intervention pyramid and the WHO public mental health approach would serve as a useful guide for mental health system reorganization (IASC, 2007; WHO, 2012).

Care Model strategic objectives

- Refocusing attention to promotion and prevention of mental health
- Social, community, intersectoral participation
- Organization of a network of mental health services
- Deinstitutionalization of chronic mental health patients
- Provision of comprehensive mental health services at the primary health care level
- Creation of secondary mental health care services
- Organization of tertiary mental health care services

Care Model components

1. Residential treatment units for persons with severe mental disorders
2. Creation of Centers for Psychosocial Care (CAPS), to provide care to persons with mental health disorders, raise the awareness of persons with mental health problems with community members, and promote social integration.

Legislation

There is no mental health law in Ecuador. The Strategic Plan 2014 mentions the need for specific mental health legislation. The following are relevant to mental health:

- The Civil Code contains a confusing definition of persons who are “insane” and makes provision for protection of these persons along with others unable to care for themselves.

- The Integral Penal Code has provisions for detention of persons who are committed to psychiatric hospitals. The Ministries of Justice and Health are currently revising the language and actions of the Code.
Ecuador ratified the 2008 United Nations Convention on the Rights of Persons with Disabilities (CRPD). Ecuador is currently reviewing its policies to comply with sections related to institutionalization and detention of mental patients.

3.2.2 Description of formal mental health services

Summary Points

● Ecuador has 5 psychiatric hospitals, 31 outpatient psychiatric care units, and 20 psychiatric units in general hospitals.

● Human resources consist of 1.0 psychiatrist, 0.91 nurses, 1.29 psychologists, 0.38 social workers, 0.12 occupational therapists, and 3.71 other health workers per 100,000 people.

● 802.6 per 100,000 people were treated in mental health facilities in 2007

Ecuador has 5 psychiatric hospitals, all of which are located in dense, urban areas within Ecuador's three largest cities, including: Julio Endara in Quito (123 beds), San Lázaro in Quito (150 beds), Sagrado Corazón in Quito (230 beds), Lorenzo Ponce in Guayaquil (1,060 beds), and CRA in Cuenca (72 beds) (WHO, 2008). These provide a total of 1,635 beds, which equates to 12 beds per 100,000 people (PAHO, 2013). However, the number of beds does not paint an entirely accurate picture, as 53% of the total beds are occupied by long term patients (who have stayed at least one year), and 64% of long term patients have stayed at least 10 years (WHO, 2008). Additionally, there are 31 outpatient psychiatric care units, and 20 psychiatric units in general hospitals (WHO, 2008). In total, 802.6 per 100,000 people were treated in all of these mental health facilities in 2007 (WHO, 2011).

Total expenditure on health as a percentage of gross domestic product is 6.08% and the per capita government expenditure on health (PPP int. $) is $165.0 (WHO, 2011). Of this, only 1.2% of the total health budget is allocated to mental health services ($1.98 per capita), and 59% of mental health spending is allocated to care delivered in psychiatric hospitals (PAHO, 2013). An estimated 18% of the population is covered by social security, and this coverage includes all mental health care examinations, hospitalizations, and medications (PAHO, 2013).

An internal report from 2008 found that mental health services for children and adolescents could use significant improvement, as 3% of the patients admitted to psychiatric hospitals are younger than 17 years old yet only 0.2% of the psychiatric hospital beds are specifically assigned for this patient population (WHO, 2008). Additionally, only 5% of primary schools and 20% of secondary schools have professionals that can attend to the mental health care needs of their students (WHO, 2008). Furthermore, there are no mental health providers that speak the indigenous languages, and accessing treatment is considerably more difficult for individuals living in rural areas.
Access to psychiatric medications can still be a major barrier to care, and the price of one daily dose of antipsychotic medication is equivalent to 20% of the minimum wage, the highest in South America (PAHO, 2013). Additionally, only 1% of the population has free access to essential psychotropic drugs (PAHO, 2013).

