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Examining Mental Health in Northern Haiti

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by
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ABSTRACT OF THE DISSERTATION

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Mental health is a severely neglected field in low- and middle-income countries globally. Populations in countries such as Haiti demonstrate a high level of need for mental health services despite a lack of services and trained professionals. In addition to the dearth of biomedical services, local belief systems and explanatory models lead a majority of the population to rely on traditional medicine as their first option for care.

The goal of this dissertation is to characterize mental health beliefs, practices, and services in northern Haiti by examining the relationship between traditional beliefs and mental illness, assessing the impact of traumatic events on mental and physical health, and identifying predictors of mental health outcomes. Using a mixed-methods approach, this dissertation utilized in-depth interviews, focus group discussions, as well as anxiety, depression, and functionality scales to assess the status of mental health care in early 21st century northern Haiti.

Study findings indicate that mental illness is strongly impacted by traumatic events experienced in the context of society-scale crises, which have a significant effect on physical and mental health. Ongoing socio-political crises in particular result in high levels of violence and disorder which affect population- and individual-level mental health. Culturally-competent,

evidence-based mental health services, such as those offered at Sant Sante Mantal Mòn Pele (SSMMP) represent a unique opportunity for treatment for those suffering from mental illness in this region. However, the vast majority of patients requiring mental health care first seek treatment from traditional healers such as Vodou priests, whose approach within the Vodou cosmology differs significantly from the biomedical model. Vodou priests use a variety of means to treat patients suffering from mental illness including prayer, leaves for teas and baths, as well as combinations of perfumes, rum, human remains and other powdered concoctions. Additionally, until structural factors that result in entrenched poverty, violence, and political and social chaos can be addressed, already high levels of trauma, and poor physical and mental health, will likely continue to rise. Future research could focus on how to build and expand biomedical mental health services that are culturally-adapted to local explanatory models, and find ways to sustainably collaborate with traditional healers that avoid conflict.

Chapter 1: Introduction

This dissertation seeks to contribute to the literature on mental health in Haiti by assessing psychological well-being, mental illness, and treatment in northern Haiti. Using a mixed-methods approach, this study examines the relationship between traditional beliefs and mental illness, the impact of traumatic events on mental and physical health, and predictors of mental health outcomes among populations in and around Haiti's second largest city, Cap-Haïtien. However, it is first important to describe the context and history of mental illness and how mental health has been characterized historically both globally and in Haiti.

Brief History of Mental Illness

In 2018, The Lancet Commission on Global Mental Health and Sustainable Development led by Dr. Vikram Patel, and other leaders in the field, characterized mental and substance use disorders as emotional, cognitive, or behavioral disturbances that reach a threshold which causes substantial functional impairment, so that an individual struggles to fulfill desired social roles in the community (Patel et al., 2018). According to the Commission, the focus on functional impairment is an essential criterion to identify the point at which a person might be considered to have a disorder or require a diagnosis; however, the measurement of functional impairment in diverse cultural contexts remains hotly debated in global mental health research (Patel et al., 2018). This debate is flavored by different interpretations of mental illness, its history, its causes, its manifestations, and its treatments.

The history of mental illness and the multitude of diagnoses that fall within its purview are as long as human history itself. Secular understanding of mental illness first emerged during early development of medical systems ranging from Greek theories on depression and psychosis, to Ayurvedic, Tibetan, and Chinese medicine's promotion of humoral imbalance as a way of understanding, diagnosing and treating mental illness. Ancient Persia invented the first asylums for mentally ill, which eventually spread to other empires in Europe and then further afield through British, Dutch and French colonialism (Kohrt & Mendenhall, 2016).

In his seminal work on the history of mental illness, *Madness and Civilization*, Michel Foucault describes how since the beginning of the Middle Ages, Europeans had a relation to mental illness broadly characterized by three words: "Madness, Dementia, Insanity" (Foucault, 1961). During this period so-called madmen were frequently exiled from towns around Europe, and forced to live a wandering existence in the countryside. In the Renaissance, these individuals were often put on boats referred to as "ships of fools" that either went to sea or traveled the rivers of Europe. The 17th century saw the birth of the first large houses of confinement, established throughout Western Europe with edicts requiring one in every county in England, for example. In Paris, it is estimated that one-tenth of all arrests sent to the *Hôpital Général* concerned "insane" or "demented men," individuals of "wandering mind," and "persons who have become completely mad" (Foucault, 1961, p. 65). Often treated as a social danger, these individuals were treated extremely harshly, kept on leashes, living in putrid cages, or chained to walls for up to years at a time. However, just a few hundred years later, with the development of medical science, individuals suffering from mental distress were considered less as criminal vagrants and more and more as patients requiring medical intervention.

By the end of the 19th century, rapid growth and transformation of understandings of mental illness introduced contemporary practices of biomedicine including psychiatry and neurology as scientists searched for biological causes of mental and neurological conditions. In this period, medical professionals explored treatment options from electroconvulsive therapy (ECT) to lobotomies, practices whose risks were so high that they were quickly abandoned with the advent of psychoactive medications – though ECT continues to be practiced today (Foerschner, 2010). While in the late 1800s, substances such as bromides and barbiturates were used to sedate the mentally ill, it wasn't until 1949 when an Australian psychiatrist experimented with the element Lithium and found it to be effective in treating some mental disorders (Foerschner, 2010). Since this period, medications from Valium in the 1960s to Prozac in the 1980s have permanently altered mental health care; however, while many in the West view these as treatments for specific disease states, populations in other parts of the world continue to view mental illness as primarily related to spiritual afflictions (Kohrt & Mendenhall, 2016).

Today, mental health disorders are categorized into a range of conditions from trauma, anxiety, depression, personality disorders, psychotic disorders, and addiction (Pincus & England, 2015). More specifically, modern nosology of mental disorders are codified by the fifth edition of the *Diagnostic and Statistical Manual* or DSM (American Psychiatric Association, 2013) as well as the 10th edition of the WHO's *International Classification of Disease* or ICD of mental and behavioral disorders (WHO, 2004). While these categories, labels, symptom lists and criteria for psychiatric diagnoses have changed significantly over the history of these documents, the current formulations include mood disorders (such as depression or bipolar disorder), anxiety disorders (such as panic or generalized anxiety disorder), stress and trauma disorders (such as post-traumatic stress disorder), psychotic disorders (such as schizophrenia), substance use

disorders (such as alcoholism), child development disorders (such as autism and ADD/ADHD), somatoform disorders (such as chronic pain), cognitive disorders (such as Alzheimer's or dementia), personality disorders (such as borderline personality disorders) and neurological disorders (such as epilepsy) – Table 1 (Kohrt & Mendenhall, 2016).

Table 1. Current Formulations of Mental Illness Categories

Disorder Type	**Examples of Disorder**
Mood Disorders	Depression, Bipolar
Anxiety Disorders	Panic Disorder, Generalized Anxiety
Stress and Trauma Disorders	Post-Traumatic Stress Disorder (PTSD)
Psychotic Disorders	Schizophrenia
Substance Use Disorders	Alcoholism, Drug Abuse
Child Development Disorders	Autism, Attention Deficit Disorder (ADD)
Somatoform Disorders	Chronic Pain
Cognitive Disorders	Alzheimer's, Dementia
Personality Disorders	Borderline, Narcissistic, Antisocial
Neurological Disorders	Epilepsy

The latest versions of the DSM and the ICD have also left room for "culture-bound syndromes" which are highly localized forms of mental distress such as Hikikomori (a Japanese syndrome of social withdrawal), Pibloktoq (Wildman syndrome in New Guinea), Arctic Hysteria among Inuit of Northern Greenland, and Windigo among Algonquin Indians, as just a few examples of well-documented syndromes of this type (Addlakha, 2008). Yet, culture-bound syndromes are not simply relegated to isolated tribes, as other scholars have examined how illnesses such as eating disorders represent forms of mental illness unique to the culture in the West, and less present elsewhere until recently (Watters, 2010). This example highlights a significant distinction between mental illness based on severity, with more moderate forms such as mild depression or anxiety and many culture-bound syndromes on one end of the spectrum,

and bipolar and schizophrenia as more severe forms on the other end of the spectrum. While debates about the culture-bound nature of other forms of anxiety, depression, and epilepsy are common in mental health research, it is generally accepted that conditions like schizophrenia and bipolar remain fixed in form because of their essential biological underpinnings (Addlakha, 2008). While secondary features of more severe mental illness – such as content of delusions and hallucinations – are affected by cultural milieu, their universality across culture indicates a deeper biological mechanism that transcends social context.

Mental Health in Low- and Middle-Income Countries (LMICs)

Mental health literature often cites the common World Health Organization refrain from 2005 that, "there can be no health without mental health" (Patel et al., 2006). Yet, despite the constant recitations of this "rallying cry," mental health has been included in the WHO's definition of health since its 1948 charter and has continually remained a neglected field (Kohrt & Mendenhall, 2016). Today, the global burden of disease attributed to mental, neurological, and substance abuse disorders was expected to rise from 12.3% in 2000 to 14.7% in 2020, with a particularly sharp rise in low- and middle-income countries (LMICs) compared with high-income countries (Patel et al., 2006). In fact, depression was predicted to become the main cause of disability and the second leading health problem after coronary heart disease by the year 2020 (Addlakha, 2008; Flisher et al., 2007).

Mental health is also closely linked with virtually all global public health priorities ranging from infectious diseases to chronic diseases (Patel et al., 2006). In fact, mental and physical disorders interact in a complex manner, with mental disorders increasing the risk for other general health problems and vice versa (Flisher et al., 2007). Yet, when the Millennium

Development Goals (MDGs) were first established in the UN Millennium Declaration, mental health was "far from the agenda" (Kohrt & Mendenhall, 2016, p. 25). Today, on the other hand, there are dedicated efforts by a select group of researchers, policy makers, and funders advocating for the representation of mental health in the global public health agenda, development goals, and interventions, and mental health and wellbeing are included in the UN's Sustainable Development Goals (SDGs) (Kohrt & Mendenhall, 2016; Trani & Bakhshi, 2017). Additionally, clinical trials have demonstrated the efficacy and cost-effectiveness of locally feasible treatment for common mental illness in LMICs, finding that mental illnesses can be treated with cheap and technically simple treatments (Patel et al., 2006). Many developing countries are now also able to produce generic versions of psychotropic medications because of changes in international patent regulation, allowing newer drugs to be accessible for low-income groups (Patel et al., 2006). Yet, despite these efforts, recent data shows that, worldwide, up to $8.5 trillion in lost output is attributed to mental, neurological and substance abuse disorders, a figure that is expected to double by 2030 (Ventevogel, 2016). While this affects countries around the world, it is particularly detrimental to LMICs.

Mental Health in Haiti

In Haiti, a Caribbean nation with a population of roughly 11 million in a land mass the size of the state of Maryland, mental health has not traditionally been a priority for the government, as the country has grappled with poverty rates that have steadily remained the highest in the Western Hemisphere (Pierre et al., 2010). Additionally, in the absence of a nationwide mental health policy, there has been little to no real planning of services, and very few professionals have been trained (Pierre et al., 2010). The first mental health therapy

practices in Haiti began in the late 1980s as part of a major AIDS prevention campaign that included face-to-face contact with at-risk populations (Nicolas et al., 2012).

However, the status of mental health in Haitian society changed most significantly when an earthquake struck the capital Port-au-Prince in January 2010 killing over 200,000 people and leaving significant untreated trauma in its wake, allowing mental health policy to enter into the spotlight for the first time (Wagenaar et al., 2013; Nicolas et al., 2012). While prior to 2010, mental health treatment was considered primarily the role of the church or other faith healers – with a few psychologists working privately or with HIV/AIDS patients – after 2010, a large push began to develop evidence-based mental health services throughout the country, primarily led by nongovernmental organizations (NGOs) such as Zanmi Lasante (ZL) – also known as Partners in Health (Michel, 2019). In their efforts to scale up services, ZL explicitly states that, "the amalgamation of biomedical, psychological, and local spiritual and religious practices in Haiti is feasible to serve a wide range of problems related to mental health care," thereby incorporating all three major treatment approaches into their program (Raviola et al., 2020). As an almost universally religious country, other local efforts to foster mental health services unsurprisingly maintain a strong religious component such as the development of the Center of Spirituality and Mental Health – *Centre de Spiritualité et de Santé Mentale* in French – at Notre Dame University in Port-au-Prince (Jean-Charles, 2017).

After the earthquake, mental health began to find a place on the Haitian government's agenda, and during the following year the Ministry of Health held meetings with key stakeholders to move towards a national mental health policy (Boyd et al., 2015). However, despite promising efforts, there continues to remain no well-defined mental health agenda to guide service provision (Boyd et al., 2015) and mental health received just 1% of the total budget

for health in the country (IESM-OMS, 2011). Currently, nearly three quarters of health services in rural Haiti are provided by NGOs, comprise mainly primary health care provision – with no mental health services – and are often staffed by foreign workers who do not speak the language or understand key cultural cues essential for mental health treatment in Haiti (Nicolas et al., 2012).

Additionally, Haiti continues to retain the lowest rate of professional psychosocial support in the Caribbean and Latin America, and one of the lowest in the world, despite the high rate of need in the wake of one of the world's deadliest natural disasters in recent memory – among other traumas (Nicolas et al., 2012). Approximately ten psychiatrists and nine psychiatric nurses work in the capital Port-au-Prince, removed from rural Haiti where more than 60% of the population lives, and the country's two public psychiatric hospitals, University Hospital Center of Psychiatry Mars and Kline and Beudet – with combined total of only 180 beds – are underfinanced, understaffed, and unable to provide high quality care (Boyd et al., 2015; IESM-OMS, 2011). While estimates vary, roughly 100-200 psychologists, 50-100 social workers, up to 30 psychiatric nurses, in addition to 20-30 psychiatrists and one neurologist are addressing the mental health needs of Haitians in the whole of Haiti whereas the neighboring Dominican Republic – with the same population as Haiti – has more than 2,000 mental health professionals, and Puerto Rico has about 5,000 psychologists and psychiatrists for fewer than 4 million inhabitants (Nicolas et al., 2012; IESM-OMS 2011). Compared with the large number of churches and local faith healers spread throughout the country, Haiti therefore abounds in largely untested – and often harmful – alternative approaches to treatment, yet has a dearth of biomedical or psychosocial approaches available to patients.

It is important to note, once again, that the deficit of biomedical or psychosocial services is not for lack of need. Data, while limited, indicates a high prevalence of depression and suicidal ideation in Haiti. Following the 2010 earthquake, one study showed rates of post-traumatic stress ranging between 24.6% and 59.1% of the population in affected areas (Albert, 2019). Another study looking at a rural population of adults in Haiti's Central Plateau found that over 6% of the population endorsed current suicidal ideation, a relatively high percentage when compared to other LMICs (Wagenaar et al., 2013). Additionally, there is evidence of significant emotional distress due to widespread organized violence and life stressors (Smith-Fawzi et al., 2012). Gang violence is particularly problematic in urban areas, where high crime rates have been directly linked to poor mental health among residents (Brewis, Wutich, Galvin & Lachaud, 2020). Haitian psychologist, Norah Desroches Salnave, who saw patients from a variety of backgrounds in Port-au-Prince, found that about 40% of patients reported problems related to violence, kidnappings, death of family members, rape and gang-related violence (Pierre et al., 2010).

Other more recent factors, such as widespread political unrest and high inflation, leading to increasing costs of living, indicate that mental health problems and suicide in Haiti are likely to continue to increase at exponentially high rates (Albert, 2019). Yet, despite these high rates of suffering, one study found that 32% of Haitians would choose God as their first choice of care, whereas only 29% endorsed clinics or hospitals (Wagenaar et al., 2013). In addition to this, local faith healers and other practitioners of alternative approaches often financially exploit patients in Haiti with one study estimating a median service cost of $120 for Vodou priests and $1 for hospitals or clinics (Wagenaar et al., 2013). Therefore, even if the services of local faith healers are not physically harmful to patients, they are harmful to the overall family's wellbeing through

often egregious financial exploitation, the authors claim. Despite this current lack of knowledge and resources, there is a long history of mental health research in Haiti, spearheaded by a few Haitian psychiatrists starting in the early 20th century.

A History of Mental Health in Haiti

Historically, the mentally ill in Haiti were not treated in specific centers, but rather treated by traditional healers in the countryside, put in jail for vagrancy, or, if judged dangerous or embarrassing by the family, tied up at home (Bijoux, 2010). As described by the famous Haitian psychiatrist, Legrand Bijoux, common belief held that if someone with mental illness hit you, you too would become mentally ill if you didn't strike them back (2010). Hence, the origin of the often brutal treatment reserved for people with mental illness in Haiti, historically.

Only during the American occupation of Haiti in the early 20th century, was the first institution reserved for mentally ill established, at the Pont Beudet training camp north of the capital, Port-au-Prince (León, 1933). However, with appalling conditions in the former military camp at Beudet, the first Haitian psychiatrist Jean Price-Mars advocated for a new modern psychiatric facility in the capital as an alternative to Beudet. In this effort, Mars founded the National League of Mental Hygiene (*Ligue Nationale d'Hygiène Mentale*), to evaluate the relationship between Haitian culture and mental illness, bringing together doctors, religious leaders, teachers, students, etc., in an effort to further medical understanding of mental illness and curb violence toward the mentally ill (Bijoux, 2010). As part of their efforts with the League, Mars and several other Haitian psychiatrists founded a local scientific journal, the Bulletin of the Center for Psychiatry and Neurology (*Bulletin du Centre de Psychiatrie et de Neurologie*), as part of a Haitian ethno-psychiatric movement in the mid-20th century. In fact, in

an essay about Vodou spirit possession, Mars was the first to coin the term "ethnopsychiatry," presenting this as a new field separate from psychiatry, and highlighting its necessity in places such as Haiti and post-colonial francophone Africa (Mars, 1953). Other writers of that generation also included rich descriptions of mental illness in the Haitian context, highlighting unique interactions between Haitian culture and psychiatry (Philippe and Romain, 1979; Philippe, 1975).

In addition to his work in research, Mars also promoted improvements in treatment starting with the foundation of an alternative to the Beudet asylum – the only institution for the mentally ill in Haiti since the 1920s. He realized this goal in 1959 with the opening of the Haiti Psychiatric Institute – now called the Mars & Kline Psychiatric Center (Bijoux, 2010). After the election of François "Papa Doc" Duvalier in 1957, a thwarted coup in 1958 caused Papa Doc to take a totalitarian and despotic turn, indiscriminately killing his political opponents. While the need for services at Mars' center were increasing, services were declining (Kline and Mars, 1960). In this fraught political environment, Mars decided to accept a position as Haitian ambassador to the US, and was thus not present to advocate for the center's continued operation. In addition, the National League of Mental Hygiene disbanded due to the political repression under Papa Doc, as academic freedom of expression disappeared in the country.

While the Mars & Kline center was built with promising ideals, higher demand for services, political repression under Papa Doc, and increasingly meager resources, it – along with Beudet – deteriorated significantly (Fils-Aimé, 2016). With academic research in the country also coming to a halt during this period, stigmatization of mental illness remains high to this day, as many medical providers and mental health professionals are not only stigmatized for treating

the mentally ill, but also often fear that they may end up "crazy" themselves after spending time with sufferers (Fils-Aimé, 2016).

Goal of this Dissertation

Given the above description of the history of mental health in Haiti, the current state of mental health services in the country, as well as important context for mental health research there, the overall goal of this dissertation project is to characterize mental health beliefs, practices, and services in northern Haiti. Additionally, while many studies have been conducted in the south of the country, this project offers a chance to assess the less studied north of the country. Northern Haiti has traditionally been poorer and more isolated than the south of the country and areas around the capital (Barthélemy, 1991). Working with the first mental health clinic established in this region of Haiti – Sant Sante Mantal Mòn Pele (SSMMP) – is a unique opportunity to examine this question in depth for the first time. Additionally, as Haiti represents a unique culture in the Americas, this research will contribute to closing important gaps in the global mental health literature. Institutional Review Board (IRB) approval was obtained from Washington University in St. Louis (IRB #202005009), as well as with the Haiti National IRB – or *Comité National de Bioéthique* (IRB #1920-51).

This dissertation seeks to examine the subject of mental health from a variety of angles in northern Haiti. In particular, in Chapter 2 it assesses the relationship between traditional beliefs and mental illness, the impact of traumatic events on mental and physical health in Chapter 3, and predictors of mental health outcomes in Chapter 4. Importantly, throughout this study, we examine the question of mental health and well-being in the context of many different factors both on the level of society as a whole – including global factors such as the coronavirus

pandemic – as well as through the lens of household or individual levels factors such as care seeking behaviors or spiritual beliefs.

More specifically, in the second chapter we use an anthropological approach to examine the perspectives of traditional healers, who are the first line of care for the vast majority of the population when suffering from mental illness. This chapter explores the foundations of what it means to be mentally ill in the religious and cultural context of Haitian Vodou, and how traditional healers and the general population conceive of mental illness in the broader cosmology of Vodou. This chapter also highlights the system of belief that exists in Haiti via the Vodou cosmology which often sees illness and misfortune through the lens of *sent spirits*. These spirits are usually viewed to have been sent by others in one's community to cause harm. Vodou priests perform treatment through a variety of means including prayer and conjuring of spirits, use of leaves for teas and baths, as well as combinations of perfumes, human remains and other powdered concoctions. Study findings suggest that while Vodou priests are willing to collaborate with biomedical practitioners, some barriers remain preventing cooperation between these two groups.

The third chapter investigates the perceptions and experiences of public health university students during two recent large-scale crises in Haiti: *peyi lòk* and the coronavirus pandemic. While the study initially only intended to examine the former, global and local events involving the pandemic necessitated a redesign of study instruments to incorporate questions related to coronavirus. Through focus group interviews, this chapter examined the impact that these two crises had on both individual and family level mental health, as well as the impact on society as a whole. With regards to *peyi lòk*, this period was characterized by significant increases in violence and fear. With gangs committing exactions and taking over large sections of urban

areas, the population was often left to their own devices for survival as the central government largely disappeared in many places. For the coronavirus pandemic, students described high levels of fear, stress, and uncertainty, particularly during the initial period of the country-wide government-imposed lockdown in early 2020. Overall, this chapter examines the impact that current crises have on mental health broadly speaking, highlighting the important role that trauma plays in overall psychological well-being at both individual and population levels.

The fourth chapter explores the experiences of patients and the determinants of mental illness at the first mental health clinic in northern Haiti, SSMMP, examining the relationship between demographic factors and depression, anxiety, and functional ability among this sample. Secondly, this chapter also delves into the importance of spiritual and religious beliefs as a potential mediator of care seeking behaviors, characterizing the extent to which patients believe their mental illness is rooted in Vodou belief systems and whether they sought care with traditional healers. In particular, results showed high levels of belief in *sent spirits* as the reported etiology of a patient's mental illness, as well as high levels of patients seeking care with Vodou priests prior to biomedical treatment. Findings also emphasized the importance of traumatic events and poor physical health as determinants of mental illness.

For six weeks during the summer of 2019, a qualitative pilot study was conducted at SSMMP to assess its patient population and gain a deeper understanding of the clinic's needs as well as the local cultural and religious environment in the communities surrounding the clinic. This formative research led to the adoption of a mixed approach for the purposes of this dissertation. While the first two chapters applied primarily qualitative approaches, the third chapter used primarily quantitative approaches. Specifically, Chapters 2 and 3 necessitated more qualitative approaches as they sought to garner in-depth perceptions and experiences of

participants. This contrasts with Chapter 4 which interviewed significantly larger numbers of participants in a clinical context, and therefore employed a quantitative approach with a questionnaire that included fixed, validated mental health assessment scales. However, Chapter 4 also included some qualitative data to further elucidate quantitative data collected.

This research fills an important gap in the evidence base, as currently there are few in-depth studies which examine mental health in very low-income environments, such as rural northern Haiti. Additionally, this study exposed important linkages between traditional belief systems and Western biomedical conceptions of mental illness, some of which have not been written about before. It is important that global mental health as a field does not neglect the fact that large sections of the global population continue to conceptualize mental illness through vastly different nosologies, and continues to engage with deeper questions about the nature of culture, religion/spirituality, and systems of belief when developing and scaling up psychiatric systems of care globally. Understanding local conceptions of mental illness and related care-seeking behavior is essential for the development of effective public mental health interventions.

Chapter 2:

Examining the Etiology and Treatment of Mental Illness Among Vodou Priests in Northern Haiti

Introduction

My first attempt to interview an *ougan* (or Vodou priest) in northern Haiti, was in a rural area roughly five miles south of the town of Limonade in a locale called Bois de Lance. I arrived with my moto taxi driver at noon on a Friday in late August 2020. Ten patients were patiently waiting on plastic chairs and makeshift wooden benches outside his brightly painted house. As patients go in and out to see the *ougan*, we can hear him singing inside, conjuring the spirits for them (or *fè limyè*). Finally at 3pm, he invites me inside a dark room filled with unlit candles, assorted bottles of alcohol scattered all over the floor, and a bowl of oil with a single small flame as the only source of light. After introducing myself as an American psychologist working with a local mental health clinic, and my study examining the perspectives of *ougan* and their treatment of mental illness, he tells me he will have to think about whether he wants to participate and that I should come back at dawn on Sunday. I return at 6am on Sunday morning to find several patients already waiting to see him. One woman says she arrived at 4am and there were already three people in line ahead of her. I wait for hours again as the sun rises, patients argue about politics, and a little girl feeds the chickens next to a ramshackle shed with two human skulls placed prominently on top. The *ougan* arrives around 8:30am after feeding his cows, and I sit patiently as he showers and prepares for his work day. By the time he invites me into the room around 9am, roughly 40 patients have gathered outside to seek his services. He agrees to speak, albeit without audio recording, and quickly explains the mixture of ingredients needed to cure mental illness (*maladi moun fou*) in his practice, chanting and singing between each ingredient, as he has already been possessed by the spirit who works for him.

The idea for a study which interviewed *ougan* in Haiti originated in the summer of 2019 when I spent six weeks volunteering at the Sant Sante Mantal Mòn Pele (or SSMMP), the first mental health clinic in northern Haiti. Founded in 2016 by a local psychologist, this clinic quickly developed into a reference for mental health treatment throughout Haiti (Galvin & Michel, 2020). During my time at SSMMP in 2019, I conducted four focus group interviews with the three staff psychologists about their perspectives on mental health treatment in northern Haiti, particularly in relation to the widespread use of traditional healing for mental illness performed by *ougan*. In particular, I was surprised members of the staff were so opposed to collaborating with local *ougan* with one arguing that "they [*ougan*] further disturb already disturbed patients through their treatments," another claiming "they exploit their patients financially," and the chief psychologist arguing that "there is a serious risk of conflict in collaborating with them." This fear of collaboration is what surprised me the most. Returning in the summer of 2020 to conduct my doctoral research at SSMMP, I was determined to understand more about traditional healing of mental illness in the area surrounding the clinic to comprehend the perspectives and experiences of traditional healers, elucidate perceived etiology and popular nosology of mental illness, as well as to gauge to what extent collaboration with the hundreds of *ougan* in the area would be possible.

Background

Just as mental illness has existed throughout human history, traditional healing practices too have developed and endured over millennia resulting in a myriad of explanatory models, treatment methods and rituals, adapted to different topographies, climates, religions, cultures, and political systems (Wampold, 2001). Today, concepts of what constitutes "mental illness,"

presumed etiology, and preferred treatment options can vary considerably from one cultural context to another (Ventevogel, 2016).

With its unique history, Haitian Vodou is often described in relation to its strong links to traditional religious systems from Africa – particularly West Africa – with many of the same spirits and divinities maintained on both sides of the Atlantic (Métraux, 1958). Similar to explanatory models of mental illness in Haiti, studies of traditional beliefs in sub-Saharan Africa often portray etiologies based in spirit possession and sorcery (Okello & Musisi, 2015; Falen, 2018). One study from Nigeria described a patient who believed his mental illness was caused by a curse from a jealous neighbor and sought treatment from a local traditional healer. The healer used a combination of divination and herbal remedies to treat the supernatural malady described as "religio-therapeutic and religio-physiologic techniques" (Umoren, 1990, p. 395). Central in these forms of treatment is the understanding that indigenous African categories of misfortune often do not consider mental illness a separate, or distinct, category from other "nonmedical forms of misfortune" (Ventevogel, 2016, p. 69). As another study describes,

> "In Africa, mental disorders are often perceived as a source of misfortune; ancestors and witches are believed to have a crucial role in bringing them about. Such disorders may be viewed in terms of magical, social, physical and religious causes, but rarely as diseases within the Western biomedical paradigm" (Ngoma et al., 2003).

Other in-depth studies from sub-Saharan Africa have exhibited similar explanatory models of mental illness and forms of traditional healing (Ovuga et al, 1999; Crawford & Lipsedge, 2004; Graeber, 2007; Thompson & Atindanbila, 2011; Kajawu et al., 2016; Falen, 2018).

While little research exists on traditional methods for treating mental illness historically, in recent years, an increasing number of studies in low- and middle-income countries (LMICs) have tried to systematically assess the practices of traditional healers for mental health treatment

(Abbo, 2008; Abbo et al., 2012; Burns & Tomita, 2015; Gureje et al., 2015; Nortje et al., 2016). Many studies examining traditional approaches to treating mental illness utilize qualitative approaches including grounded theory, developing theories that are connected to the data collection and analysis process (Glaser & Strauss, 1967). In particular, these methods emphasized participant observation, in-depth interviews, and collecting artifacts or texts to better understand subjects being studied. Additionally, many studies also use an iterative approach through the constant comparative method, in which researchers move in and out of the data collection and analysis process, and emphasize inductive reasoning.

As in many places around the globe where traditional healing in the treatment of medical ailments is widespread, understanding the methods of traditional practices and how the traditional healers – and their communities – perceive illness is important for public health programming in Haiti. Traditional healing practices for mental illness in southern Haiti have been documented by several studies (Meudec, 2007; Pierre et al., 2010; Fils-Aimé, 2016). However, some aspects of *ougan* practices have not been investigated before. In addition, no known studies have examined traditional healing practices in the north of the country. While similar to southern Haiti, researchers have documented many distinctions between the north and the south as relates to traditional healing practices (Métraux, 1958). As Haiti is a country with few mental health services outside of the capital and in the south, the vast majority of Haitians in northern Haiti have little choice but to go to traditional healers for mental health concerns. While some research shows that Haitians would prefer biomedical services if they were available (Khoury et al., 2012), there is debate as to whether improved access to allopathic services alone would significantly change local health behaviors (Meudec, 2007). To date, few studies have examined the perspective of traditional healers – and the activities they engage in with regards to

treating mental illness – in addition to the possibilities for coordination between traditional and biomedical practitioners in Haiti (Fils-Aimé, 2016).

Methods

Setting

This descriptive study examines the practices of *ougan* in Haiti relative to mental health. This research was conducted in northern Haiti between 2019 and 2020 in the context of a doctoral dissertation. Initial focus group interviews were conducted with clinic psychologists in May and June of 2019. Formal in-depth interviews were conducted with 20 *ougan* – 15 male Vodou priests referred to as *ougan* or *bòkò* and 5 female Vodou priestesses referred to as *manbo* – that live and work in the municipalities immediately surrounding SSMMP (including Kadouch, Limonade, Quartier Morin, Dereal, and Bois de Lance) between August and November 2020. Other studies which interviewed traditional healers similarly found that 20 was an appropriate sample size for achieving saturation while ensuring validity (Guest et al., 2006; Akol et al., 2018). Even though *ougan* is a term reserved for male Vodou priests – with females referred to as *manbo* – for simplicity sake this study will refer to them collectively as *ougan*, which is common practice in Haiti. SSMMP is located in a rural area just east of Haiti's second largest city Cap-Haïtien. All interviews were conducted solely in Haitian Creole (or Krèyol) and lasted between 30 minutes and one hour. Ten additional informal interviews were conducted with other key informants including medical professionals, *ougan* from southern Haiti, civic leaders, and university students for the purpose of this research. All names used in this study are pseudonyms to protect the identity of participants.

In this article, we will be using terms in Krèyol as written in Valdman's *Ann Pale Krèyol* (1988), thus writing the commonly termed "Voodoo" in English as "Vodou," etc. Words in Krèyol are written the same in singular and plural so the designation *ougan* represents both. Though largely derived from French, Krèyol is a unique language that is unintelligible to a French speaker. Though both French and Krèyol are official languages in Haiti, a very small minority speak French (Etienne, 2006). As there are few French-speaking countries in the Western hemisphere – and even fewer that speak French-derived Krèyol – Haitians have been historically insulated from many outside influences (Métraux, 1958). Additionally, in 1804 Haiti earned its independence decades and even centuries before many of its neighbors, allowing a local culture largely inspired by former African slaves to dominate the country (Pierre et al., 2010). Several experts have examined the African origins of Haitian beliefs with regards to traditional medicine (Métraux, 1958; Hurbon, 1987; Hoffman, 1990; Meudec, 2007; Régulus, 2012).

Study Design

Institutional Review Board (IRB) approval was obtained from Washington University in St. Louis for both the focus groups conducted in 2019 (IRB #201905029) and in-depth interviews with traditional healers in 2020 (IRB #202005009), as well as with the Haiti National IRB – or *Comité National de Bioéthique* – in 2020 (IRB #1920-51). In the context of a larger mixed-methods study on mental health in northern Haiti, this research used grounded theory to examine the perspectives and experiences of *ougan,* particularly in relation to their treatment of mental illness, in the areas surrounding SSMMP. Through participant observation and semi-structured in-depth interviews, this study also sought to examine their past collaboration with

biomedical service providers as well as their openness to future collaborations. Using a constant comparative analysis, researchers used an inductive approach in which data informed the development of theories and hypotheses rather than vice versa. This is primarily due to the fact that we currently know very little and there are few theories developed surrounding these practices. In addition to interviews with 20 traditional healers, this research was conducted in close collaboration with clinic staff to ensure full understanding of data collected as well as to ensure that there was no risk of conflict with local traditional healers, as was originally feared by staff psychologists in 2019 interviews.

Data Collection

Participants were selected through purposive sampling based on their proximity to SSMMP. As *ougan* are largely located in rural areas – often far from main roads and towns – and can be difficult to find, participants were identified either through referrals from clinic staff or local residents who know the area well such as moto taxi drivers. Participants were provided 250 gourdes ($4) as compensation for their time. This sum was determined in consultation with SSMMP clinic staff. All participants were presented with a form explaining the study and informed consent. As the majority of *ougan* are illiterate, the form was read to them aloud before they signed. Ten of the twenty interviewed marked with an 'x' as they could not sign their name. If an *ougan* refused informed consent they would not be interviewed, however none refused for the purposes of this study. Interviews were audio-recorded, though four *ougan* refused recording in which extensive case notes were taken and immediately transcribed following the interview. Transcriptions were translated into English and analyzed using thematic analysis. Analysis was performed using the constant comparative method including inductive

coding (Silverman, 2005). These codes were consequently operationalized into themes which were reviewed, modified, and agreed upon by both the PI and staff psychologists at SSMMP. Staff psychologists also served as "cultural informants" to elucidate complex spiritual concepts in Vodou healing practices. Patterns of themes were discussed and elaborated together in monthly meetings to establish new codes, beginning after the first month of completed interviews. By the end of month three, primary themes were established and subthemes were identified, for example, the five different remedies that *ougan* use to treat mental illness. As little prior research existed on this subject in this setting, it was important to develop these themes through an ongoing and iterative process.

Results

Who are *ougan*?

The *ougan* interviewed for this study ranged in age from 23 to 70 years old, with an average age of 49. Three *ougan* gave approximations of their age and one said he did not know his age at all. The vast majority of *ougan* had significant work experience ranging from 7 to 46 years, with an average of 23 years working experience among them. There are a large number of *ougan* working throughout rural Haiti. A 1973 study estimated there was 1 *ougan* for every 100 Haitians (Merlo, 1973). A 2003 study was slightly higher estimating that there were 1.5 *ougan* for every 100 inhabitants in Haiti, a number that would be significantly higher in rural areas where *ougan* tend to be concentrated (Clérisme, Antoine & Lyberal, 2003). This is compared to an estimate of only 1 doctor for every 40,000 Haitians, with other studies estimating 1 in 100,000 (Meudec, 2007; Méance et al, 2014). In interviews with *ougan* for the purposes of this study,

most estimated that there were between 10 to 30 other *ougan* working in their local area, indicating a high concentration in areas surrounding SSMMP.

In addition to serving as religious healers, *ougan* are generally used as guides to find solutions to different problems in rural Haitian society (Merlo, 1973). In this sense, they can act as counselors, judges, social workers in addition to spiritual leaders. However, their primary role is to heal (Méance et al., 2014). The majority are born in the local communities in which they live and work, generally come from poorer classes of society, and are often illiterate (Clérisme, Antoine & Lyberal, 2003). In his seminal 1958 work on Haitian Vodou, *Le Vaudou Haïtien*, Swiss anthropologist Alfred Métraux described rural Haitians as "confined to a world in which mystical forces are always present" (p. 238). Religion and spirituality are in fact omnipresent in Haiti, as described by Haitian sociologist Laënnec Hurbon (1987), "God is always on the lips of the people, invoked in all circumstances" (p. 173). Yet, Haiti presents a unique case of religious "syncretism" – or mixing – in which local Catholicism is heavily interwoven with African beliefs (Mena, 1998). For this reason, it is oftentimes difficult to parse out the African beliefs from Christianity in Haiti, as the two are so tightly melded.

How do they become *ougan*?

The knowledge of traditional healers is usually passed down through families, with the *lwa* (or African spirit) "claiming" a new individual in the family after the elder's death (Deren, 1953; Métraux, 1958). One study found that there are 401 different *lwa*, and that they primarily live in local plants and animals, such as trees and snakes (Méance et al., 2014). As described by one *manbo* interviewed, when the spirits choose a new person in the family it is following the "rites of Guinea" (*rit gine*) and "ensuring continuity in the name of Africa" (Manbo Manise). A

common refrain heard by several different *ougan* is that they were "called" (*se lwa ki relew*) or "claimed" (*reklame*) by a *lwa*. Three *ougan* interviewed claimed that they inherited the *lwa* from grandparent who was *ougan*, with one saying, "when our grandparents aren't here anymore, the *lwa* choose children to inhabit" (Ougan Wilfrid). There are several ways in which this spirit transfer can take place, as described by Ari Kiev in his 1962 work *Psychotherapy in Haitian Voodoo*, but most common are either through ceremonies or dreams (Métraux, 1958; Kiev, 1962). One *ougan* I spoke with described being possessed with the spirit during a large ceremony on January 2nd or Ancestry Day (*Jour des Aïeux*) – an important holiday in Haiti – when he was 13 years old: "That was when I first 'danced' [was possessed]. It was a big party that day… my mother always put pressure on me, she always said I had a spirit (*jany*)" (Ougan Ronald).

Several other *ougan* interviewed described becoming a healer after a spiritual experience from a dream. One described how,

> "One night something appeared before me and told me to go get a rock in the ravine and I found something marked "Philomise" [the most prominent *lwa* in Limonade where he lives]. After that my sister became sick, it was then that the spirit first came to me (*lespri a te monte*) and it stayed inside me. People started asking me to work for them [as an *ougan*]" (Ougan Jacques).

Another described an experience in which God spoke to him and gave him the power to cure sickness through a dream:

> "I had a dream. When I laid down, I saw God opened the sky. There was someone with a stomach ache, they were suffering. God told me to put my hands on them… After that when I passed my hands over people I could heal them" (Ougan Pierre).

Dreams were also described by other *ougan* as a time in which they received messages from spirits in order to seek tools for treatment or cures for patients experiencing a variety of sicknesses. One study describes how "dreams are a powerful and recurring medium of

interaction with the divine and the occult" and "are not necessarily juxtaposed against reality" (Falen, 2018, p. 105). Overall, little formal training was received by the majority of *ougan* interviewed with regards to either physical or mental health treatment.

For *ougan* who are called or claimed by the spirits, refusal is often not an option. Other studies describe the severe consequences of refusing a *lwa* resulting in either sickness, insanity, or even death (Kiev, 1962; Rémulus, 2012). This was echoed by several *ougan* interviewed, who claimed that "you have to listen to it [the *lwa*] and obey it, or else" (Ougan Henri-Claude). Three *ougan* I spoke with claim that the *lwa* caused them physical harm during the period when they were resisting possession, with one showing me scars on her arm, claiming that it repeatedly stabbed her during this period. Another claimed to have spent two years in a wheelchair as the *lwa* paralyzed her as punishment for her resistance. A third claimed he tried to escape the *lwa* by fleeing to the mountains, "but it brought me back down… we were forced to agree with it" (Ougan Jean-Louis). *Ougan* who are claimed therefore often feel an obligation to do the work of their spirit.