As for human resources, Ecuador certainly has a relatively high number of individuals working to provide mental health care services for its population. Amongst health professionals working in the mental health sector per 100,000 people, Ecuador has: 1.0 psychiatrists, 0.91 nurses, 1.29 psychologists, 0.38 social workers, 0.12 occupational therapists, and 3.71 other health workers (WHO, 2011). This indicates that Ecuador has 7.4 mental health workers per 100,000, as compared to the global median of 9 per 100,000. 44% of the psychiatrists work in public institutions while 56% work in either private practice or for a non-profit institution (WHO, 2008).

Most primary health care doctors and nurses have received training on mental health disorders within the last five years (WHO, 2011). Officially approved manuals on the management and treatment of mental disorders are available in the majority of primary health care clinics (WHO, 2011). Additionally, official referral procedures for referring persons from primary care to secondary or tertiary care do exist, as well as referral procedures from tertiary or secondary care to primary care (WHO, 2011). National prescription regulations currently allow primary health care physicians to prescribe psychotherapeutic medicines (WHO, 2011). Primary health care nurses are not allowed to independently diagnose and treat mental health disorders within the primary care system, nor are they allowed to prescribe psychotherapeutic medicines (WHO, 2011). In psychiatric hospitals and mental health centers, various psychotropic medications are distributed at no cost to patients. These drugs, however, are not available in the primary care setting (WHO, 2011).

Overall, Ecuador has economic, geographic, and cultural barriers that limit access to care, which especially affects the poor living in rural areas, many of whom are indigenous.

3.2.3 Coordination of government, private sector, NGOs, traditional healers

Summary Points

- Most of Ecuador’s mental health care services and budget are still centered around large psychiatric hospitals
- Concerning treatment of psychiatric conditions, Ecuador is in a state of transition
- Since the earthquake, NGOs are providing community level services, including safe spaces and education for children and adolescents affected in the region
Role of the government

The network of health services is under the Ministry of Public Health. There are 2 levels: provincial and cantonal. The last National Plan of Mental Health was in 2014. There are no distinct laws covering mental health services in Ecuador, but many legal bodies discuss it.

Only 1.2% of the health care budget goes towards mental health, and 59% of this goes towards the five psychiatric hospitals in the country’s largest cities. The armed forces also maintain beds for psychiatric patients in hospitals in Quito, Guayaquil, and Esmeraldas. There are no public psychiatric centers exclusively for outpatients. Most primary care, including psychiatric, takes place in the Centros de Salud. The private sector works to place chronic psychiatric patients in homes or asylums. In the past decades addiction centers with diverse treatment modalities have emerged, but many are not under professional control.

Mental health care in Ecuador is still transitioning from the traditional model of exclusively psychiatric hospitals as the means of psychosocial care to the newer integration of mental health into all aspects of patient care.

The government does not have any formal health education campaigns. However in the last few years NGOs and UNICEF, supported by the Ministries of Public Health, Education, and Wellbeing have started putting some together. Some topics included are prevention of drug and alcohol addiction, maltreatment of women and children, AIDS prevention, and sexual health. There currently are none in place covering mental health.

Less than 5% of schools have full or part-time psychiatric healthcare providers such as psychologists or counselors. There are educational psychiatrists working with Departamentos de Orientacion y Bienestar Estudiantil (DOBE) to promote mental health education in schools. There is no reported formal mental health training for judiciary members or the national police, but physicians, psychologists, and psychiatrists are employed by prisons to assist with inmates as needed. Only 1.4% of Ecuadorian physicians are psychiatrists, and 56% of those are in private practice. There is no formal psychiatric specialization for social workers or psychiatric nurses.

Psychiatric medication is available in psychiatric hospitals and health centers that are dependents of the Instituto Ecuatoriano de Seguridad Social (IESS) or the armed forces. Centers under the control of the Ministry of Public Health do not dispense these. Primary care centers generally do not have a psychiatrist or distribute these medications. Pharmacies will only fill prescriptions for psychoactive drugs if a physician registered to the Ministry of Public Health and the medical college of the designated province writes the prescription.

There are currently support groups for families of those with Down Syndrome and Alcoholics Anonymous. However, no support groups exist for those with mental health conditions.
Role of NGOs

Much of the current mental health education is facilitated by NGOs. Since the earthquake, NGOs have been on the frontlines providing psychosocial support to the people of Ecuador.