Rit Gine **versus** ***Rit Lwa***

It is important to note that in addition to the *ougan* who are "called" or "claimed" – or *rit gine* – there is a second category of *ougan* called *rit lwa* (or "rites of *lwa*"). Those that follow *rit lwa* are differentiated from *rit gine* as they did not inherit their spirit, but rather they purchased it. As one *ougan* put it, "there's two types of *ougan*, the ones who bought a *lwa* and are trying to make money, and the ones who were chosen by spirits" (Ougan Jean-Louis). All *ougan* interviewed described significant differences between these two categories of *ougan* with the biggest difference being that "*rit gine* are the ones who use their power to do good not evil" and

"*rit lwa* use their power more for evil" (*rit lwa travay plis sou mal la*) (Manbo Magalie; Manbo Manise). *Rit lwa* are commonly considered to hurt or even kill people using magic, and are often referred to as *bòkò* – or sorcerers. As one *ougan* put it, "they kill people, raise from the dead, give diseases, poison people" (Ougan Claude). For this reason, the vast majority of *ougan* I interviewed claimed to solely be *rit gine* – even when this was not the truth, according to other sources who know *ougan* in this area. The few who admitted to being *rit lwa* all claimed that, unlike others who use *rit lwa*, they don't hurt people and only use their power for good. Other studies on this subject similarly found that sorcerers claimed to only use their power for good when this clearly was not the case (Meudec, 2007; Graeber, 2007).

For Métraux, there is an important distinction between *ougan* who use *rit gine* versus *rit lwa* as this differentiates those who use white magic (*maji blan*) versus black magic (*maji nwa*) (1958). According to Tremblay, a large majority of Haitians believe in the power of black magic (1995). In my interviews with *ougan,* this distinction between *maji blan* – to help people – and *maji nwa* – to hurt people – was also commonly discussed, and is common in West African Vodou as well (Falen, 2018). In her wide ranging examination of Vodou and illness in Haiti, anthropologist Marie Meudec describes how *ougan* who use *rit lwa* can spend large sums of money to buy a *pwen* (or magical powers) from other *bòkò*, which allows them to perform black magic (2007). In order to make back the money they invested, they can often hurt or kill people – using magic – when requested by clients (Régulus, 2012). In her 1953 examination of Vodou, Maya Deren also noted the phenomenon of purchased *lwa* and highlighted its association with more malevolent spirits (Deren, 1953). A 2004 study argues that there was a proliferation of *rit lwa* starting with the exodus of Haitians from rural areas in the late 19th and 20th centuries, as many rural dwellers sold their land and their ancestral spirits along with it (Bechacq, 2004). This

created a sort of commercialization of *lwa* as they were previously tied almost exclusively to family heritage. Today, however, the lines between the "good" *ougan* versus the "bad" *bòkò* in Haiti are frequently blurred, making it difficult to differentiate one from the other (Falen, 2018).

How much does a visit to *ougan* cost?

A widely cited article from 2013 argued that *ougan* financially exploit patients as the median cost of their service is 100 times more expensive than public hospitals or clinics (Wagenaar et al., 2013). First, it is important to understand that most *ougan* do not have a fixed price for their services. Rather, the price usually depends on the patient's means and ability to pay, and is often in negotiation throughout treatment. Secondly, the amount paid by a patient generally covers the entire treatment which can last for months, whereas hospitals charge the cost of one visit. While it is difficult to get specific figures from *ougan* on their prices during interviews – with most repeatedly insisting there is no fixed price – the amounts they cited for a treatment for someone with mental illness ranged from 5,000 Haitian gourdes ($80) to 70,000 gourdes (or roughly $1,000). One visit to SSMMP generally costs an average of 4,000 gourdes ($65), including lab tests and medications.

Almost universally, *ougan* claim that they do not fix the price themselves, but rather it is the spirit that picks the price. As one argued, "if the spirit asks for a certain price, I have to take that, I can't ask for more" (Ougan Jacques). While several noted that Haitians from the diaspora – living primarily in the US and Canada – are often required to pay more, sending cars, new cell phones, and in one case building walls around a new compound for an *ougan*, other researchers argue that it is poor rural Haitians that pay the largest sums. One study found that the more people are poor, the more they spend at the *ougan*, emphasizing the exploitative nature of *ougan*

pricing (Clérisme, Antoine & Lyberal, 2003). Even in the 1950s, Métraux found average costs to be between $50-100 with many *ougan* making large sums off their services to largely poor farmers, writing that it is undeniable that these practices strongly impact the poverty of rural Haitians (1958). One *ougan* interviewed also described these exploitative and coercive practices, saying "some *ougan* make people sell a cow to pay for treatment, then if the person dies they keep the money. You can make a lot of money being an *ougan*" (Ougan Joseph).

Yet, as described above, many *ougan* noted significant differences between the fees for services of *ougan* who follow *rit lwa* versus *rit gine*. While the price for treatment among *rit gine* ranged from 5,000 to 15,000 Haitians gourdes ($80 to $240) at most, *rit lwa* would regularly go much higher. One *manbo* who practices *rit gine* claimed, "if you're chosen by the spirits, you have to do what the spirit wants, you can't exploit people" (Manbo Magalie). A common refrain among those practicing *rit gine* was "*rit gine* don't make a lot of money" (*gine pa fè kòb).* Implicit in this is that *rit lwa* generally make significantly more money than their *rit gine* counterparts. As one *ougan* said,

> "*Rit lwa* are not tolerant. They can take 500,000 gourdes to treat someone, but they don't really treat them. It's a fake treatment. *Rit gine* don't rip people off" (*rit gine pa manje lajan*) (Ougan Jacques).

When asked about the practices of *rit lwa*, many *rit gine* said they would prefer not to discuss them for fear of reprisal. Even during the course of conducting this study, researchers were warned about asking to many questions about the livelihoods of powerful *rit lwa* in the area, at one point being threatened to discontinue the research. Yet ultimately these divisions between *rit gine* and *rit lwa* may be somewhat exaggerated, as Meudec writes,

> "The Vodou priest is a business person. In exchange for payment he will do anything asked of him. However, the illness and the cure both often depend on the amount of money paid to him,

with the wealthiest having the last word [in terms of receiving more effective or fast acting treatments]." (2007, p. 47).

Why do Haitians go to see *ougan*?

As described in the story in the introduction, *ougan* often have large numbers of people seeking their healing services, with some waiting all day. Estimates of the number of patients consulted per day ranged from 3 to 100 amongst *ougan* I surveyed, with an average of roughly 30 patients per day. The reasons people go to see an *ougan* however can vary, and it not solely related to illness. According to one study, farmers often go to increase the fertility of their fields, people go to cast spells due to jealousy in their relationships, while others go to seek advice during important points in their life – i.e. a new job, beginning or end of marriage, death of a loved one, etc. (Bechacq, 2004).

Yet, illness is the primary reason for consulting an *ougan*, with an estimated 60 to 90% of the Haitian population consulting traditional healers due to poor health (Meudec, 2007). One study argues that the vast majority go for mental illness in particular – which he refers to as "schizophrenia" – even though it is difficult to get specific estimates as there is no recorded data (Hurbon, 1987). Among *ougan* surveyed, several said the majority of their patients have some form of mental illness – usually referred to interchangeably as *maladi moun fou* "crazy person disease," *maladi sevo* "brain disease," or *maladi move lespri* "bad spirit disease".

There is much debate about why Haitians continue to utilize traditional healing so extensively as opposed to biomedical treatments. One widely cited article entitled, "Explanatory Models and Mental Health Treatment: Is Vodou an Obstacle to Psychiatric Treatment in Rural Haiti?" attempts to answer this question by arguing that lack of appropriate medical services, as

opposed to explanatory models of illness rooted in Vodou, is the primary reason Haitians continue to frequent *ougan* (Khoury et al., 2012). While the above article makes a strong case, other experts have found that even when appropriate medical services are present, Haitians continue to prioritize traditional medicine. Haitian doctor Garnel Michel writes that in large part, traditional medicine is the first "reflex" for Haitians when faced with illness (Michel, 2019, p. 100). Méance writes that for Haitians suffering with psychiatric symptoms, "the healing process starts at the Vodou temples, continues at the Church, and ends at the psychiatric hospital or other mental health facilities" (2014, p. 82). In this sense, when biomedical services are present they will be sought only after unsuccessful attempts at traditional or religious healing. Meudec largely agrees with this writing,

> "Even if people from the countryside believe in the efficacy and even the superiority of modern medicine, they will first try traditional medicine. In treating illnesses perceived to have a root in magic, traditional therapies are the first recourse. If after this they are still not cured, they would see the doctor" (2007, p. 38).

In this sense, while Haitians may not object to going to the hospital for psychiatric treatment, these services often do not reflect a certain religious reality and therefore are not the first choice when seeking help (Auguste & Rasmussen, 2019).

Explanatory models of illness in Vodou

There is a common expression in Haiti that "not all illnesses are for doctors to treat" (*tout maladi pa maladi doktè*). Reflecting this, there are two broadly different conceptions of illness type that lead to different paths for treatment. On the one hand, if it is determined that the sufferer has a disease of natural causes (*maladi natirel, maladi peyi, maladi bondye*), the sufferer should go to the hospital and see a doctor. However, if the illness is due to sorcery or other

supernatural origins (*maladi moun fè mal, maladi lwa, maladi satan/dyab*), the sufferer should consult an *ougan* (Deren, 1953; Kiev, 1962; Tremblay, 1995; Auguste & Rasmussen, 2019; Jean-Jacques, 2019). With regards to the latter, traditional medicine in Haiti intervenes in a profoundly religious universe in which illness is seen as a weapon in the battle between Good/God and Evil/Satan (Meudec, 2007). Métraux (1958) talks about how supernatural illnesses can be either attributed to divine punishment for sins, or as a result of an act of sorcery. While ordinary people cannot perform sorcery themselves, they can pay an *ougan* or *bòkò* to do it for them. Though a large variety of diseases can be attributed to sorcery, chronic illnesses or ones that are particularly hard for doctors to treat (*maladi difisil*) tend to be associated with supernatural involvement (Falen, 2018; Galvin & Michel, 2020). For example, illnesses such as elephantitis (*gwo pye*), epilepsy (*malkadi*), and in particular mental illness (*maladi moun fou*) are often attributed to mystical causes and thus referred to *ougan* for treatment (Métraux, 1958; Delbeau, 1990; Carrazana et al., 1999; Meudec, 2007). In this sense, it is important to point out that mental illness is not conceived of as something separate from other forms of supernatural illness, but rather is an illness caused by spirit possession similarly to physical ailments.

In my interviews with *ougan*, they often highlighted this same distinction between natural (*maladi natirel*) and supernatural or "given" (*maladi bay*) diseases. Reflecting the distinction between *rit gine* and *rit lwa* among *ougan*, one *ougan* described how there are two additional rites: "*ougan* rites" (*rit ougan*) and "doctor rites" (*rit doktè*) (Ougan Claude). In essence, just as there are two different forms of viewing treatment among *ougan* themselves, there are also two different forms of viewing treatment more broadly, with *ougan* on the one hand and medical doctors on the other. As one *ougan* stated,

> "If you have a *zombi* [supernatural illness] an *ougan* has to take it out, whereas if it's a problem with the brain, you go to the hospital to get an injection [of a sedative]" (Ougan Jean-Louis).

Ougan are thus considered able to treat a specific class of illness that doctors are unable to treat, as when the disease is attributed to a "bad spirit" or other supernatural causes, "you have to go to the *ougan* to get rid of it" (Ougan Gregoire).

When I introduced the concept of mental illness (*maladi moun fou* or *maladi sevo*) in the beginning of each interview, nearly half of *ougan* immediately began referring to mental illness as *maladi move lespri* – or "bad spirit disease." There are many different terms used by *ougan* to refer to these supernatural illnesses: mystical illnesses (*maladi mistik*), magic illnesses (*maladi majik*), spirit illnesses (*maladi lespri*), sent illnesses (*maladi voye moun*), fetishes (*fetich*), *lwa* illnesses (*maladi lwa*), *batri* illness (*maladi batri*, see below), and illnesses that someone put on you (*fè y'ap fè'w*). While there are subtle differences between some of these – which we discuss in the following paragraphs – many of these terms are used interchangeably. In general, these *sent spirits* are considered to be the soul of a dead person intentionally sent by someone supernaturally with the intent to harm or even kill (Métraux, 1958; Pierre et al., 2010). In this sense, many assume the illness was sent to them by someone who wishes them harm – a *malfektè* or evil-doer.

Batri, *Nanm*, and *Zombi*

Sent illnesses are most commonly expedited in the form of a *batri* – sometimes also referred to as *kout poud* (attack of powder) or *kout batri* (Wade, 1988; Meudec, 2007; Kaiser & Fils-Aimé, 2019; Jean-Jacques, 2019). Very little research exists on *batri*. However based on my interviews, a *batri* is a composition – often of powders – made by an *ougan* (usually *rit lwa*

as most *rit gine* claim not to use them) to send illness or misfortune onto an unsuspecting victim at the direction of someone who wishes them harm. Wade describes them as "a magical powder that may cause illness and/or death" (1988, p. 280). As one *ougan* described it,

> "*Batri* can kill all the cells in the body… there are *batri* that can kill you the same day and there are *batri* that hurt you little by little over time… The *ougan* takes this and that and mixes them. Then they mix it with something else and put it in your path. The body has cells inside, and the *batri* will get inside and make your leg inflamed… or it can make a *zombi* get inside you. In my experience, this is how they give people *zombi* (*yo ka prepare zombi epi fè ekspedisyon voye souw*)" (Ougan Wilfrid).

While *batri* can sometimes be composed of poison or other toxic materials, Wade writes that things such as tarantulas, sea worms and sea toads are essential components of *batri* (1988). *Batri* also contain a spiritual force (*yon fòs spirityèl*) that lead to possession by *sent spirits* (*ekspedisyon move lespri*) (Ougan Jacques). These spirits are usually taken from the cemetery via exhumed corpses, as one *ougan* describes: "they send the dead spirit (*ansyen mò yo*) from the cemeteries as they have techniques to transfer the spirits from the dead" (Ougan Ronald). Another adds that these spirits can have different names, "sometimes it's a *zombi* sometimes it's a *nanm*" (Ougan Etienne). The spirit possession that results from the *batri* can then result in inflammation or mental illness, requiring the intervention of an *ougan* to remove it (Manbo Guerline).

In my interviews with *ougan*, two types of spirits were repeatedly referenced as the cause of mental illness: *nanm* (also the Krèyol word for "soul") and *zombi.* Despite repeated probing on the difference between the two types of spirits, responses were often inconsistent, as they both were accused of being "like an insect" (*tankou yon bèt li ye*), and that the sufferer can feel like it's "walking all around the inside of the body" (*li mache toupatou sou kò a*) and can cause problems like inflammation, agitation, and mental illness (Ougan Guillaume; Ougan Claude).

Hurbon (1987) references consequences of *ekspedisyon* similarly writing that "some demons walk all around the inside of the body". *Ougan* attempted to describe the subtle differences between the two spirits: "*Nanm* can suck your blood, it can eat your flesh, it can eat all the cells in your blood" (Ougan Wilfrid) whereas "*zombi* are old spirits from the cemetery that get inside your head" (*zombi kap chita andann tèt la*) resulting in mental illness (Ougan Dervilus). However, other times the *ougan* contradicted each other with some saying that *nanm* is more common and harder to treat and others saying that *zombi* are more common and harder to treat.

In his 1988 work on zombification in Haiti, Wade describes how there are two different types of *zombi*. One is the type we commonly think of in terms of the zombification process resulting in the "living dead," whereas another is referred to as *zombi éfface* and is simply the "death spirits" used in *ekspedisyon* (Wade, 1988, p. 281). The latter is what *ougan* we spoke with were referring to, as Wade writes, "the *zombi éfface* is the spirit of a dead person that you send on someone [to harm them]" (1988, p. 281).

In descriptions of people with mental illness who are possessed by these *sent spirits*, *ougan* generally emphasize behavioral disturbance and disruption of social norms, rather than symptoms related to thought disturbance or perceptual symptoms, similar to findings from studies in sub-Saharan Africa (Ventevogel, 2016). Several described violent behavior as a result of spirit-induced mental illness, with one saying, "there are people who are crazy (*fou*) and they have a *zombi*, it makes them run around breaking things" (Ougan Jean-Louis). Others referenced throwing rocks, destroying property, fighting, hitting people, eating dead animals in the street, talking a lot, or being unable to sleep. Another *ougan* said,

> "When they have a bad spirit inside them (*move lespri sou li*) it causes them to fight, to throw rocks… it makes them run around (*kouri kouri*) and become crazy (*vinn fou*)" (Ougan Jacques).

Yet, others expressed sympathy as they too could have been rendered mentally ill by *sent spirits* as punishment had they refused their calling to become *ougan*:

> "They [mentally ill people] might spend 7 days outside, running around… but if I didn't accept the spirit I could have become like that too" (Manbo Magalie).

Interpretation of mental illness by *ougan*

The interpretation of illness in Haiti is rarely done by the individual alone. Rather, patients often interpret their illness with family members and community leaders – such as *ougan*, pastors, or priests – who also participate in the elaboration of strategies for treatment (Meudec, 2007). In the case of *ougan* however, the final interpretation of the illness and its causes is done by the spirit or *lwa* (Hurbon, 1987; Meudec, 2007). This takes place during a ceremony in which a candle is lit, usually alongside rum (*kleren*) and water, and the *ougan* "conjures the spirit" (*fè limyè* or literally "making light"). There are many different names for these spirits – often referred to as *jany* or "angels" in northern Haiti – including *Sebosu, Sagawi, Ti Jean, Jean Loreng, Jean Krab, Seboran, Segranbwa, Erzulie Freda, Maîtresse Erzulie* (Samba). In line with earlier comments about syncretic Catholicism in Haiti, each spirit is generally associated with different Catholic saints.

Conjuring the spirit (*fè limyè*) is the first step in treating a patient for *ougan*. All 20 *ougan* interviewed emphasized the importance of this step. As one *manbo* says, "you have to look into the light" (*chache nan limyè*) to see what illness they have (Manbo Guerline). In this process of conjuring the spirit, several *ougan* describe how it is no longer they who are communicating with the patient, but rather the spirit itself. In three of my interviews, *ougan* told me I wasn't actually speaking with a person, but rather with a spirit. Therefore, it is not the

ougan who diagnoses the illness, instead it is the "spirit that knows" (*se lwa ki konnen*). Other researchers also documented hearing this phrase often (Meudec, 2007). In this sense, the experience is very different than with biomedical approaches as described by one *ougan*: "when you go to the doctor, the doctor is the one that talks to you, tells you what's wrong. But with us it's not us it's the spirit that tells you… you light a candle (*fè limyè*) and figure out what the problem is" (Ougan Ronald).

In the Vodou cosmology, the significant power wielded by spirits emerged as a theme multiple times. Not only do spirits possess *ougan* against their will – and enforce consequences if refused, as described earlier – but they also tell the *ougan* when to start working each day, what illnesses patients have, and how to treat them. As one *manbo* says, "I use the spirit that inhabited me to treat them [patients]" (Manbo Magalie). Communication with the spirits is constant, as one *ougan* describes, "he [the spirit] tells you everything. He tells you to start work at 1pm or 2pm each day. He also told me to start working [as an *ougan*] in 2001" (Ougan Wilfrid). In this sense, *ougan* often see themselves simply as vessels for the spirit to act through, absolving themselves of significant responsibility in the interpretation and treatment of illness. As another *manbo* described,

> "The mystery [spirit] knows everything, it writes down what we need for treatment on the paper and we go and get it" (*se mistè ki konnen tout bagay lè mistè ekri nan papye nou ale*) (Manbo Manise).

When conjured, the spirit thus not only diagnoses the illness, but also determines the treatment and ultimate resolution of the problem: "when you have a *jany* [or angel] that's working for you, it can see how to get the bad spirit out" (Ougan Dervilus).

Treatment of mental illness by *ougan*

In addition to conjuring the spirits (*fè limyè*), *ougan* treat patients with a variety of different medicines or remedies (*remèd*). It is important to emphasize however, "it is the spirit that cures, the remedies just help" (*se lespri ki geri, remed yo selman ede*) (Ougan Gregoire). For the purposes of this research we identified five different remedies that *ougan* can use to treat mental illness: prayer, leaves, perfumes, *fiksyon*, and human skulls.