Especially after the earthquake, mental health is a high priority, particularly in places where at least 70% of homes were lost. It is the duty of health services to identify psychosocial issues and provide interventions to prevent violence, sexual and otherwise, against vulnerable groups. Participating organizations in this effort are Cruz Roja Ecuador and Organizacion Panamericana de la Salud (PAHO) which partners with Ecuador’s Ministry of Public Health.

Many in affected communities are vulnerable to exploitation, separation from relatives, violence, and abuse. The most vulnerable groups include boys, girls, adolescents, women, and people with reduced mobility. Affected populations need therapy which will be provided through UNICEF, Save the Children, ONUMujeres (UN Women), and UNFPA.

Education is the most important rehabilitation method for children. The Ecuadorian government has temporarily suspended public education in affected areas, but national volunteer forces intend to open temporary schools for the estimated 120,000 children in need. Combined efforts between UNICEF, Save the Children, RET, and UNESCO intend to open 50 temporary spaces for children.

Plan International (PI) has more than a 25 year history of supporting Ecuador’s Most vulnerable groups. PI volunteers are working to keep shelters, often the only place of refuge, safe for children. They are prioritizing children during aid distributions and providing them safe places to play. Fewer and fewer volunteers are showing up to help. Plan International plans to open 60 safe spaces for children across Manabi. Locally known as “intelligence factories”, these spaces serve as shelter for children that are victims of the earthquake and currently living in temporary housing. These locations will also provide these boys and girls education and support. These spaces will be set up to encourage play and sports-oriented activities among the children to provide psychosocial support to this especially vulnerable group. These will benefit 30,000 children across Manabi. In addition, psychosocial education will be present for parents to learn about self-esteem, child resilience, nutrition and child protection. The hope is that the children will be able to smoothly transition back to school. Action Against Hunger is setting up similar facilities for children, along with “baby tents” which will provide psychosocial support for mothers and infants.

The Spanish Red Cross has mobilized more than 1,200 volunteers and is collaborating with the Red Crosses of Ecuador, Costa Rica, Peru, and Mexico. They are focusing on finding lost persons, evacuating if necessary, and providing health care including psychosocial support. Equipo de Respuesta Inmediata en Emergencias (ERIE), part of the Spanish Red Cross, is supporting relatives of the victims living in Spain.
CARE will set up recreational activities and psychosocial assistance to help support children recover. CARE also plans to provide psychosocial support to help both children and adults deal with this trauma. 72 year old Ramona said “people (are) traumatized and everyone in our community needs a psychologist…Life is very hard and sad now. People are afraid of aftershocks. They are depressed because they lots family members. They lost their entire livelihood.”
References Section 3.0


4.0 Humanitarian context

4.1 History of humanitarian emergencies in the country

On April 16, 2016 a 7.8 magnitude earthquake hit west of the northern coast of Ecuador at 6:58pm and was followed by 160+ aftershocks occurring over subsequent days (ACAPS, 2016a). The epicenter of the earthquake was centered in Manabí, 27 kilometers southeast of the town Muisne and 170 kilometers northwest of Quito. The earthquake resulted from a shallow thrust faulting on or near the plate boundary between the Nazca and Pacific tectonic plates. This was the most powerful earthquake in the region in 26 years (ACT Alliance, 2016; World Vision, 2016). Aggravating factors that are believed to have contributed to the earthquake include the extreme rainy season due to El Niño and subsequent flooding and landslides (ACAPS, 2016a). Similar issues, climate change and poverty, are also believed to make recovery from the earthquake more challenging for many (ACAPS, 2016b).

Shortly after the earthquake struck the government declared a State of Emergency with a red alert in six provinces and solicited support from the United Nations. The most affected regions are those on the coast and in the mountainous regions (IFRC, 2016). Canton of Pedernales was declared a “disaster zone”. In this region there were 113 people rescued alive. Almost half of the affected people were children and 10% were under 4 years old (UNICEF, 2016). Across all affected regions there were substantial fatalities and injuries resulting from the earthquake as well as many potential invisible consequences such as psychological and social sequelae. Within the 10 days following the earthquake it was estimated that there had been 655+ deaths, 4,605 injuries, 20,503 people seeking emergency assistance.
shelter, 805 destroyed buildings, 140 affected schools, 48 people that had not been accounted for and 70,000 people affected in total. Most of the deaths occurred in Manabí province (n=643) (ACAPS, 2016b; IFRC, 2016).

There have been seven earthquakes of 7.0 magnitude or higher in Ecuador since 1900 (ACAPS, 2016b). Another notable earthquake occurred in 1979 and killed 1,000 people. In addition to earthquakes, there are several active volcanoes in Ecuador. Most recently, the Tungurahua volcano erupted several times in 2006 resulting in evacuation, displacement, livestock loss and land damage (IFRC, 2007). The history of earthquakes in particular has prompted Ecuador to improve building standards, but they remain insufficient (ACAPS, 2016b). Just prior to the 2016 earthquake, the International Organization for Migration (IOM) Ecuador organized a workshop to build capacity to respond to a mass evacuation resulting from a natural disaster. The training was specifically conducted in preparation for an eruption of the Cotopaxi volcano (IOM, 2016). There has yet to be evidence regarding whether this training impacted the 2016 earthquake response.

4.2 Experiences with past humanitarian aid in general

Following the eruption of the Tungurahua volcano in 2006, the Ecuadorian Red Cross aimed to respond to the needs of 5,500 people through the provision of food packages, hygiene kits and cleaning kits. Additionally, they provided medical treatment in Chimborazo and Tungurahua. Water sanitation mechanisms were distributed to 4 heavily affected communities. Psychosocial support was provided to volunteers and communities, especially children (IFRC, 2007).

April 2016 Earthquake

The Ecuadorian government has solicited support from the UN following the April 2016 earthquake, and support from UNDAC and PAHO has been received. Venezuela, Colombia, Peru, Mexico, Spain and Chile also provided support to the Ecuadorian government. The Humanitarian Network has been established to coordinate efforts and involves 10 sectors: early recovery/response, education, protection, WASH, shelter, camp coordination/camp management, health, logistics, food security and coordination. (IFRC, 2016; UNOCHA, 2016). The National Decentralized System involves all public and private efforts and is supported by the Ecuadorian Red Cross. The Spanish, Colombian, American, Canadian, Mexican, Salvadorian, and Norwegian Red Cross organizations have also provided support (IFRC, 2016). Many other agencies are also involved in the earthquake response. International Medical Corps has conducted a rapid assessment of the situation in heavily affected regions (IMC, 2016). AmeriCares has been providing medical supplies to healthcare professionals in affected areas (AmeriCares, 2016).

Development and emergency response programs are heavily politicized in Ecuador. According to reports by the Child Fund and Kahre, the government has inexplicably intervened in NGOs operations in heavily affected regions in Ecuador (IMC, 2016). Rural villages seem to be disproportionately affected and continue to receive the least assistance.
from government efforts (IMC, 2016). There remains a need for emergency medical teams (particularly from the international community) to be organized, trained and operate self-sufficiently (WHO & PAHO, 2016).

4.3 Experiences with past humanitarian aid involving MHPSS

Very little documentation of MHPSS in the context of humanitarian response to previous disasters in Ecuador was found through this review of the academic and grey literature. One study documented the estimated prevalence of emotional distress following the 1987 earthquakes in Ecuador. Results suggest that 40% of persons screened in primary care clinics two months after the 1987 earthquakes reported emotional distress. Risk factors for emotional distress included not being married, self-report of poor physical or emotional health and having poorly defined physical symptoms (Lima et al., 1989).

April 2016 Earthquake

UNICEF has noted concern regarding the psychosocial well-being of Ecuadorians, particularly children, affected by the April 2016 earthquake (UNICEF, 2016). Several agencies have initiated MHPSS activities in response to the 2016 earthquake in Ecuador. UNICEF and IMC have each conducted/are currently conducting an assessment of psychosocial impacts of the earthquake (IMC, 2016; UNICEF, 2016). Christian Blind Mission (CBM) has recently completed psychological first aid (PFA) training (Valle Trabadelo, 2016). Plan International and World Vision have been setting up child-friendly spaces (CFS) to provide space for physical activity, education, psychosocial support (e.g. self-esteem, resilience) nutrition, and child protection (Plan International, 2016; UNICEF, 2016). Medecins Sans Frontieres is providing mobile psychosocial support with a team of two individuals in four camps in Pedernales. Referral mechanisms for mental illness are unknown, but community members have reported that traditional social support has been disrupted by the earthquake (IMC, 2016). UNICEF is working with the Ministry of Social and Economic Inclusion to coordinate appropriate care and screen children via the “Return to Happiness” program (UNICEF, 2016).
**References Section 4.0**


WHO & PAHO. (2016). Ecuador: Coordinating the arrival of international Emergency Medical Teams is key in response to earthquake in Ecuador.