The first remedy for patients suffering with mental illness is prayer (*lorasyon*). This is usually an extension of conjuring the spirits (*fè limyè*), and involves similar practices to prayer in Catholicism – i.e. lighting a candle, talking to God. As one *ougan* says, "it means the same thing as when the Bible says to pray for people" (Ougan Ronald). However, the ceremonial prayer in Vodou can have some differences, such as putting powder on patients as a way to heal them (Manbo Manise). Other *ougan* will put their hands on a patient's head or body during a prayer ceremony as a way to heal them, though these practices are also common in some Christian communities as well (Ougan Jacques).

Two *ougan* interviewed referred to Haiti as "leaf country" (*peyi fey*) in reference to the common use of leaves to treat illness. The use of leaves to treat mental illness in Haiti is widely documented (Métraux, 1958; Weniger et al., 1986b; Hurbon, 1987; Meudec, 2007; Vonarx, 2008). Significant overlap exists between diviners like *ougan* and herbalists, called "leaf doctors" (*medsen fey*), though only *ougan* were interviewed for this study. *Medsen fey* are not generally inhabited by a spirit like *ougan*. This division between diviners and herbalists has also been documented in studies from sub-Saharan Africa (Graeber, 2007; Ventevogel, 2016; Falen, 2018). There are a variety of leaves used to treat mental illness by *ougan*, most commonly *langachat* (cat's tongue), *fey koray* (coral leaf), eucalyptus, and many others: *kaka poul, fey*

kapab, revni bon anj, jambe lè, madam kaya, kacheman, fey loni, fey kè, brital, fey sed. While this study did not examine the exact usage of different leaves, other analyses have assessed their particular uses in Haiti – including several of the leaves mentioned above (Weniger et al., 1986; Davis, 1988; Volpato et al., 2009). Though these studies examined the cultural use of leaves for different ailments among Haitians, no study to date has analyzed the chemical components of leaves for effectiveness against any specific mental or physical illness. *Ougan* who are part of *rit gine* are particularly likely to use leaves in their treatment, as "leaves are really good at treating bad spirits" (*fey bon anpil pou trete move lespri*) (Ougan Ronald). Most commonly, *ougan* said they brew the leaves in a bath for their patients, and bathe them in it. Also common is brewing tea for patients as several *ougan* interviewed said they used a variety of teas to treat different mental illnesses. One *manbo* said she tied leaves to her patients' foreheads and left them there for three days as a treatment for certain mental illnesses (Manbo Magalie).

Next, it is common for *ougan* to use perfumes and deodorants in their treatment of mental illness. In particular, many *ougan* use Florida Water – a type of cologne – which is considered a staple of Vodou rituals (Ainsworth, 2013). A mixture of essential oils and perfumer's alcohol, Florida Water gained popularity in the southern United States and Caribbean in the late 19th century when it began to be used in ritual traditions such as Haitian Vodou. While some *ougan* interviewed said they only used it on the skin of patients, many others said they had patients drink it. While Florida Water and other perfumes contain alcohol, this is not alcohol meant for human consumption and thus can result in toxic effects. As one *ougan* described it, "it can make people crazy, or even violent" (Ougan Dervilus). Another said people who drink it can "fight a lot or be aggressive" (Ougan Pierre). Yet, it continues to be widely used as one *ougan* claimed,

> "It has magic inside, white people don't use it in every way (*sa gen majik ladann, blan pa itilize nan tout sans*); we drink it, we put it on our body, we mix it with things" (Ougan Jacques).

Most commonly, consuming Florida Water is considered effective in battling *nanm* as "when you mix it with powdered tobacco [and drink it], it kills the *nanm* disease" (Ougan Joseph). Other perfumes or deodorants used in treatment of mental illness include Hombre – an aerosol deodorant spray from the Dominican Republic – and Pompeïa, Rêve d'Or, and Bien Être – three French perfumes (Manbo Manise; Manbo Magalie).

Fiksyon is what one *ougan* referred to as "mystical medications" (*medikaman mistik*) (Ougan Paul). Usually kept in unlabeled white plastic bottles, many *ougan* say they do not know what exactly is in these compositions though they are primarily powders mixed with water or alcohol. While little is written about *fiksyon*, Meudec (2007) says they originate primarily from "plants (leaves and extracts from sap) and animals (frogs, lizards, snakes) that are ground, as well as pharmaceuticals in powder form. No chemical analysis has been performed on these powders to date" (p. 84). There are a variety of different *fiksyon* that treat mental illness. Most commonly cited are *pèdi nan vyann*, (used by 6 *ougan* interviewed), *fok mol* (5), *kampe lwen* (3), *tablantin* (2), and others such as *zo devan, vapè minwi, detowo, demen kontre, timinot, kadalgate, detowokontre, repiyans, repouse,* and *pa kampe la*. While each of these *fiksyon* have different uses, the purpose of this research was to examine the use of *fiksyon* to treat mental illness more broadly. *Fiksyon* tend to be used by *ougan* who practice *rit lwa* as they are often considered black magic, though some *rit gine* use them too (Ougan Ronald). One *ougan* says he first uses leaves to weaken the bad spirit, and then will use magic in the form of *fiksyon* to send it away permanently (Ougan Claude). Another claimed that if you're *rit lwa* "you have to use magic, you have to buy magic [in the form of *fiksyon*] to use on patients" (Ougan Jean-Louis). *Fiksyon* can be used either on the skin or ingested. When interviewing *ougan*, I had the chance

to examine and smell several of the *fiksyon*. Oftentimes the smell was too strong to even remain near them for more than a second, leaving an extended burning sensation in the nostrils. The majority of *ougan* purchased their *fiksyon* at special pharmacies for *ougan* on 9th street in Cap-Haïtien.

The final remedy used by *ougan* elucidated in my interviews was the use of human skulls (*tèt mò*). Skulls were almost exclusively used by *rit lwa*, as many *rit gine* claimed that the use of skulls is purely black magic. While two *rit lwa ougan* claimed they did not use skulls due to the risk of bacterial contamination from the dead body, five others said they did use skulls for the purposes of treating mental illness.

> "When people send an illness to someone else [*ekspedisyon*], I have to go to the cemetery to get a human skull. I ask permission to go in the cemetery from the *bawon* [the spirit of the first person buried in the cemetery]. The *bawon* gives me permission to take a skull and then I can use it to treat someone" (Ougan Claude).

Once procured the *ougan* will grind the skull and mix the shavings with rum for the patient to drink. This remedy is claimed to work on both *nanm* and *zombi* as, with "people who have a force on them, it [the skull] can get rid of the disease" (Ougan Jacques). Another *ougan* mixed the skull shavings with Florida Water, highlighting how many of these remedies are not mutually exclusive and can be used in combination with one another (Ougan Joseph). While the majority of *ougan* interviewed claimed they did not have their patients ingest skull shavings, nearly all *ougan* had a human skull for ceremonial purposes:

> "We take the skull of someone who uses magic (*mason loj*) who died, and then we use the skull during ceremonies. That makes the bad spirit go away, the person can be cured" (Ougan Charles).

While the idea of such remedies might be difficult to understand for an outsider, there is a common belief that treatments such as this provide faster relief than leaves for example: "*rit gine*

treatments are slow, *rit lwa* on the other hand work really quickly" (Ougan Guillaume). This appeared to be the primary factor influencing a patient's decision to see a *rit lwa* versus a *rit gine*, despite the increased cost.

Collaboration between traditional healers and hospitals

Haiti represents a system that is often described as "medical pluralism" in that the country has two types of "medicine" that co-exist and aren't used in the same way: namely, allopathic medicine (*lopital*) and traditional medicine (*lakay ougan*) (Benoist, 1996; Vonarx, 2008). With regards to mental health, while modern psychiatry has made some inroads, interpretations of mental illness continue to remain strongly embedded in "magical" or "spiritual" explanations (Jean-Jacques, 2019). Nevertheless, traditional healers in Haiti will often send their patients to the hospital if they determine the illness is not within their realm of treatment (Meudec, 2007). In this study, all 20 *ougan* interviewed said they send patients to the hospital in cases where they feel their treatment did not or will not work.

As this data was collected during the coronavirus pandemic, several *ougan* discussed an interest in learning about the coronavirus during the initial outbreak in order to identify cases to send to the hospital rather than treat themselves. As one described, "with coronavirus I was interested in how people could get treatment, since it was something that made everyone anxious" (*tout moun tèt cho*) (Ougan Ronald). *Ougan* are largely responsive to epidemics since the 2010 cholera outbreak which infected nearly 700,000 people in Haiti and sparked a public health campaign that attempted to target *ougan* for education and training (CDC, 2014). Yet, outside of epidemics, illness is still largely classified as natural or supernatural in origin which determines whether a doctor or an *ougan* should provide treatment. As one *ougan* said, "some

diseases I can treat with magic (*maji*)… but doctors can't treat with magic" (Ougan Joseph). In addition, some *ougan* argued it is dangerous for doctors to attempt to treat illnesses of supernatural origin as the provision of medications or injections by a doctor are said to worsen symptoms of people with "bad spirits" (*move lespri*) (Ougan Ronald). Yet, another *ougan* pointed out that treating someone for *move lespri* when they don't in fact have one is similarly risky: "if someone is sick and they don't have *move lespri*, then we [*ougan*] can make people feel even worse [by treating them]" (Ougan Wilfrid). Thus, in the eyes of *ougan*, it is key to determine if the illness is natural or supernatural prior to treatment.

All *ougan* interviewed live and work in the communities immediately surrounding SSMMP. As the first biomedical treatment facility specialized in mental illness in northern Haiti, SSMMP represents a unique opportunity to provide high quality psychiatric care to the primarily rural population of this region for the first time (Galvin & Michel, 2020). All *ougan* were asked whether they knew of SSMMP, and only two *ougan* reported that they did not know it. One *manbo* reported having a sister who was treated at SSMMP for mental illness: "I have a sister with mental illness (*twoup mantal*) who was treated there and now is more or less recovered, thanks to the doctors" (Manbo Magalie). Another *ougan* said he had gone to SSMMP for treatment himself, albeit only to see the doctor due to a physical ailment (Ougan Charles). Several *ougan* also reported referring patients with mental illness to SSMMP after determining they could not treat them. "They're good over there [SSMMP]… when I send people there they never come back to see me again" (Manbo Guerline). Some *ougan* also claimed they received patients who were referred by SSMMP when they couldn't treat illnesses of supernatural origins, though staff rebutted this suggestion arguing they would never refer a client to an *ougan* under any circumstances.

Despite the relatively common practice of *ougan* referring patients to hospitals, there exist few instances of professional development trainings or collaborations between hospitals and *ougan*. Of the 20 *ougan* interviewed, only six reported having previously attended trainings at hospitals. The majority of these trainings took place in 2001 when several *ougan* described having attended large meetings at Sacré Cœur hospital in Milot; however, two *ougan* reported attending meetings there more recently. When asked what they learned at these trainings, *ougan* generally mentioned basic medical screenings, treatments, and hygiene practices. As one *ougan* said,

> "I learned if an illness is not for me to treat, I shouldn't treat it. If I can't treat them, I should send them to the hospital because they can better treat the body [as opposed to spirits]" (Ougan Etienne).

This suggests that *ougan* respond well when trainers highlight the distinction between physical and spiritual causes, and leverage this to encourage o*ugan* to refer physical-caused ailments to hospital.

Similarly, one *ougan* described an important training on the identification of three serious physical illnesses: tuberculosis, AIDS, and syphilis (Ougan Wilfrid). After this training he was able to identify a woman with AIDS who came for treatment, describing to me that despite sending her immediately to the hospital, she ultimately died several days later due to complications from the illness. Trainings such as these are important for healthcare in Haiti, as other researchers have documented cases in which *ougan* regularly claim to be able to cure certain types of HIV/AIDS which they claim are of supernatural origin (Farmer, 1990; Bernard & Désormeaux, 1996).

The vast majority of *ougan* interviewed wanted to take part in trainings and collaborations with hospitals and medical providers. They described wanting "more knowledge" and "to understand better," arguing that "there needs to be a big relationship between *bòkò* [*ougan*] and doctors" in Haiti (Manbo Guerline; Ougan Wilfrid; Ougan Jacques). Despite this enthusiasm and clear need for additional cooperation, there remains some hesitation about collaboration for several reasons. Firstly, there are stark differences in the vision of disease etiology and treatment with one *ougan* arguing "there are sciences that aren't the same as the hospital [medical sciences]" (Ougan Dervilus). Another *ougan* stated, "what we do is just different [from doctors]" (Ougan Paul). Other *ougan* insisted that collaborations should focus on incorporating *ougan* into hospital facilities in order to offer consultations for supernatural illnesses as well, with one saying, "all hospitals need an *ougan* working there too" and another describing how hospitals that hire *ougan* to provide services "work better" – though no hospitals were identified which actively work with *ougan* (Ougan Ronald; Ougan Dervilus).

However, the primary concern among *ougan* regarding collaboration reflected the fears of conflict expressed by SSMMP staff in interviews from 2019. While cooperating with *ougan* would have little threat of conflict with *rit gine*, several *ougan* expressed concern about collaborating with *rit lwa*: "*rit lwa* you can't work well with them. These are people that kill people… you could work with the *jany* [*rit gine*] but not really with the *rit lwa*" (Ougan Pierre). Yet others downplayed this fear with one *rit lwa* saying there really isn't a great fear and adding, "sometimes *ougan* have a fever and go to the hospital too. Some things *ougan* can't fix, so you have to go to the hospital" (Ougan Jean-Louis). Therefore, there may be *ougan* who are less cooperative or open to collaboration – primarily *rit lwa* – however, on the whole increased cooperation between *ougan* and hospitals is essential as they represent the two primary pillars of

the existing healthcare system in the country and currently function virtually completely independent of one another with little to no communication.

Discussion

The material present in this study provides a brief sketch of traditional healing for mental illness in early 21st century northern Haiti. To some extent, this portrait confirms what has already been depicted in the largely French-language literature on this subject. However, some of the findings in this study have not previously been explored in the literature. In particular, little to no research exists examining forms of treatment that include perfumes such as Florida Water, *fiksyon*, or treatments utilizing human skulls.

A large study on the history of Vodou in Haiti noted that no religion has been subject to more attack or misrepresentation by outsiders than Haitian Vodou (Ramsey, 2011). It has survived centuries of slavery and conflict with the Catholic and Protestant churches until it was declared an official religion of Haiti in 2003 (Méance et al., 2014). Against all odds, Haitians have managed to maintain systems of African belief to a larger extent than any other society in the global African diaspora. For these reasons, this study attempted to speak directly to those that maintain the practices of Vodou themselves, the *ougan*, in order to limit distortion of beliefs and spiritual practices. However, other studies examining practices related to sorcery and healing have pointed out that since these practices are inherently mysterious, perspectives can vary greatly and often be difficult to verify, making these problematic subjects about which to write authoritatively (Graeber, 2007).

As the primary role of the *ougan* is to heal, it is important to understand the perspectives, experiences, and treatment practices of *ougan* with regards to mental illness. As this study has shown, the relationship between Vodou and mental health in Haiti is complex. The cosmocentric worldview in which Haitians see themselves as impacted by powerful spiritual forces stands in stark contrast to the anthropocentric worldview in most Western understandings of self (Sterlin, 2006; Pierre et al., 2010). This has resulted in the formulation of mental illness as an ailment which is a result of spiritual forces, requiring the services of spiritual healers, *ougan*, to alleviate the pain of sufferers. The literature on etiology of mental illness in sub-Saharan Africa similarly emphasizes spiritual causes (Ventevogel, 2016). Due to these belief systems, some argue that traditional Western psychotherapeutic approaches may be less effective for Haitians, as they strongly associate their condition with God or *sent spirits* (Bibb & Casimir, 1996). Nevertheless, it is important to recognize that the practices of *ougan* are "not institutionalized, with no controls, resulting in widespread abuses" and can represent significant risks to the health and well-being of patients – such as the ingestion of perfumes, deodorants, or human skull shavings (Meudec, 2007, p. 57).

However, *ougan* unquestionably represent the first responders for people living with mental illness in Haiti today. In addition, they have several commonalities with psychotherapists in that they listen carefully to a patient's story and perception of the causes of suffering, and validate their experiences of pain and distress in an attempt to begin the process of healing. Consequently, with the added spiritual component *ougan* provide, they are likely to remain a strong substitute for mental health care in Haiti – despite the risks inherent in some of their treatments (Méance et al., 2014). Other studies have highlighted how local conceptualizations of mental illness have significant implications for the planning of treatment interventions in settings

such as sub-Saharan Africa and Haiti (Ventevogel, 2016). For these reasons, increased collaboration between medical providers and *ougan* is critical for the future of mental health service provision in Haiti. As the results of this study exhibited, there is a strong desire for increased training and cooperation with hospitals and biomedical care providers among *ougan* interviewed. Yet, the training is perhaps not unidirectional as Auguste and Rasmussen (2019) write, "any practice of psychology should try to integrate an understanding of Vodou into its toolbox" as "Vodou is central to any understanding of mental health in Haiti" (p. 5). Though Vodou may be considered as a barrier to care by many mental health providers, it will likely remain the primary pathway to address and treat mental illness in Haiti for the foreseeable future, and therefore is an important component in culturally competent and responsive care.

This study has several limitations. First, it is based on a selection of twenty *ougan* from the municipalities immediately surrounding SSMMP and therefore cannot provide a representative overview of traditional healing for mental illness in Haiti. For example, other studies have discussed additional treatments for mental illness by *ougan* which were not mentioned by *ougan* interviewed for the purposes of this study (Huxley, 1966; Davis, 1988). Second, in-depth interviews with *ougan* were conducted by a foreign researcher which perhaps influenced the responses from participants at times. However, others remarked that this could be an advantage as *ougan* did not fear a foreign researcher associated with a well-known local clinic would "steal their secrets" or cause trouble for them in the community. For this reason, *ougan* may be more open to exchanging freely with an outsider on some subjects. Yet, whenever the subject approached anything that remotely resembled violence or murder, *ougan* would immediately veer to a new topic. Lastly, while the interviewer is fluent in Krèyol, the

terminology of spiritual beliefs and treatment among *ougan* is specific and at times there were misunderstandings which prevented full comprehension between parties.

Conclusion

This study utilized an anthropological approach to examine the perspectives and experiences of traditional healers, who are the first line of care for the vast majority of Haitians suffering from mental illness. It explores the foundations of what it means to be mentally ill in the religious and cultural context of Haitian Vodou, how traditional healers and the general population conceive of mental illness in the broader cosmology of Vodou, and highlights the systems of belief that exists in Haiti via the Vodou cosmology which often sees illness and misfortune through the lens of *sent spirits* – usually viewed to have been sent by others in one's community to cause harm. Vodou priests perform treatment through a variety of means including prayer and conjuring of spirits, use of leaves for teas and baths, as well as combinations of perfumes, rum, human remains and other powdered concoctions. Study findings suggest that while Vodou priests are willing to collaborate with biomedical practitioners, some barriers remain preventing cooperation between these two groups. Future research could examine further ways to overcome these hurdles to promote increased cooperation, thereby fostering improved methods of treatment for the population as a whole.

Chapter 3:

Exploring the Impact of Crisis and Trauma on the Mental Health and Psychological Well-Being of University Students in Northern Haiti

Introduction

History of Recent Crises in Haiti

Over the last several decades, Haiti has experienced countless crises. These crises range from social, economic, health, political, legal, and environmental, and have impacted every level of Haitian society (Giafferi, 2003). Yet, while undergoing many of these acute crises, Haiti is also experiencing a more chronic crisis similar to many other "fragile states" around the world. With a government that lacks the will and/or the capacity to manage public resources and deliver core state functions such as essential infrastructure, protection of property, basic public services, and security, the population is largely left to fend for itself in the face of mass poverty and collective violence (Jean, 2019).

Haiti currently has one of the lowest Human Development Index (HDI) ratings in the world at .498 – on a scale of 0 to 1 – ranking 168th out of 189 countries (Etienne, 2020). This compares with an average of .758 for the Latin American and Caribbean region (Germain, 2019). In his groundbreaking book, Haiti, *An Economy of Violence: Political Instability and Economic Violence*, Haitian economist Fritz Alphonse Jean describes an unequal system offering little opportunity to young people, where violence and civil disruption are the norm, and armed gangs are hired by warring parties in both the private and public sector (2019). He describes a country where 67% of the population continue to live on less than $2 a day, where electricity has never reached more than 30% of the population – only 5% in rural areas – and 80% of those with

higher education choose emigration. Other studies confirm this finding that 85% of Haitians with a diploma live outside the country (Michel, 2019). As Jean writes, "Haiti co-exists with the 21st century but its reality is more like the beginning of the end of the 19th century" (Jean, 2019, p. 211).