5.0 Conclusions

5.1 Expected challenges and gaps in MHPSS

Beyond simply the large number of people in need of humanitarian assistance (ACAPS, 2016a), several additional challenges to humanitarian response exist. These challenges may be categorized into structural, resource limitations, and political challenges.

First, structural challenges include damages to infrastructure in earthquake-affected regions may impede humanitarian response, particularly in rural regions which are difficult to access and already vulnerable and receiving less assistance (ACAPS, 2016a; ACAPS, 2016b). Access to many areas has become increasingly difficult due to landslides, collapsed buildings, unstable roads, and uncertain power supplies (Save the Children, 2016).

Some of the strategies to address basic needs following an emergency, such as shelter, can also produce unintended consequences and challenges. For example, temporary shelters have been introduced as a short-term solution to displacement and property destruction resulting from the earthquake. After disasters occur it is common to observe increases in violence, particularly in shelters. Thus, gender-based violence and other forms of violence are of particular concern in displaced populations residing in shelters (Plan International, 2016). It is important that these challenges and potential consequences are anticipated so programs are introduced to mitigate this risk or alternative options are explored.

Other structural challenges include the destruction of critical systems and institutions such as schools for children and health centers for the community. UNICEF has emphasized that consistent education is critical to ensure progress towards psychological recovery for children affected by the 2016 earthquake. Structural damage to school buildings has prevented the operation of schools in the areas most affected by the earthquake. In response, UNICEF is providing temporary learning spaces (UNICEF, 2016a).

Second, human resources are limited as evidenced by the request for additional international medical teams and others to provide various services. With regards to MHPSS, there are several agencies that are engaging in these activities but poor communication and absence from coordination meetings has made it difficult to understand the scope of work for all activities (IMC, 2016). This is compounded by the challenges of poorly defined coordination of MHPSS referrals between humanitarian agencies and their limited connection with Ecuadorian health systems.

Third, the politicization of development and humanitarian response programs in Ecuador pose an additional challenge (IMC, 2016). Aligning priorities and practices between government agencies and NGOs is challenging; however, it is important that responsibilities and delegation of tasks is coordinated in order to avoid duplication of efforts, avoid dissemination of conflicting information, and to improve the efficiency of the humanitarian response.
5.2 Expected opportunities in MHPSS

Several NGOs and multilateral agencies have documented the need for psychosocial support services to be available in post-earthquake Ecuador, particularly for vulnerable groups (e.g. children, displaced persons) and humanitarian workers (PAHO, 2016; UNICEF, 2016b). Opportunities for improving the provision of MHPSS aid exist in areas of coordination and systems strengthening.

Several agencies including World Vision, Save the Children, IMC, CBM and Plan International are engaging in psychosocial activities, but there is currently a lack of coordination and awareness of other agency activities. Many organizations are implementing similar activities, such as child-friendly spaces, that could learn from each other’s successes and challenges and, possibly, coordinate their programs to expand their catchment areas.

One large gap in knowledge is the mental health referral system within Ecuador’s formal health services. In Ecuador, mental health is part of the primary health care system and mental health care is typically provided by primary health care doctors (WHO, 2011). Although few in number, there are specialist mental health providers in Ecuador (2.1 psychiatrists per 100,000 population, 29.1 psychologists per 100,000 population). According to the WHO Mental Health Atlas Country Profile for Ecuador, there is a referral system in place. It is evident based on agency reports that the MHPSS response has not been integrated into or made aware of this formal mental health referral network (IMC, 2016). Strengthening the relationships and ability of humanitarian agencies to refer to primary health care for mental health purposes or to mental health specialists, as needed, would strengthen responders’ ability to triage community members and provide non-specialized psychosocial support to the majority of affected persons and refer persons with more severe mental health problems to appropriate services within the formal health system.
References Section 5.0