Traditionally, disasters have been characterized as either "man-made" or "natural," and Haiti has experienced its share of natural disasters. In the last ten years, much has been written about the 2010 earthquake which killed an estimated 220,000 Haitians, injured another 300,000, and left more than a million homeless in a population of just 11 million (Wagenaar et al., 2013; Nicolas et al., 2012). Former Haitian president Jean-Bertrand Aristide writes about how conditions in Haiti led to such a large death toll, as Mexico has had several earthquakes of higher magnitude near large urban areas with exponentially smaller death counts (Aristide, 2011). In addition to the earthquake however, Haiti has also been hit by a total of 26 hurricanes since the year 2000 alone. In particular, the 2016 Hurricane Matthew devastated the southern part of the country, with an estimated 175,000 people displaced, leaving many facing food insecurity due to damage to crops and livestock. The country was simultaneously combatting the cholera epidemic which was introduced by United Nations peacekeepers following the 2010 earthquake (Raviola et al., 2020).

Aside from natural disasters, Haiti is also confronted with serious "man-made" disasters, particularly in the form of socio-political crises. For example, since the fall of the Duvalier dictatorship in 1986, Haiti has experienced 21 presidents in just 32 years with many of them coups d'états (Pierre-Paul, 2019). Due in part to this instability, compounded with structural and organizational weaknesses, Haiti has the lowest GDP in the hemisphere (UNDP, 2018; Etienne, 2020). According to one Haitian scholar, Haiti has not had one decade of continued economic

growth since independence in 1804 (Germain, 2019). In one study on the relationship between political crises and economic growth, another Haitian scholar found that since the fall of the Duvaliers, political instability consistently had a negative impact on economic growth, as the economy plummeted with each political crisis (Lalime, 2010). This has left the country with one of the lowest standards of living in the hemisphere, with increasing population pressures and conflict over control of scarce resources.

Current Crises: Peyi Lòk and the Coronavirus Pandemic

The two crises examined for the purposes of this study were the recent political crisis and lockdown of 2019 referred to locally as *peyi lòk* – or "locked country" – in Haitian Creole (Krèyol). Slowing in early 2020, this crisis was quickly followed by the arrival of the coronavirus pandemic and government-imposed national lockdown in Haiti in March 2020.

The origins of the political and social crisis called peyi lòk started following the 2010 earthquake, when Haitians elected popular singer Michel Martelly to the presidency in 2011. In 2016, his hand-picked successor Jovenel Moïse was elected after a contested election. In 2017, a probe by the Superior Court of Auditors found that nearly $3 billion of Venezuelan loans through the Petrocaribe program had been embezzled by these two governments, with president Moïse himself receiving millions of dollars in fake contracts (Mullet & Thomas, 2020). In response, the political opposition staged protests against the rampant government corruption. While protests were scattered through 2018, they were often violent, occasionally forcing people to remain at home, as roads were blocked and schools closed (Raviola et al., 2020).

However, protests increased significantly in 2019 leading Haiti into the period of lockdown referred to as peyi lòk. The country was brought to a standstill for months at a time. These protests culminated in the second half of 2019 with protesters forcing the extended shutdown of roads connecting all regions of the country as well as virtually all of the country's primary institutions. In this extended period of social and political unrest, many were unable to access sufficient food, water, or medical care for extended periods of time. According to one estimate, 40% of Haitians were in need of emergency food assistance by the end of 2019 (Etienne, 2020). In addition, gangs proliferated throughout the country causing widespread violence as the government lost control of large swaths of the country. Reported incidents of unrest, extreme violence, and kidnapping rose significantly during this period (Beckett, 2020). Peyi lòk finally began to ease in December of 2019, though scattered protests continued.

The coronavirus pandemic followed quickly after with the first cases identified in Wuhan, China in late 2019. Global alarm increased after a sharp rise in cases in Northern Italy in February 2020, from which the virus quickly spread to the rest of Western Europe and the Americas (Etienne, 2020). After the first two cases were confirmed in Haiti on March 19th, the president declared a state of emergency (Henrys, 2020). New measures were announced on March 22nd, closing schools and universities, shutting down manufacturing industries, prohibiting public gatherings of more than 10 people, implementing a daily curfew from 8pm to 5am, and closing all land, air, and sea ports transporting human beings (Cénat, 2020; O'Hare & Hardingham, 2020). Once again the country was brought to a standstill for months as Haitians waited to see how the virus would impact them.

As millions of Haitians make a living day to day, many were unsure how they would make ends meet, as larger urban areas closed public markets and banned unnecessary movement

(Etienne, 2020). While cases continued to increase – albeit slower than in other parts of the world – the Prime Minister reopened some businesses such as textile factories on April 20th (Charles, 2020). Confirmed cases rose through the Spring and culminated on June 6th with 332 cases on that day (JHU, 2020). Following June 6th however recorded cases slowly declined remaining in the double and single digits for the remainder of 2020. On July 1st, the country decided to reopen flights in and out of the country and reduced the hours of the curfew from midnight to 4am daily (US Embassy, 2020). Despite alarm on the part of international officials, with the Director of the Pan American Health Organization stating in May that Haiti had "a perfect storm approaching" with regards to the threat of coronavirus in the country, only 233 deaths due to the virus had been confirmed in Haiti as of December 2020 (PAHO, 2020; JHU, 2020).

Crisis, Trauma, and Youth Mental Health

Several studies have examined the role of socio-political violence and unrest during periods of crisis in Haiti (Willman & Marcelin, 2010; Logie et al., 2017; Lai et al., 2020). As the average age in Haiti is only 24, many of these studies focus on the experiences of youth, who make up a larger percentage of the population than in any other country in the hemisphere (CIA, 2020). One comprehensive study in Port-au-Prince sampled 1,260 households looking at experiences of violence following the political unrest after the 2004 overthrow of President Jean-Bertrand Aristide. The authors find stark impacts with an estimated 8,000 murders and 35,000 rapes – with more than half of victims under 18 years old – during the 22-month assessment period (Kolbe & Hutson, 2006). While these studies examined Haiti through the lens of crisis, few have examined the impact of these crises on mental health and trauma on youth in the

country. The remaining studies which do focus on mental health and crisis in Haiti examine it through the lens of the 2010 earthquake (Kolbe et al., 2010; Shultz et al., 2011; James et al., 2020). One of the most exhaustive of these studies is entitled *Narratives in Sensitivity: Post-Traumatic Stories from Survivors of the January 12th, 2010 Earthquake in Haiti* (Cadichon, 2019). In this work, Haitian psychologist Jeff Matherson Cadichon examines the impact that this natural disaster and crisis had on the mental health of youth survivors, reporting more than 35% of young people interviewed continue to have severe post-traumatic symptoms years after the earthquake.

While many of these studies have taken place in and around the capital, Port-au-Prince, only one study examining the relationship between crisis and mental health/trauma looked at the north of the country (Bolton et al., 2012). This study also examined experiences and perceptions of violence following the departure of Jean-Bertrand Aristide in 2004. During this period, the city of Cap-Haïtien was attacked and overrun, the airport was looted, and parts of the city were ransacked and burned to the ground (Bolton et al., 2012). The authors described organized violence as chronic and pervasive in Haiti due to coups d'états, civil unrest, extreme poverty and lack of infrastructure. To determine the relationship between this crisis and mental health, the study interviewed populations in slum areas of Cap-Haïtien as well as nearby towns through key-informant interviews. Authors found a strong relationship between periods of crisis and symptoms of mental distress, making the case for the development of effective interventions to treat sufferers as well as the need for increased capacity to deal with large scale crises in the region.

In order to develop programs for mental health and psychosocial support, it is important to know what people who live in these settings see as the most pressing problems, and where

problems related to mental health and well-being are situated in relation to all of the difficulties people are facing. Assessments which use methods derived from qualitative social sciences are based on what people report themselves, providing useful measures of the saliency of local conceptualizations of mental health and well-being and their importance in specific contexts (Bolton & Tang, 2004). The overall goal of this study is to assess the impact of current crises on mental health of youth. In terms of specific objectives, this research seeks to examine the perceived causes of these crises by youth, to characterize the impact of these crises on students' lives and lived experiences, and to describe youth perception for impacts on Haitian society as a whole.

Methods

This study describes a community-based assessment with focus groups of Haitian public health university students in Cap-Haïtien, Haiti. Cap-Haïtien is the second largest city in Haiti with a population of roughly 500,000 inhabitants. Using qualitative methods, this study consisted of six focus group discussions which were conducted between September and November of 2020 at the Université Publique du Nord au Cap-Haitïen (UPNCH). As one of the largest public universities in northern Haiti, UPNCH started its bachelor's degree program in Public Health and Social Work in 2017 to increase training and expertise in these domains, as well as to train future public health and social work leaders for the country (Galvin et al., 2020). In order to enter the program, students take a competitive exam and are selected for entrance based on their score.

Participants were selected through a purposive sampling process. Inclusion criteria for participation consisted of students currently attending the Public Health and Social Work bachelor's degree program at UPNCH, students who were present in Haiti for the entirety of the crises, and agreed to informed consent. The six focus groups were composed of between five and eight students and lasted for 45 minutes to one hour. Participants were between 18 and 24 years old and all groups were a mixture of male and female students, with 38 students interviewed in total – 18 male and 20 female. Fourteen students were in the fourth year of the program and 24 students were in the second year of the program. Other studies reported that at least 20 interviewees representing both genders were needed to identify salient issues, therefore this study nearly doubled that number to ensure saturation was achieved (Bolton et al., 2012).

Students were provided a small lunch as compensation for their participation in the study. While they ate, students were explained the purpose of the study examining the relationship between current crises and mental health in Haiti, and asked if they were interested in participating. After confirming interest, they were then presented with a form explaining the study and informed consent was obtained. Students were informed that they did not have to speak about any information that they did not feel comfortable sharing. However, they were encouraged to share both the experiences of themselves and their families as well as their perception of effects on society in general. Once the audio recording was begun, students were first asked, "What is your perception of the relationship between peyi lók and mental health in Haiti based on your experiences?" After each student had the chance to speak, students were then asked, "What is your perception of the relationship between the coronavirus pandemic and mental health in Haiti based on your experiences?" Once again all students had a chance to speak. When they were finished students were asked, "Which crisis had a more serious impact

on mental health in Haiti based on your experience?" A Haitian research assistant guided each discussion, asked probing questions when more information was needed regarding a student's account, and took notes on the discussion.

All focus group interviews were conducted in Krèyol. Interviews were recorded and transcribed verbatim for analysis. Original transcripts in Krèyol were coded and analyzed through an inductive process. Analysis consisted of consolidating codes into a single summary list of problems and symptoms, then ranked based on how many respondents reported each item. These codes were reviewed, modified, and agreed upon by both the PI and research assistant at UPNCH. Institutional Review Board (IRB) approval was obtained for this study from Washington University in St. Louis (IRB #202005009), and the Haiti National IRB – or *Comité National de Bioéthique* (IRB #1920-51).

Results

Peyi Lòk

Several major themes emerged from the focus group discussions on peyi lòk (Table 2). The primary causes of psychological problems were related to the protests and violence, and the shutdown of normal life that resulted in late 2019. Students were unable to work or go to school for months at a time, a fact mentioned by 17 of 38 students. Fourteen students described being confined, stuck at home, or unable to go outside due to the crisis. "All productivity was at a standstill (*pwodiktivite a li kanpe net*)," one student remarked. With many unable to work or go to school, students also described a steep decline in their economic situation while

simultaneously recounting a significant rise in prices – mentioned by 9 students – for many necessities.

Table 2. Summary of Peyi Lòk Themes by Problem and Symptom

Problems	**# of respondents who mentioned problem (N = 38)**
No work/school	17
Guns/Gunshots	17
Confined/can't go out/stuck at home	14
No food/hunger	10
No transport	10
Gangs/criminals	10
Increase in prices	9
Roads blocked	9
Protests	9
No money	8
Things are worse in Port-au-Prince	7
Throwing rocks	7
Bribery/Theft	7
Death/Murder	7
Throwing bottles	6
Fights/Assaults	6
Not as bad in rural areas	5
No water	4
Property destruction	4
Rape	3
No gasoline	3
Burning tires	3
Separated from loved ones	3
Kidnapping	2
Tear gas	2
Increased unemployment	1
Increased unwanted pregnancies	1
Difficult accessing money transfers	1
No police	1
Symptoms	**# of respondents who mentioned symptom (N = 38)**
Stress	18
Worried about safety of self/loved ones	9
Fear (*pè*)	8
Discouraged/Frustrated	7

Bored/Nothing to do	5
Anxiety (*perez, ajitasyon*)	4
Can't concentrate (*espriw pa dispoze, dekonsantre*)	4
Traumatized (*tromatize*)	4
Feel imprisoned (*anprizone, encarsere*)	3
Belief in God/Jesus for protection	3
Not at ease (*pa alèz*)	3
Distress (*twoub*)	2
Afraid to go outside	2
Shock (*chok*)	2
Suffering (*soufrans*)	2
Wanting to leave Haiti	2
"Haitians are used to political problems"	2
Psychosis	1

As the crisis continued for months, students described an inability to meet basic needs such as finding food and water. With less money and inability to work, several students stated there was a lack of food and widespread hunger in their homes and communities. Ten students described not having enough food or experiencing hunger, and 8 discussed lack of money. One student said he felt the "hunger in the body" (*grangou nan kòw*). Another was unable to find water for an extended period:

> "A lot of people couldn't find food during this period, other times it was hard to find water or you had to go out for water even though the neighborhood was really dangerous" (*zòn nan toujou cho*).

Others mentioned how even when they could find potable water, the price more than doubled going from 60-70 gourdes to 175 gourdes. "Even if you have money, you might not have food or anything to drink since you can't go outside [to buy anything]" one said. Another remarked that "you can only go out for provisions on certain days, Friday and Saturday usually, because on Monday the craziness (*tenten*) would start again." Two students described how market sellers were often unable to come into the city with their products, so there was nothing to buy even for those with money.

Widespread violence was another common theme in focus groups. Seventeen students mentioned guns or gunshots which highlighted the level of danger in the streets. Others discussed the use of rocks and bottles as weapons by gangs and protesters, with 7 and 6 mentions respectively. The primary culprits in this violence were gangs which were cited by 10 students. As one described, in many neighborhoods,

> "The gangs have power over life and death… you have to wait until they let you leave your house, and then also when you want to go back home again."

Similar to other countries, gangs in Haiti are primarily made up of young men from poor backgrounds and have increased significantly in urban areas in recent years (Etienne, 2020). During peyi lòk, students described how gangs would block roads – including the one bridge that connects the two halves of the city – and force people to pay to pass: "when you cross the bridge [which connects the city], whether you're in a private car or public transport, you have to pay them [the gangs] a bribe." In addition, theft was common and impunity was rife. "Gangsters (*bandi*) would stand around, frisk everyone who walked by, and take everything they had on them," in one student's neighborhood.

Brutality increased as the crisis went on, with battles breaking out between different neighborhoods in the city center. Two poor neighborhoods in particular, Shada and Nan Bannann were overrun with gangs which "took advantage of the situation to terrorize the population." Several students reported seeing killings with their own eyes. One student remarked,

> "At one point there were 3 people who were burned alive in the city near my house, that really affected me. I asked myself, how would a human burn another human to death like that?"

Another reflected on the particular risks for young women among the violence: "[the gangs blocking the roads] would steal people's cars and take the young girls and rape them in the middle of the road or out in the forest" (*fè aksyon sou fiy yo nan mitan wout la ou nan raje*).

While several students were in Port-au-Prince during this period and reported even more severe violence and unrest than in Cap-Haïtien – describing "total insecurity" and being unable to sleep due to the gunshots – the violence in Cap-Haïtien still stood in stark contrast to the relative calm of the countryside. Four students described leaving the cities to live in the countryside during this period, in order to escape the violence and unrest. "During peyi lòk I had to return to the countryside, it was getting too hard to go outside in the city and buy things," one said. Another remarked that while schools and places of business were still closed in the cities, they were open in the countryside, allowing people to resume some normal activities there.

Among psychological problems, the most salient theme discussed was stress which was mentioned by 18 of the 38 students. One student described peyi lòk as a whole as "just a period of intense stress." After stress, 9 students mentioned worry about the safety of themselves and loved ones. One student described how,

> "During peyi lòk there were a lot of people who were victims; if it's not from a rock someone threw, it can be from hunger or thirst, a medication, or just stress. You always ask yourself, if I go out will they throw rocks at me? Will there be gasoline [for transportation]? Will there be people burning tires?"

Fear (*pè*), feeling discouraged or frustrated, and boredom followed closely behind – with 8, 7, and 5 mentions, respectively. Four students said they were traumatized (*tromatize*). Three students described peyi lòk as being like a prison (*amprizone*). Students told stories about being afraid to go out as they were often unable to return home due to protests or violence, forcing them to walk for miles or take long detours. Others reported that even when they tried to get work done, they couldn't concentrate:

> "I couldn't come to school, and I wasn't able to concentrate on anything [at home]. This means that every time you're trying to think about something, the only thing you can think about is what's going on in the country."

Three students stated religious beliefs and God (*Bondye*) helped them make it through this period, with 2 expressing a desire to leave the country.

Peyi lòk was therefore first and foremost characterized by extreme violence and economic hardship. These factors resulted in widespread hunger, stress, and fear in the population at large as people could no longer work or go to school, and often feared simply going out in search of basic necessities. By December of 2020, peyi lòk began to ease. Markets reopened, roads were no longer blocked, and travel between large cities recommenced throughout the country. However, this opening would only last for a few months before the government imposed lockdown due to the coronavirus pandemic.

Coronavirus Pandemic

Some similar themes were raised with regards to the coronavirus pandemic and lockdown when compared with peyi lòk. Twenty-one of 38 students cited the confinement or being unable to leave home or go outside again in 2020 (Table 3). One student described the lockdown as "peyi lòk's little brother (*piti frè peyi lòk*)" and another called it "global peyi lòk," reflecting on how the whole world was now shut down, like Haiti was in 2019. However, unlike peyi lòk, the coronavirus pandemic lockdown did not result in largescale violence. Rather students primarily expressed concern about the impact of the virus itself, as well as the economic repercussions from the lockdown.

Table 3. Summary of Coronavirus Pandemic Themes by Problem and Symptom

Problems	**# of respondents who mentioned**

	problem (N = 38)
Confined/can't go out/stuck at home	21
High income countries couldn't handle virus	18
No work/school	17
Poor health system in Haiti	14
High levels of stigma surrounding corona	14
Experienced corona symptoms	13
No transportation/travel	11
No food	11
No money	9
Increase in prices	9
No prevention measures in place in Haiti	8
Used traditional treatments for corona	8
Skeptical about corona/Conspiracy theories	7
Information spread on social media	7
Mentioned story of professor in Limonade	5
No personal space	3
Went to live in countryside	3
Mentioned local Belgian woman who had corona	1
Increased unemployment	1
Difficult accessing money transfers	1
Increased unwanted pregnancies	1
Symptoms	**# of respondents who mentioned symptom (N = 38)**
Fear (*pè*)	27
Stress	19
Worried about safety of self/loved ones	16
Avoiding people/Can't visit loved ones	16
Belief in God/Jesus for protection	8
Bored/Nothing to do	7
Discouraged/Frustrated	6
Not at ease (*pa alèz*)	5
Relaxed after the first few months	5
Anxiety (*perez*)	5
Traumatized	4
Trouble sleeping	2
Egzema due to klorox	2

In the initial months of the pandemic, 18 students cited concern about the fact that high income countries were unable to handle the influx of patients resulting in significant deaths. "After what happened in France and Italy, I thought it was possible that all Haitians might die of

corona if it entered the country," one student said. Another remarked that, "if it [coronavirus] got to Haiti we would die in droves." These comments highlight the widespread uncertainty in this early period and the fear that coronavirus could have an even more serious impact in Haiti than in more developed countries.

> "When you saw the big countries had people dying, we were worried because Haiti doesn't really have a health system or good hospitals," another added.

The poor state of the healthcare system was mentioned by 14 students. In a country where 50% of medical services are provided by NGOs, students noted how Haiti's medical system does not allow easy access to care, also highlighting the fact that many doctors and nurses were not coming to work in the early weeks of the pandemic out of fear of the virus and due to a dearth of appropriate protective equipment (Germain, 2019). As participants were all students of public health, their training provided them with extensive knowledge of Haiti's healthcare system and its weaknesses.

In addition to the lack of appropriate medical services and infrastructure in Haiti, 8 students noted the absence of prevention measures for coronavirus among the population. One student remarked how "Haiti wasn't prepared to respond to a pandemic" while another said that "there weren't good measures in place, and Haitians were negligent in that lots of people didn't wear masks." Speaking about his low income neighborhood near the city center, Baryè Boutey, one student remarked that "out of 100 people, 95 will tell you they won't wear a mask." Part of this was related to the unique way stigma developed regarding coronavirus during the early days of the pandemic and lockdown in Haiti. Fourteen students mentioned stigma as a significant problem during this period. With regards to masks, 3 students described how wearing a mask would make people think you had coronavirus. "If you wore a mask sometimes people would

threaten you, they thought you had corona; so people didn't really wear masks too much," one described. Fears of threats or violence if you were suspected of having coronavirus were a particular problem in the early months, according to 6 students. One said,

> "There are people that can attack you if they think you represent a danger for them or those around them. They don't need to know if you have it or not, they will just kill you so you don't spread the illness (*yo ta plis bezwen eliminew pouw pa pwopaje maladi a*)."

As 13 students interviewed described having or fearing they had symptoms in the early months of the pandemic, there was considerable fear of both the virus and the stigma.

Several students described threats of violence with regards to fears of coronavirus infection in the community. One student recounted an instance where someone was suspected of being infected and a group of men with machetes showed up at the house. Another student explained how one of his professors would kick students out of class for a small cough. In one final example, a student had to leave town due to threats from neighbors based on the perception he had been infected and could spread it to them. Perhaps the best illustration of the threats of violence related to coronavirus stigma however, was the case a professor from the State University in the nearby town of Limonade who returned to Haiti on March 9th after a trip to the United States. On March 17th, he taught his classes as the university and came down with a fever and back pain (Etienne, 2020). He was immediately suspected of having coronavirus and was contacted by the Ministry of Health to be tested. Yet, due to the lack of information on the virus at that time, locals threatened to burn his house down, he was threatened with death by armed groups, and was refused care at the local hospital by worried doctors and nurses. Five students described this as a key incident with regards to stigma of coronavirus, with one student interviewed saying he was present in the professor's class the morning he fell ill. As that student describes,

> "I had class with him that Monday from 1-4pm… when students started sharing information about the professor maybe having corona, the school was in upheaval, everyone ran home as fast as they could… I locked myself in my room and told my family to leave my food on the table without telling them anything [about what had happened]."

These experiences led to the professor's ambulance being attacked when he was finally on his way to the hospital, almost killing him.

Part of the difficulty in a crisis like coronavirus in the era of pervasive social media use in settings with low levels of education, is the rapid spread of false information. Students reported receiving information via WhatsApp in the month of March that predicted 150,000 Haitians to die from coronavirus, with another saying that 1,000 to 2,000 people were expected to die in the country per day by May. Other false information widely shared on social media included "little hair tea" (*te ti plim*) which was mentioned by 2 students. As one described,

> "When you open the Bible you're supposed to look for a hair in the pages, and when you find one you boil it with water and put it in a kettle. The whole family drinks it and that prevents everyone from getting corona. All Haitians heard about this. If you believe in God, people would say only God can help us now, and this is the solution… Everyone was buying Bibles and searching in the pages, it was like a game."

While the origins of this social media phenomenon are unclear, the rumor is reported to have been started by a pastor in Ghana where it quickly spread (Afram Plains, 2020).

The uncertain nature of the coronavirus pandemic and lockdown led 8 students to express a belief in God or Jesus for protection. Coupled with a fear of hospitals, many Haitians turned to traditional treatments to either prevent or treat coronavirus. Eight students discussed using these remedies. In addition to the 2 that mentioned "little hair tea," 5 mentioned using leaves for tea, 4 using ginger, 2 using rum, and 1 using aloe. With the surge in demand for many of these items, students described large rises in prices, with one student traveling to the countryside solely to purchase affordable ginger. As the border with the Dominican Republic remained shut due to the pandemic for the rest of 2020, many other prices went up as well as Haiti imports a

significant percentage of its goods from its neighbor. Nine students mentioned the problem of increase in prices, 9 described not having enough money, and 11 not enough food. As one student said, "there was a sort of famine [in this period], some families couldn't eat… everyone just ate what they had." With many Haitians living day to day, one student noted how "people [were] more afraid of hunger than corona." With markets closed most days of the week, many necessities harder to find, and large numbers of people unable to work, the pandemic lockdown resulted in significant hardship.

> "My mom works in the market and my dad works construction, so when all activities stopped we fell into extreme poverty. It was really hard the way we had to live," another student said.

Despite the early months of uncertainty around the virus, the wave of deaths experienced in other parts of the world did not flood Haiti's hospitals. Seven students mentioned the widespread presence of skepticism and conspiracy theories in the country with regards to the virus. Two cited the widespread belief that Haiti was too hot for coronavirus to survive there. Another 2 discussed the conspiracy theory that the Haitian government invented the crisis to get money from international donors. "Haitians thought the government was trying to get aid money from other countries," one student said. An additional 3 students described how poor Haitians thought it was just a disease for the wealthy: "people in the lower classes said it's a disease for the bourgeois, and that they won't get it." A final student described the class divide in terms of education, saying,

> "People who are educated were more stressed than people who are illiterate; they thought corona was nothing saying, 'this disease isn't for Haitians.'"

By October, a large banner appeared over a main road in town stating, "Thank you God for the protection you give us, you protected the country of Haiti against coronavirus and especially the

city of Cap-Haïtien." This emphasized the widely believed notion that God had protected Haiti from the coronavirus pandemic.

In terms of psychological problems, the most salient theme was fear (*pè*) mentioned by 27 out of 38 students. With the combination of factors discussed in the preceding paragraphs, one student described the early weeks of the lockdown as a "climate of fear." Another student described how "lots of videos were being shared on social media about how the virus is spread… I was so afraid, I thought I had symptoms when I got home and was very anxious." Next, 19 students described experiencing stress. One student reported how,

> "It was so stressful because Haitians are used to living very close to one another, things are dirty, eating wherever, everything at the market is on the ground, not washing hands, dust everywhere," fearing that these lack of precautions would lead to a more serious outbreak.

Following this, 16 students discussed worrying about the safety of themselves and loved ones, with students with parents who worked at the hospital particularly concerned. Sixteen students also described avoiding people or being unable to visit loved ones due to the lockdown and/or concerns about the virus. Due to living in close quarters, social distancing was difficult for many: "In the area where I live you can't go outside without being in close contact with so many other people. We couldn't know if they were sick," one student said. Seven students complained of boredom, 6 said they were discouraged or frustrated, 5 said they were not at ease (*pa alèz*), with an additional 5 expressing anxiety (*perez*). Four students said they were traumatized (*tromatize*). One student said during the pandemic lockdown, "I felt panicked, mentally I wasn't functioning well." Another said, "sometimes you're so angry and you don't even know why." However, when the country started opening up again in the late Spring, 5 students mentioned the atmosphere relaxing significantly.

> "After a few months I saw it wasn't so bad in Haiti, I became more relaxed, and even started going out with a mask. It doesn't really have an effect on me now," one remarked.

Another said, “I got used to it, in any case everything is open now in the country. I have the impression that we’re living like corona doesn’t exist for us here in Haiti.”

The coronavirus pandemic in Haiti was therefore characterized by the government lockdown which forced people to stay at home, as well as the economic hardship that followed. Additionally, the pandemic provoked high levels of fear, stress, and uncertainty, as Haitians saw a new and menacing virus that was thrashing the most advanced healthcare systems in the world before it arrived on their shores. In combination with structural weaknesses in the country’s government and healthcare system, misinformation and stigma spread widely occasionally resulting in acts of violence.

Comparison of Peyi Lòk and Coronavirus Pandemic

When asked which crisis had a more significant impact on mental health in Haiti, 21 students said peyi lòk whereas 16 students said the coronavirus pandemic, with 1 student undecided. In their justifications for selecting peyi lòk, students used terms like danger, instability, violence, stress, gangs, guns, impunity, and the lack of authority. Students said they felt threatened every day, and saw videos of bodies circulating on social media. Several students lost friends or family members to violence and 2 students reported having people killed in front of them. These events in particular resulted in serious self-reported psychological distress for students. In addition, there was the strong presence of the gangs in the violence and chaos of peyi lòk. One study on the increasing problem of gangs in Haiti describes them as “omnipresent groups” that can overthrow governments, silence opposition, terrorize entire cities, and facilitate a burgeoning kidnapping industry, adding “it is impossible to discuss Haiti without addressing

the issue of gangs" (Kolbe, 2013, p. 2). All of this "apparent violence," as one student put it, contrasts with relative calm of the coronavirus pandemic.

In their justifications which minimized the gravity of the coronavirus pandemic, students mentioned how Haiti has dealt with worse pandemics in the past, such as the 2010 cholera pandemic which infected 900,000 and killed over 9,000 Haitians (UN, 2016). Others mentioned that while coronavirus was feared in the early months, by the time this study was conducted in Fall 2020, few believed it remained a serious threat to Haiti. Parallel to this reasoning that Haitians have dealt with worse pandemics in the past was the argument that "Haitians are used to political crises," a sentiment shared by 2 different students. As the unrest that culminated in peyi lòk started years earlier, students expressed a certain resignation about political deadlock and the resulting protests and violence, particularly in the cities.

Yet, a significant percentage of students maintained that the coronavirus was more serious than even the violence of peyi lòk. Many of these students live in the countryside however, where they were little affected by the urban-focused peyi lòk and more impacted by the national coronavirus lockdown. One student talked about how people in his rural community were afraid of outsiders in the early days of the pandemic, as they thought people could come in and infect them. Others highlighted the general uncertainty surrounding the virus and its potential consequences, emphasizing their fear of the unknown. With peyi lòk they knew it had to come to an end someday, they said, whereas with the coronavirus lockdown, "we didn't know when the shutdown would end." Lastly, the extent to which students resigned themselves to religious beliefs or God also emphasizes the fear that this poorly understood virus instilled in the population, even among the most educated.

Discussion

The purpose of this study was to describe the mental health and psychological effects of two recent crises on a sample of Haitian public health university students in their own words. This data is intended to inform future studies on the relationship between social and political crises, and mental health care and treatment in Haiti. The results of this study found that both crises were characterized by a shutdown of normal life, such as an inability to go to work or school. Due to this inability to make a living, both crises also resulted in extreme economic hardship for students, with many reporting difficulty accessing basic needs such as food and water. Both crises also resulted in significant increases in stress and fear. However, the extreme violence of peyi lòk resulted in higher levels of reported stress among participants, whereas the widespread uncertainty of the coronavirus and its effects in the early days of the pandemic resulted in high levels of fear.

Crisis and Trauma

While this study did not categorize psychological symptoms with corresponding criteria in the Diagnostic and Statistical Manual of Mental Disorders (or DSM), there is significant overlap with many symptoms described and disorders such as depression, anxiety, and post-traumatic stress (APA, 2020). Additionally, the experience of traumatic events, chronic stress, fear, and anxiety is known to result in more serious mental disorders in many individuals (Galvin, 2020).

Several recent studies have examined the relationship between mental health and psychological well-being in the context of different crises in places around the world (Tremblay et al., 2009; Uutela, 2010; Bartoll et al., 2014; Bargava & Gupta, 2020). While these studies largely focus solely on either economic or social crises, the recent examples of peyi lòk and the coronavirus lockdown in Haiti highlight the multi-faceted nature of these crises in the country. Though significantly different in terms of their causes, both of these crises also had similarities in terms of the psychological effects on young people, most notably in terms of traumatic experiences of threats or violence, forced confinement, economic distress, and large increases in population-wide stress and fear. While already experiencing the chronic stress of living in a "fragile state," the trauma of acute crises that overlay the chronic crises can add an additional burden on the health and psychological well-being of young Haitians that may result in mental illness.

Coronavirus and Belief Systems

While little has been published about the coronavirus pandemic in low-income countries thus far, two studies have looked at the extent to which rumor and misinformation were able to spread throughout Haiti, particularly on social media. These studies reflect the accounts presented by students in which 14 remarked on high levels of stigma around the virus, 7 discussed conspiracy theories or skepticism about the existence of the virus, and another 7 highlighted the way information now spreads via social media channels. One study described rumors in Haiti saying that the virus is transmitted by contaminated testing swabs, or that hospitals are using patients for vaccine experiments (Rouzier et al., 2020). Another described the conspiracies circulating in Haiti that the coronavirus is a result of sin and is God's

punishment on humans for their sinful ways, that the world's elite manufactured the virus to kill minorities and people in poor countries, or that the vaccine will render people in poor countries sterile so that they do not produce so many children (Louis-Jean et al., 2020). While some Haitians have accurate information and understand these are falsehoods, there are reports in Haiti of hospital staff being threatened and physically attacked, including the stoning of Ministry of Health mobile testing teams (Rouzier et al., 2020).

Additionally, the fear of a deadly and unknown global pandemic in places like Haiti results in an "automatic magico-religious response when it comes to diseases like Covid-19" according to one Haitian scholar's exhaustive analysis of the country's response to the coronavirus pandemic (Etienne, 2020). In addition to our findings in Chapter 2, several studies other have documented the preponderant role of Vodou and leaf-based treatments in traditional healing in the country (Meudec, 2007; Vonarx, 2008; Pierre et al., 2010). For this reason, it is perhaps unsurprising that the coronavirus crisis resulted in a return to traditional medicine in many parts of Haiti. As one study describes, many different recipes were used to combat the virus, including aloe and a variety of other leaves and roots. This study also cites cases of coronavirus among the Haitian diaspora in Florida where people "recovered" after consuming some of these "notorious beverages" (Henrys, 2020).

Crisis and Poverty

Perhaps the most significant negative impact on the mental health of young Haitians according to participant accounts in this study was economic challenges including employment and access to food. In this sense, as Etienne describes, food insecurity became severe due to the "combined shocks of peyi lòk in 2019 as well as the coronavirus pandemic, when the most

vulnerable households were exposed" by this accumulation of crises (Etienne, 2020). One student whose mother couldn't work during either crisis described how he was able to eat enough during peyi lòk, but when the pandemic lockdown arrived a few months after it ended he was no longer able to eat his fill. This testimony highlights the cumulative effects that repeated acute crises – on top of chronic structural crises – can have on physical and mental well-being.

With high percentages of young people compared to middle- and high-income countries, low-income countries like Haiti face a continual challenge of providing food, education, housing, jobs, and stability for its future leaders (Ortiz & Cummis, 2012). After instances of corruption such as the Petrocaribe scandal, many in Haiti argue that their government does little to nothing to provide a decent future for its youth. In fact, Haitian government policy has encouraged emigration as a solution to the "demographic problem" the country is facing, according to one Haitian expert (Michel, 2019). Yet, the international community has failed Haiti in the recent past as well, in particular with the loss and misappropriation of billions of dollars among the $9 billion raised for post-earthquake reconstruction (Bilham, 2010; Ramachandran & Walz, 2015). The problem and complexity of long term stability and crisis prevention in Haiti was also evinced by the cholera outbreak stemming from UN peacekeepers, highlighting the international community's contribution to Haiti's instability at times as well (Lemay-Hébert, 2014).

Preventing Future Crises

Young people in Haiti continue to be forced to live through repeated crises. As the vast majority of Haitians were born since the 1986 departure of Baby Doc, they have never known a country without extended periods of crisis. This exposure to chronic stress, fear and traumatic events such as unrest, extreme violence, and natural disasters, is proven to result in mental illness

such as depression, anxiety, and other disorders including post-traumatic stress. Several studies have demonstrated this relationship in Haiti itself, showing increased incidents of mental illness and suicidality among young people, and highlighting the inability of existing services to offer adequate treatment or care (Wagenaar et al., 2012; Hagaman et al., 2013).

While preventing national or global crises – like that of peyi lòk or the coronavirus respectively – is exceedingly complex and difficult, services that provide effective therapies for survivors can address the wounds on a more individual level, and should be adapted and implemented locally (Bolton et al., 2012). With only one mental health clinic in the entire northern region of the country – started recently in 2016 – few biomedical service options are available for a population that continues to overwhelmingly seek care with Vodou priests (*ougan*) and other traditional healers as described in Chapter 2 (Galvin & Michel, 2020). In addition to providing individual-level care, community-level interventions should be considered as well, in order to restore community cohesion and promote resilience in the event of future crises (Ventevogel, 2016).

Limitations

This study had several limitations. Firstly, while students were all chosen from the same Public Health program at UPNCH, they were not randomly selected. Rather they were chosen based on their availability and willingness to participate, which opens the possibility for selection bias within UPNCH. Thus, it is unclear whether the sample chosen for this study is generally representative of students at UPNCH. Additionally, as these are students receiving an undergraduate education in public health, they are likely more educated and aware of the relationship between crisis and mental health compared with the broader university population in

Haiti. For this reason, they may not be representative of a community of Haitian university students.

Next, there is a potential for reporting bias in this study as students may be underreporting undesirable effects of the crises. As these interviews were conducted in the context of focus groups with their peers, some students may have limited the discussion of difficult experiences they had during these periods. Additionally, as these discussions took place in front of a researcher from the United States, it is possible that this influenced the response patterns of the participants. Social desirability bias may have led them to portray responses that they believe were more socially acceptable rather than those that are reflective of their true feelings or experiences. Lastly, the discussions regarding the coronavirus pandemic took place while the pandemic was still ongoing in the Fall of 2020. Changes in the consequent months of the pandemic may impact overall perceptions or experiences of this crisis.

Conclusion

This study assessed the impact of two current crises – peyi lòk and the coronavirus pandemic – on mental health of youth in Haiti. In particular, this study found strong impacts of these crises on the lived experiences of students interviewed. With regards to peyi lòk, students were severely impacted by widespread violence and insecurity resulting in high levels of stress, as well as stress and concern for the safety of loved ones. During the coronavirus pandemic, students highlighted substantial uncertainty, fear, and stigma surrounding the new virus. In conjunction with already existing political violence and pervasive poverty, youth interviewed described significant trauma-related impacts on their lives and on Haitian society as a whole.

Future research on mental health and crisis in Haiti could further examine the physical and mental consequences of largescale traumatic events on individuals in different communities.

Chapter 4:

Determinants of Mental Illness and Care Seeking Behaviors in Northern Haiti: An Assessment of Demographic, Social, and Religio-Cultural Factors Among Patients at the First Mental Health Clinic in the Region

Introduction

Background and Significance

According to recent research, the global disease burden of mental illness has been significantly underestimated until recently. Current figures suggest that 13% of disability adjusted life years (DALYs) worldwide are caused by mental health issues while up to 85% of individuals with serious psychiatric conditions living in low- and middle-income countries (LMICs) do not receive the treatment they need (Vigo, Thornicroft, & Atun, 2016). This is largely due to the fact that many low-income countries have less than one psychiatrist per million inhabitants and few trained psychologists or other biomedical mental health practitioners (Ventevogel, 2016). Research in the field of global mental health is currently focused on how to address this high burden of mental illness while improving access to high-quality, sustainable, and cost-effective services in LMICs (Patel et al., 2018).

Haiti is a country that exemplifies these gaps with high levels of mental health disease burden and low levels of treatment or access to biomedical care (IESM-OMS, 2011; Smith-Fawzi et al., 2012; Wagenaar et al., 2012; Galvin & Michel, 2020). Like many populations residing in LMICs, Haitians face harsh social vulnerabilities that increase risk for poor mental health, such as high levels of poverty, violence, and social stressors, poor physical health and

nutrition, and low levels of education (Lund et al., 2010; Kieling et al., 2011; Smith-Fawzi et al., 2012)

Today, mental health services in Haiti remain largely limited to the 60-bed Mars & Kline center and the 120-bed Beudet hospital, both located in the capital Port-au-Prince. However, even services at these institutions have been deemed inadequate and of poor quality (Raviola et al., 2020). Besides Mars & Kline and Beudet, non-governmental organizations (NGOs) such as Zanmi Lasante provide significant mental health services in the Central Plateau region to the northeast of Port-au-Prince, yet few services exist outside of these areas, leaving the majority of Haitians with few options for mental health care (Nicolas et al., 2012). More high quality mental health treatment services are urgently needed to fill these gaps in services, particularly in regions where little to no biomedical treatment options are available.

Sant Sante Mantal Mòn Pele (SSMMP) – or Mental Health Center at Morne Pelé in English – was created in 2016 just outside of the city of Cap-Haïtien with the goal of bringing evidence-based, culturally-appropriate, and community-centered mental health treatment to Haitians living in the north of the country for the first time (Galvin & Michel, 2020). Before the arrival of SSMMP, Haitians with chronic mental illness such as clinical depression, anxiety, bipolar disorder, schizophrenia, addiction, and epilepsy had few options outside of consulting traditional healers such as Vodou priests (*ougan*), or traveling to the south of the country for care. Yet, with a dearth of current research about mental health services in Haiti – and in the north of the country in particular – there is a significant knowledge gap regarding the basic concepts of treatment in the Haitian social and cultural context and how these services can best meet local needs (Michel, 2019).

Religious Beliefs and Explanatory Models of Illness in Haiti

Culture and systems of belief are essential factors to consider when trying to understand health behaviors in a given context (Kleinman, 1978). With regards to Haiti, it is important to note that many Haitians maintain a "cosmocentric" perspective of health in which people see themselves as nested within and impacted by a vast world of spirits (Sterlin, 2006). This is particularly the case due to the influence of Vodou, a religion of African origin, which mixed with French Catholicism to create a unique syncretic religion specific to Haiti as described in Chapter 2 of this dissertation (Métraux, 1958; Pierre et al., 2010; Fils-Aimé, 2016). For this reason, many studies consider participants who report their religion as Catholic to also be followers of Vodou; however, the vast majority of Haitians continue to maintain belief systems strongly influenced by Vodou (Meudec, 2007). Therefore, Haitians' unique religious and spiritual beliefs may be a mediating driver of mental health outcomes and of particular importance in designing and improving mental health services.

Religious belief is an important component in the functioning of daily life in Haiti (Jean-Charles, 2017; Cadichon, 2019). One researcher described Haiti as a "labyrinthian socio-religious space" that encompasses Protestantism, Catholicism, and Vodou (Tremblay, 1995). In the last century however, Catholicism has lost significant influence to Protestantism which has gained many converts in Haiti (Barthélemy, 1991). While many Haitians – particularly Protestant converts – often claim to despise Vodou and refuse any compromise with proponents of these practices, the vast majority of Haitians have a relationship to Vodou beliefs (Métraux, 1958; Meudec, 2007; Tiberi, 2016). As described in one of the most prominent historical works on the subject of Vodou, *Le Vaudou Haïtien,* author Alfred Métraux writes, "All Haitians, whatever their social status, have trembled in their youth at stories of *zombi* and werewolves and

learnt to dread the power of sorcerers and evil spirits. Most of them, under the influence of school or family, react against such fancies but some give in to them and consult a Vodou priest in secret" (1958, p. 87). This continues to remain largely true today, with high levels of belief in magic, sorcery, and Vodou ritual practices (Michel, 2019).

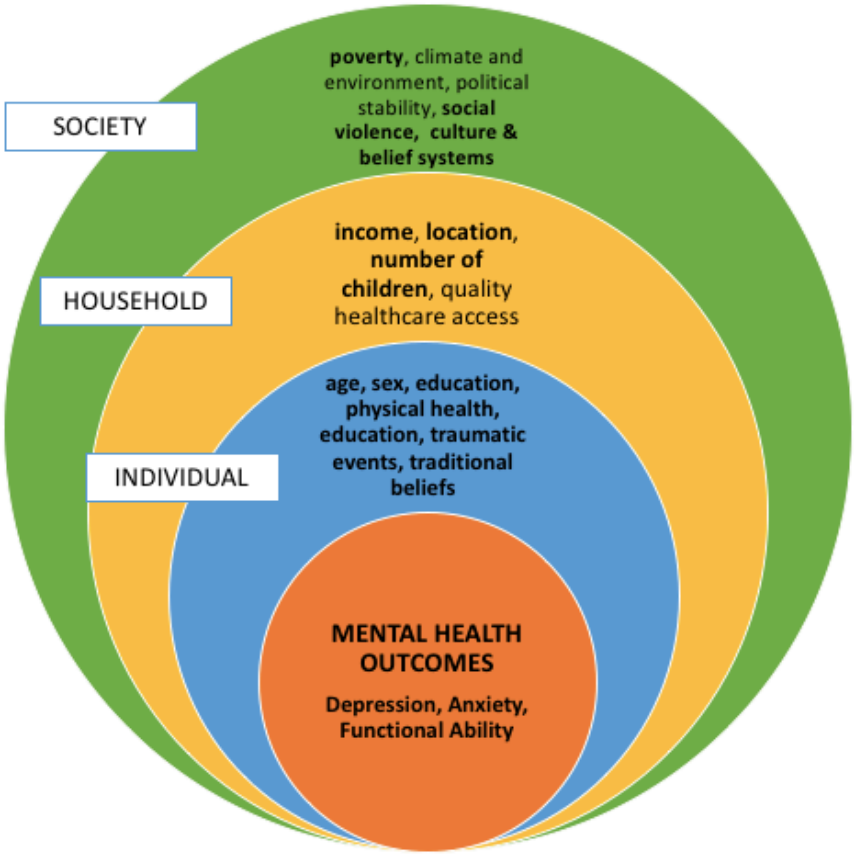
A 2012 estimate found that roughly 70% of Haitians rely on traditional medicine as their first option for care (OPS/OMS, 2012). However, this same report described how biomedical care can be difficult to access for many Haitians, which may partly explain the reliance on traditional medicine. Traditional medicine however is primarily used by Haitians due to widely accepted explanatory models of illness that emphasize *sent spirits* (Meudec, 2007; Méance et al., 2014; Auguste & Rasmussen, 2019). A *sent spirit* is viewed as a spirit intentionally sent by someone supernaturally, used to explain an experience of misfortune such as an accident, illness, or death (Kaiser & Fils-Aimé, 2019). As in other societies influenced by traditional African beliefs, many Haitians believe humans do not simply die without a reason; rather, if someone dies someone must have killed them, usually through act of sorcery such as a *sent spirit* (Graeber, 2011). As described in Chapter 2, Vodou priests are often sought to treat psychological distress by mediating relationships between the living, the dead, and ancestral spirits (Wagenaar et al., 2013). While there is debate about the impact of such beliefs on mental health stigma and outcomes, few other studies to date have examined the extent to which Haitians with mental illness believe their illness is caused by *sent spirits* and seek treatment with traditional healers.

Measuring Mental Illness

The methods presented here are similar to other studies conducted on mental health in Haiti as well as in other LMICs (Wagenaar et al., 2012; Ventevogel, 2016). This means using a combination of existing culturally validated scales and demographic variables to assess prevalence and severity of depression, anxiety, and functional ability. In addition, other elements were included, such a measuring the number and type of traumatic events experienced. Many studies have proven the association between experiencing traumatic events and mental illness (O'Brian, 1998; Martsolf, 2004; Belik et al., 2007). Given the findings presented in Chapter 3 of this dissertation with regards to the recent crises of the global coronavirus pandemic and severe political and social unrest in Haiti over the last few years, there is a high rate of trauma-related disorders in Haiti (Auguste & Rasmussen, 2019). In particular, one study found that nearly 40% of Haitian youth have experienced traumatic events such as kidnapping, gang violence, or physical/sexual assault (Jaimes et al., 2008).

Other demographic factors that can have strong links to mental health outcomes on a population level include sex, income, education level, location of residence, marital status, number of children, and religious affiliation (Wagenaar et al., 2012; Ventevogel, 2016). As significant associations exist between physical and mental health, it is also essential to assess any ailments patients may be experiencing outside of mental health concerns, as well as a general assessment of overall physical health (Ohrnberger et al., 2017). These factors impact individuals experiencing mental illness on multiple levels (Figure 1).

Figure 1. Determinants of Depression, Anxiety, and Functional Ability[1]



[1]Text in bold refers to determinants that are examined for the purposes of this study.

Due to the particularities in belief systems in Haiti, it is important to have a mixed-methods approach in which standardized and culturally specific instruments are used. In other words, while there are some dynamics that are universal when it comes to examining mental health, there are other factors that are unique to the Haitian cultural context and must be examined and taken into account. With regards to including qualitative approaches, the use of case studies is also pragmatic because it allows for additional data that can help elucidate and clarify quantitative outcomes (Greene, 2008).

Goal and Objectives

The overall goal of this pilot study is to examine the experiences of patients with mental illness at the first mental health clinic in Northern Haiti, as well as the relationships between demographic, social, religious and economic factors and mental health outcomes. More specifically, this study sought to (1) assess the demographic factors that impact traditional beliefs and practices with regards to mental illness etiology and treatment. Secondly, we (2) measure traumatic events experienced by patients and the relationship to mental health among this population. Lastly, we (3) study the determinants of three mental health outcomes: depression, anxiety, and functional ability. We hope to use this data to better understand patient populations at SSMMP with the ultimate goal of improving services as well as increasing access to high quality mental health services throughout the region.

Methods

Study Sample and Design

As few have studied the lives of individuals living with mental illness in Northern Haiti, this purposive cross-sectional study surveyed patients about their experience with mental illness at SSMMP between August 31st, 2020 and February 15th, 2021. We aimed to interview 150 participants for this study, however considerations of attrition led us to determine that a sample of roughly 100 participants would be sufficiently powered and in line with similar mental health pilot studies (Kaiser et al., 2013; Eustache et al., 2017; Legha et al., 2020). SSMMP clinic data between 2018-19 data indicates 61% of patients were female and 39% were male (Michel, 2019). Additionally, as male patients present with more than double the rates of psychosis as female

patients at SSMMP – and often arrive for care in chains or other physical restraints put on by fearful family members – many male patients were excluded from participation due to inability to respond to the study questionnaire. Psychosis is determined by staff psychologists and encompasses five primary elements: confused thinking, delusions, hallucinations, changed emotions and disturbed behavior, including violence (Ventevogel, 2016). Other studies globally have confirmed that males often represent the most serious cases – including florid psychosis – as they are the most likely to delay treatment (Bijl et al., 2003).

The main inclusion criteria for participating in this study comprised: (1) being a person of Haitian nationality of at least 18 years of age, (2) having a history of mental illness, (3) being physically and mentally capable of answering questions in the survey, and (4) having given informed consent. Patients presenting with epilepsy but no symptoms besides seizures were excluded. All patients who presented for treatment at SSMMP during the study period who met these criteria were offered the opportunity to take part. As all participants were recruited from SSMMP, researchers were also given access to the patient's medical chart at the clinic, if agreed to by the patient. This provided additional information on diagnostic history as well as qualitative information shared during sessions with the psychologist, allowing researchers to better understand the patient's history and background related to mental illness and treatment.

Data Collection and Measures

All instruments in this study were designed as self-report questionnaires. Due to the high illiteracy rate in Haiti – particularly in the north of the country – researchers used the questionnaires as a structured interview starting with informed consent, and then reading each survey question aloud to the participant. The average time for this interview was 45 minutes to

one hour. To determine if patients suffer from depression, researchers used the Zanmi Lasante Depression Symptom Inventory (or ZLDSI) – a version of the PHQ-9 depression scale which is widely used through the world (Rasmussen et al., 2015; Legha et al., 2020). To determine if patients suffer from anxiety, researchers used a version of the Beck Anxiety Inventory that has been translated into Haitian Creole (Krèyol) and culturally validated (Kaiser et al., 2015). Lastly, researchers used the Krèyol Functional Assessment (KFA) that was developed and culturally validated in Haiti using Bolton and Tang's approach (2002; Kaiser et al., 2013). These scales were selected as they are among the only mental health assessment scales which are not simply translated but also culturally validated for use in the Haitian cultural context, incorporating local understandings of mental illness and idioms of distress.

In addition to these three validated scales to measure mental illness in the Haitian context, significant demographic data related to mental health outcomes was collected related to gender, age, location of residence, mental health diagnosis, marital status, physical health, number of children, monthly income, years of education, religious beliefs, health history, spiritual beliefs related to diagnosis, previous visits to traditional healers for treatment, and number of traumatic events (Das et al., 2007; Wagenaar et al., 2012; Ventevogel, 2016). Location of residence was captured as the name of the town or nearest town to where the individual lived, as well as whether it is in an urban or rural setting. Marital status was denoted as either single, married, or in plaçage. Haitian sociologist Laënnec Hurbon describes plaçage as "a compromise between African polygamy and Western forms of marriage" (Hurbon, 1987, p. 83). Others describe it as a more informal, open form of marriage, however one in which women are at a relative disadvantage in terms of regulating terms of the relationship and inheritance

(Meudec, 2007; Régulus, 2012). Physical health was captured as being either "good" or "bad." Number of children, monthly income, and years of education were noted in numerical terms.

Few other mental health studies in Haiti have collected data regarding the relationship between patient spiritual beliefs and illness etiology (Wagenaar et al., 2012). Following formative research conducted in 2019, researchers determined that it was important to capture this data among patients at SSMMP. For this reason, patients were asked if they believe their mental illness was caused by a *sent spirit*. In Krèyol, the phrase "Do you believe this was something someone did to you?" (*Eske ou kwè se fè y'ap fè'w?*) was determined to be the best formulation. Immediately after, patients were asked if they had visited a Vodou priest for treatment (*Eske ou te wè ougan?*) so as to make clear the visit was related to this illness.

Patients were told that they could share any additional information throughout the interview. Furthermore, at the end of the survey, patients were asked again if they had anything else they would like to share. This qualitative data, combined with health history information in the patient medical chart, allowed for supplementary data to inform quantitative analyses. Finally, participant observation at SSMMP was an important element of this study as by observing the day to day work, interacting with practitioners and clients, and observing community interactions/attitudes towards the clinic, researchers were able to gain increased insight into the overall world in which SSMMP functions.

Training and Cultural Validation

During two weeks in August 2020 prior to starting research, a training took place for the four researchers on the study team – one American psychologist and the three Haitian

psychologists at SSMMP who were going to conduct interviews with participants. This training ensured mutual understandings of study protocols and intent, as well as to confirm the final questionnaire was comprehensible for patients, culturally valid, and relevant to the study's overall goals. The American researcher on the team is a practicing mental health provider – licensed clinical social worker (LCSW) – with seven years of practice experience, and fluent in Krèyol with extensive previous research experience in Haiti, including prior experience volunteering at SSMMP.

During the first week, all researchers were provided a copy of the questionnaire and requested to provide feedback. Through these validation exercises, several necessary adaptations to the questionnaire were identified. For example, some language in the depression and anxiety scales was altered so as to ensure full comprehension by patients in northern dialects of Krèyol. Additionally, other discrepancies came to light among psychologists' understandings of "urban" and "rural." To ensure consistency in data collection, only residents of the large cities of Cap-Haïtien, Port-au-Prince, and Gonaïves were recorded as "urban," with residents of smaller towns recorded as "rural." Other issues treated during these exercises related to how best to calculate of "years of education," with psychologists having differing interpretations of how to best to quantify this based on the Haitian education system. Ensuring common sets of understandings, comprehensibility, and cultural relevance of each item adjusted for potential threats to validity in the process of developing and adapting this questionnaire. Following the training, surveys were pilot tested with patients. This process ensured that local perceptions and understandings guided instrument development.

Ethical Considerations

The population of persons with lived experience of mental illness in Haiti represents a vulnerable group. The ethical issues posed by conducting research with this population was addressed at several levels in the study. First, the enrollment was conducted by the Haitian psychologist treating the patient at SSMMP. The psychologist asked patients about their willingness to be contacted by a researcher only after checking all the predetermined criteria, which includes the cognitive ability to understand the nature of the research and to consent. The psychologist also judged whether the study would potentially be harmful to the psychological well-being of the patient. Only after this preliminary screening were participants asked if they were willing to be contacted. If the answer was "yes", they were included on a list for the researcher's review.

Second, the consent form represented a dual consent process. The researcher explained to each person with lived experience of mental illness that to ensure that their rights would not be violated, they can designate another person who takes care of them to consent for their participation in the study. If requested, this same caregiver was also required to consent in a separate process. Third, during the interviews or observations, the researcher was respectful, and always reminded the informants that they can choose not to answer any question, or to stop the session at any time, for any or no reason. In this sense, participation was completed voluntary, and several patients declined when offered the opportunity to participate. Patients were compensated with a 500 Haitian Gourdes ($7 US) reduction in the cost of their visit or medications for participation. This amount was determined in collaboration with Haitian psychologists at SSMMP. Institutional Review Board (IRB) approval was obtained for this study from Washington University in St. Louis (IRB #202005009), and the Haiti National IRB –

or *Comité National de Bioéthique* (IRB #1920-51). All research was conducted with respect to local COVID-19 guidelines.

Analysis Procedures

Data analysis was performed using STATA software (version 15.0; StataCorp, College Station, TX). Univariate and bivariate analyses were used to examine the relationships between social, demographic, economic, religious and cultural factors, and depression, anxiety, and functional assessment scales. Kernel density estimation plots were used to assess the normality of distributions on outcome variables. Student's *t*-tests and chi-square tests were used to assess relationships that included categorical variables, and Pearson correlations were conducted to examine relationships between continuous variables. Logistic regressions were performed to measure the impact of demographic characteristics on the belief that the patient's illness was caused by a *sent spirit*, and if the patient had previously visited a Vodou priest for treatment of this illness. The Hosmer-Lemeshow Goodness of Fit Test was performed to ensure a good fit for the model. In addition, model fit checks were performed to detect outliers, and the variation inflation factor (VIF) test was used to test for multicollinearity among independent variables in the model.

Ordinary Least Squares (OLS) regression models were used to assess the effects of demographic variables and exposure variables on the continuous variables: total anxiety, depression, and functional assessment scale scores. To check for regression assumptions we ran several tests. The Breusch-Pagan/Cook-Weinberg test for heteroskedasticity was performed which detects any form of heteroskedasticity which may disrupt the model and corrupt interpretation of results. The VIF test was used to test for multicollinearity among independent

variables. P-P plots and Q-plots were used to check for normality of the error terms, and we ran the function *rstudent* for studentized residuals. With regard to identifying influential data, we performed the Cook's distance (or Cook's d) test to examine for influential data which indicates outliers that may have an impact on results. Using Cook's d, four participants had extreme values that seemed to influence regression coefficients. While average number of sessions per patient was only 3, these four patients had attended between 14 and 17 sessions. No other patients had attended more than 9. Thus, to examine the influence of these values, two separate models were run – with and without the four values. The results indicated significant differences between the two models and as such the final model did not retain these four outliers.

Results

Sample Characteristics

This study interviewed 92 patients, including 64 women and 28 men (Table 4). Patients ranged between 19 and 79 years of age with an average age of 43 years old. Most participants in this sample live in rural areas, with a minority from urban areas, primarily the city of Cap-Haïtien. Six patients came from other parts of Haiti however, with one from Gonaïves, one from Ouanaminthe, one from St. Marc, one from St. Raphael, and two from Hinche. Patient medical charts listed a vast majority of patients with a diagnosis of depression or anxiety – usually a combination of the two – while 20% listed a diagnosed of bipolar disorder. Five patients also had co-morbid epilepsy. Overall education levels were low, with the average patient having only an 8th grade education. Ten patients had no formal education, and roughly one-third of patients could not sign their name. Just over half of participants reported being in

"bad" health, the other half reported "good" health. On average, patients had previously attended three sessions at SSMMP prior to their participation in this study.

Table 4. Sample Characteristics (n=92)

	N (%)	Mean (SD)
INDIVIDUAL CHARACTERISTICS		
Age (min/max: 19-79)	-	43 (13.4)
Sex		
Male	28 (30%)	-
Female	64 (70%)	-
Years of Education (min/max: 0-18)	-	8 (5.2)
Physical Health		
Good	41 (45%)	-
Bad	51 (55%)	-
Marital Status		
Single	37 (40%)	-
Plaçage[1]	17 (19%)	-
Married	38 (41%)	-
HOUSEHOLD CHARACTERISTICS		
Location		
Urban	39 (42%)	-
Rural	53 (58%)	-
Average Monthly Income in USD[2] (min/max: 0-322)	-	50 (77)
Number of Children (min/max: 0-8)	-	2 (1.9)
Religion		
Catholic/None	17 (19%)	-
Protestant	75 (81%)	-
MENTAL HEALTH CHARACTERISTICS		
Diagnosis on Medical Chart		
Depression/Anxiety	74 (80%)	-
Bipolar	18 (20%)	-
Number of Sessions (min/max: 0-17)	-	3 (2.4)
Number of Traumatic Events (min/max: 0-8)	-	3 (1.7)
Believe Illness Caused by *Sent Spirit*		
Yes	68 (74%)	-
No	24 (26%)	-
Visited Vodou Priest for Treatment		
Yes	36 (39%)	-
No	56 (61%)	-
Depression Scale Score (min/max: 0-42)	-	21 (11.8)
Patients with Depression (≥ 12)	69 (75%)	-
Patients without Depression (< 12)	23 (25%)	-
Anxiety Scale Score (min/max: 0-60)	-	24 (15.8)
Patients with moderate to severe anxiety (≥ 26)	40 (43%)	-
Patients with minimal to mild anxiety	52 (57%)	-

(< 26)		
Functionality Scale Score (min/max: 0-36)	-	14 (9.4)

[1]Plaçage is a more informal, open form of marriage common in Haiti.
[2]Converted from Haitian Gourdes (*0.013 on February 25, 2021)

Among respondents, 41% reported being married, 40% being single, and 19% in plaçage. Men were much more likely to be single than women. Participants were also asked questions about their household, however as the concept of household is not readily understood in Haitian culture, interviewers informed participants that the household is composed of people who share living space, finances and food, and can include a boyfriend or girlfriend or a relative's child that lives with you and that you care for (Kolbe & Hutson, 2006). Participants reported a monthly household income ranging from 0 to 240,000 Haitian Gourdes (or $0 to $322 US) with an average of 3,827 Haitian Gourdes ($50 US). Yet, over one-third of all participants reported having no income at all.

Participants were also asked questions about their religious beliefs and beliefs surrounding the etiology of their mental illness. The vast majority of participants reported being Protestant, including a significant minority among more radical "born again" sects such as Pentecostal, Jehovah's Witness, Adventist and Apostolic Protestant. The remaining participants reported being Catholic or having no religion, except for one participant who identified Vodou as his religion. Nearly three-quarters of participants said they believed their mental illness was caused by a *sent spirit*. In addition, over one-third of patients in the sample had previously visited a Vodou priest for treatment. Among the patients who believed their illness was caused by a *sent spirit*, over half had previously visited a Vodou priest for treatment, almost always multiple times.

The mean depression scale score among this sample was 21. Patients scoring 12 and above are considered depressed (Legha et al., 2020). Three-quarters of participants scored 12 or above. This sample's mean anxiety scale score was 24. Patients scoring 26 and above are considered to have moderate to severe anxiety (Beck et al., 1996). Just under half of participants scored 26 or above. The mean score on the functional assessment was 14.

Number of Traumatic Events

The number of traumatic events that impacted participants' mental health highlight significant levels of trauma among this sample (Table 5). The most common traumatic events experienced were related to deaths of loved ones with two-thirds reporting the sudden death of a loved as a trauma contributing to poor mental health. The vast majority (87%) of participants reporting a sudden death of a loved one also reported a loved one being murdered. Additionally, almost half of participants reported being injured in a fight. One-quarter of the sample experienced a natural disaster with many having lived through the Port-au-Prince earthquake of 2010, and others reporting hurricanes or other weather-related disasters such as floods. Lack of food or water, or lack of medical care were also traumas reported by roughly a quarter of the sample. Approximately one-sixth of the sample reported lack of shelter. Over one in five women in the sample reported trauma from a difficult pregnancy and almost one in ten women reported having been raped.

Table 5. Traumatic Events Experienced by Participants that Impacted Mental Health (n=92)

Traumatic Event	**Male (%)**	**Female (%)**	**Total (%)**
Sudden Death of Family or Close Friend	18 (64%)	44 (69%)	62 (67%)
Murder of Family or Close Friend	15 (54%)	39 (61%)	54 (59%)

Separation of Family	6 (21%)	24 (38%)	30 (33%)
Natural Disaster	9 (32%)	14 (22%)	23 (25%)
Lack of Medical Care	9 (32%)	14 (22%)	23 (25%)
Lack of Food/Water	5 (18%)	16 (25%)	21 (23%)
Injury Due to Fight	10 (36%)	8 (13%)	18 (20%)
Difficult Pregnancy	0 (0%)	14 (22%)	14 (15%)
Lack of Shelter	3 (11%)	10 (16%)	13 (15%)
Victim of Gang Violence	4 (14%)	7 (11%)	11 (13%)
Loss of Property	1 (4%)	4 (6%)	5 (6%)
Rape	0 (0%)	5 (8%)	5 (6%)
Imprisonment	1 (4%)	1 (2%)	2 (3%)

Bivariate relationships

Correlations indicate younger patients are significantly more likely to believe their illness is caused by a *sent spirit* and are more likely to have visited a Vodou priest for treatment (Table 6). Participants with less income are also more likely to believe their illness was caused by a *sent spirit* as those who believed had an average monthly income of roughly $40 USD whereas those who did not believe had roughly $100 USD.

Correlations also showed significant relationships with depression, anxiety, and functional assessment scales. Correlation between all three scales was highly significant. All three scales were also significantly correlated with number of sessions attended indicating that as number of sessions increases, symptoms of depression, anxiety and lack of functional ability decrease. Additionally, correlations were highly significant between the three scales and physical health, with negative symptomology increased for those with “bad” physical health. Lastly, an increase in number of traumatic events was significantly correlated with high levels of depression and anxiety scores but not functionality. Poor functionality however was significantly correlated with fewer sessions, more children, less education, and lower monthly income.

Table 6. Correlations Between Study Variables (n=92)

Variable	1	2	3	4	5	6	7	8	9	10	11
1. Functionality Score	-	-	-	-	-	-	-	-	-	-	-
2. Depression Score	.56***	-	-	-	-	-	-	-	-	-	-
3. Anxiety Score	.35***	.77***	-	-	-	-	-	-	-	-	-
4. Age	.07	-.13	-.18	-	-	-	-	-	-	-	-
5. Number of Sessions	-.34**	-.54***	-.45***	.16	-	-	-	-	-	-	-
6. Number of Children	.21*	.01	.02	.55***	-.09	-	-	-	-	-	-
7. Years of Education	-.28*	.02	-.01	-.46***	.06	-.50***	-	-	-	-	-
8. Average Monthly Income	-.34***	-.17	.00	-.04	.10	.05	.10	-	-	-	-
9. Number of Traumatic Events	.20	.22*	.24*	.24*	.07	.16	-.13	-.01	-	-	-
10. Physical Health	-.49***	-.60***	-.49***	.11	.53***	.08	.07	.11	-.08	-	-
11. Believe Illness Caused by Sent Spirit	.06	.06	.09	-.26*	-.03	-.10	.07	-.33**	-.11	-.02	-
12. Visited Vodou Priest for Treatment	.08	.04	.05	-.27*	-.08	.05	-.07	-.15	-.03	.00	.48***

**p<.05; **p<.01; ***p<.001, two tailed test.*

Illness Etiology and Traditional Healing

Logistic regressions were conducted regarding the belief that a participant's illness was due to a *sent spirit* and whether a patient had previously visited a Vodou priest for treatment. Results show that age was a significant predictor of both (Table 7). Specifically, younger participants were more likely to report believing their illness was due to a *sent spirit* and were more likely to visit a Vodou priest for treatment. With regards to believing illness was caused by a *sent spirit*, participants with less monthly income were more likely to believe. Lastly, men were more likely to believe their illness was caused by a sent spirit than women. Hosmer-Lemeshow Goodness of Fit Test was performed on the belief illness caused by a *sent spirit* and whether the patient visited a Vodou priest, indicating no significant lack of fit.

Table 7. Determinants of Believing Illness is Caused by *Sent Spirit* and Visited Vodou Priest for Treatment (n=92)[1]

Variable	Believe Illness is Caused by *Sent Spirit*			Visited Vodou Priest for Treatment		
	OR	SE	P[2]	OR	SE	P
Sex (ref: female)	7.36	6.64	**.03**	.84	.46	.76
Age	.91	.03	**.005**	.92	.03	**.003**
Location (ref: rural)	2.22	1.50	.24	.82	.43	.71

Number of Children	1.33	.28	.18	1.37	.26	.10
Years of Education	.96	.07	.56	.96	.06	.55
Monthly Income	1.00	.00	**.01**	1.00	.00	.06
Marital Status (ref: single)	-	-	-	-	-	-
Plaçage	.45	.49	.47	4.30	3.69	.09
Married	.24	.18	.06	.99	.62	.99
Religion (ref: Catholic/None)	-	-	-	-	-	-
Protestant	4.43	3.65	.07	1.73	1.22	.44
Constant	90.06	171.59	**.02**	13.85	20.69	.08
Pseudo R^2	.28	-	-	.19	-	-
X^2	30.01	-	**.000**	22.81	-	**.007**

[1]Logistic Regression Model
[2]Significant p-values are represented in bold at the p<0.05 level

Depression, Anxiety, and Functionality Scales

Linear regressions were performed for predictors of depression, anxiety, and functional assessment scales (Table 8). Participants with poor physical health had higher levels of depression, anxiety, and lower functional ability. An increase in the number of traumatic events experienced by a patient was also associated with increased depression and anxiety. Female patients also had increased depression scores. A decrease in monthly income was also associated with a decrease in functional ability. However, as the number of sessions patients attended for treatment increased, there was a decrease in both depression and anxiety. Harmful levels of multicollinearity or heteroskedasticity were not detected in the models, revealing no significant lack of fit, and R-squared values of 0.46, 0.34, and 0.35.

Table 8. Determinants of Depression, Anxiety, and Functionality (n=88)[1]

Variable	**Depression**			**Anxiety**			**Functionality**		
	β	SE	P^2	β	SE	P	β	SE	P
Sex (ref: female)	-4.62	2.16	**.04**	-6.37	3.27	.06	.73	1.92	.71
Age	-.04	.10	.69	-.24	.14	.11	-.08	.08	.35
Location (ref: rural)	1.19	2.11	.56	1.76	3.19	.58	-1.43	1.87	.45
Number of Sessions	-1.61	.51	**.002**	-1.79	.76	**.02**	-.13	.45	.78
Number of Children	.14	.68	.84	.76	1.03	.46	.99	.60	.10
Years of Education	.25	.22	.26	.06	.34	.46	-.26	.20	.19
Monthly Income	-.00	.00	.05	-.00	.00	.99	-.00	.00	**.002**
Number of Traumatic Events	1.23	.61	**.04**	2.21	.93	**.02**	.67	.54	.22

Physical Health	-9.61	2.30	**.000**	-10.38	3.48	**.004**	-7.51	2.04	**.000**
Marital Status (ref: single)	-	-	-	-	-	-	-	-	-
Plaçage	3.39	3.06	.27	4.34	4.63	.35	.46	2.72	.87
Married	1.18	2.38	.62	-.27	3.59	.94	1.79	2.11	.40
Constant	25.96	5.05	**.000**	35.52	7.62	**.000**	20.99	4.48	**.000**
Adjusted R^2	.46	-	-	.34	-	-	.35	-	-
F-value	7.84	-	**.000**	5.03	-	**.000**	5.27	-	**.000**

[1]Ordinary Least Squares (OLS) Regression
[2]Significant p-values are represented in bold at the $p<0.05$ level

Discussion

To our knowledge, this is the first clinic-based study to examine patients living with mental illness in Northern Haiti. The results highlight key findings with regards to the relationship between beliefs and explanatory models of mental illness, with large numbers of patients attributing their illness to *sent spirits* and visiting Vodou priests for treatment. In addition, key factors were identified with these variables in relation to age, sex, and income that impacted forms of belief and care seeking behaviors. Next, this study also exhibited important results depicting high levels mental illness and impairment, with particularly elevated depression scores among participants. The large number of severe traumatic events reported by patients in addition to physical ailments and poverty appear to play a significant role in the mental distress of this sample.

Other recent studies have examined mental illness in the south of the country, particularly following the 2010 earthquake (Hagaman et al., 2013; Blanc et al., 2016; Cadichon et al., 2017). Our findings depict a population that is mostly rural, very poor, with little formal education, and living primarily in the area surrounding the city of Cap-Haïtien. The vast majority of these patients have a diagnosis of either depression, anxiety, or a combination of the two, with severe symptomology. Most of the patients in this sample also reported waiting months or years prior

to seeking proper treatment, which partly explains the gravity of illness manifestations seen at SSMMP. For example, it was not uncommon for patients in this sample to report being sick for up to 10 years before seeking care at SSMMP. While many previously sought care from traditional healers for years at a time, some of these patients reported experiencing abuse and saw symptoms worsen rather than improve. Common forms of abuse experienced by patients at SSMMP include deep cuts, burns, or inflammation on the face and body from ritual "healings" performed by *ougan* to chase away harmful spirits (Michel, 2019). Some of these patients who experienced abuse had developed psychotic symptoms as well, many of which were excluded from participating in this study due to an inability to respond to study questions.

Recent scholarship in the field of global mental health has highlighted the importance of differentiating clearly between disorder and distress in mental healthcare (Ventevogel, 2016). For example, many clinicians in the United States tend to see patients in distress due to social suffering related to problems in their personal or professional lives (Yapko, 1998). However, at SSMMP few patients seek care when problems are at this low level. Rather, patients who come to SSMMP virtually all suffer from a disorder – or psychiatric condition – meaning the level of care needed is much higher. Services such as those provided by SSMMP are important for meeting the needs of these patients, who are often suffering from severe mental illness.

Traditional Beliefs and Healing

In Chapter 2 we explored the systems of belief surrounding mental illness in the Vodou cosmology as well as cures that are performed by local traditional healers in the treatment of mental illness. In particular, those findings show how conceptions of mental illness and explanatory models in Vodou maintain perceptions and understandings of illness and disorder, as

well as treatment modalities, that differ starkly from current biomedical models. For this reason, it was determined to be essential to capture mental illness etiologies and care seeking behaviors in relation to traditional healing that are common among this patient population, as belief in Vodou explanatory models appeared widespread based on preliminary research from 2019.

There were significant findings with regards to religion and explanatory models of illness and healing in this study, a subject which few others have examined in Haiti (Blanc et al., 2016). With nearly three-quarters of patients reporting their illness being caused by *sent spirits*, this differs significantly from other mental health studies in rural Haiti which reported only 10% of respondents saying spirits could cause mental illness (Wagenaar et al., 2012). Many studies highlight how Protestants in Haiti are much less likely to believe in *sent spirits* compared with Catholics and other groups, due to negative feelings toward Vodou (Meudec, 2007, Louis, 2011). However, in this study over three-quarters of Protestants thought their illness was due to *sent spirits* compared with only 65% of Catholics and other groups. Most interestingly, among more radical protestant sects – such as Pentecostal, Jehovah's Witness, Adventist and Apostolic Protestant – who are deemed to be the most intolerant of Vodou, 96% (23 out of 24 participants) thought their mental illness was due to *sent spirits*.

With regards to visiting a Vodou priest for treatment, 39% reported seeking treatment through an *ougan* prior to coming to SSMMP. This is a much higher rate compared with other studies in Haiti that found only 5% sought care through traditional healers (Eustache et al., 2017). Catholics and other groups were more likely to seek treatment from *ougan*, with 47% visiting a Vodou priest for treatment compared with 37% of Protestants. Another study investigating this question similarly found that Catholics and other groups were more likely than Protestants to seek care from Vodou priests (Wagenaar et al., 2013). Only one-third of more

radical Protestants visited Vodou priests for treatment indicating that while they almost always believed they were a victim of *sent spirits*, they often did not follow through with a visit to a Vodou priest for treatment. However, SSMMP psychologists argue that more radical Protestants may have felt uncomfortable revealing their visit when they had in fact previously gone.

In terms of other findings related to traditional beliefs and healing, younger people were significantly more likely to believe their illness was caused by *sent spirits*, with an average age of 41 among those who believe and 49 who don't. Similarly, younger people were also more likely to have visited a Vodou priest for treatment, with an average age of 39 among those who visited one and 46 who had not. The literature on this subject often emphasizes that less educated people are more likely to visit Vodou priests (Meudec, 2007). However, as young people in this sample were significantly more educated than older, and education level among groups who believe in *sent spirits* and visited Vodou priests were roughly the same, there seems to be more complexity with regards to the relationship between age, education, and traditional beliefs and healing than in much of the literature to date. Yet, one relationship that is confirmed by the literature is that poorer people are more likely believe in traditional healing methods (Clérisme et al., 2003). In this study, the average income of those who believed their illness was caused by *sent spirits* was less than half of those who did not. Additionally, men were more likely to believe their illness was caused by *sent spirits* than women, likely due to a proclivity to see their mental illness as caused by someone else via sorcery as opposed to occurring naturally.

The results of this study exhibit high rates of belief in mental illness etiology related to *sent spirits* compared to other studies which examined this subject, as described above. This may be due in part to the fact that it took place in the more isolated northern part of the country, where traditional beliefs tend to remain stronger. However, it is also important to note that, like

many populations in a globalized world, Haitians can often hold multiple or hybrid explanatory models for any given set of symptoms (Pierre et al., 2010). Additionally, simply because patients believe their illness is caused by *sent spirits* does not necessarily mean they believe a Vodou priest will be able to cure them. In particular, many patients who reported believing *sent spirits* were the cause of their illness said they sought relief through prayer at church, arguing that they believed God could cure them (*se bondye ki konn geri*).

Determinants of Depression, Anxiety, and Functional Ability

There were high levels of depression and anxiety amongst this patient population – with almost three-quarters of patients clinically depressed and nearly half with moderate to severe anxiety – compared with other studies in Haiti which found depression among less than half of respondents (Rasmussen et al., 2015). This study also found low levels of functional ability, particularly among patients with high levels of depression and anxiety, in the correlation models. In addition, there are vulnerabilities at each level of the theoretical framework, as noted above in Figure 1, which function as determinants of mental illness among adults in Northern Haiti.

First and foremost, contextual factors at the society level of the theoretical framework highlight important effects on mental well-being. In particular, rural Haiti suffers from extreme levels of poverty (Sletten & Egset, 2004; Singh & Barton-Dock, 2015). Other studies have established strong associations between low socio-economic status and psychological distress (Das et al., 2007; Smith-Fawzi et al., 2012; Wagenaar et al., 2012). A majority of patients in this study told interviewers that they didn't have any money (*pa gen lajan*), reporting that they had to borrow from friends or family to pay for treatment. Many also said they couldn't work due to their illness, and were supported by friends or family members. Through participant observation,

researchers also witnessed many patients who did not have enough money to pay for the entirety of their medications, leaving them to pick and choose which ones to purchase and which to forego. In addition, patients often did not return for their follow-up visits due to a reported inability to pay. While the clinic director often provided discounted treatment or medication when patients reported they were unable to pay, it was not possible to decrease fees for everyone in need.

The types of traumatic events indicated also highlight important aspects of the larger societal context in which the patient lives. For example, two-thirds of patients reported experiencing the sudden death of a family member or close friend which negatively impacted their mental health. In addition, 87% of these sudden deaths – or 54 of 62 individuals – also reported the murder of a family member or close friend. This statistic may reflect high levels of extreme violence in Haitian society that have been growing in recent years (Brewis, Wutich, Galvin & Lachaud, 2020). On the other hand, as described previously, Haitians often believe that loved ones who die are killed by *sent spirits* and thus could be reporting loved ones as "murdered" when there was in fact no violent crime to be witnessed. However, other indicators such high levels of injury due to fights, gang violence, and several cases of rape highlight that there are in fact high levels of violence affecting mental health among patients at SSMMP. Extreme violence has been documented in other mental health-related studies in Haiti as well (Martsolf, 2004; Pierre et al., 2010; Smith-Fawzi et al., 2012; Bolton et al., 2012). Lastly, over one-quarter of patients reported being a victim of a natural disaster – usually the Port-au-Prince earthquake or a hurricane – exemplifying Haiti's precarious ecological position in the Caribbean and the far reaching effects that natural disasters can have on mental health (Wagenaar et al., 2012; Tiberi, 2016).

Moving inward on the theoretical framework to the household and individual levels, sex was a determining factor in relation to depression, with women more likely to have higher rates of depression than men. This is a finding that has been confirmed repeatedly in Haiti and around the globe, and though there is still some debate as to exactly why, some researchers attribute this to factors related to reproduction (Yapko, 1998; Patel et al., 2002; Wagenaar et al., 2012; Rasmussen et al., 2015). In addition, there was also a strong relationship between lower income and decreased functional ability. Other studies using the KFA similarly found that lack of economic means is related to lower functionality (Kaiser et al., 2013). Weaker relationships were found between low functionality and number of children and years of education, however, these factors have been associated with increased poverty in Haiti (Sletten & Egset, 2004; Verner, 2008).

At the individual level, poor physical health was strongly associated with depression, anxiety, and poor functional ability, and over 60% of patients complained of a physical illness in addition to mental illness. Patients often complained of physical ailments due to incidents not always captured in traumatic events, such as head injuries from automobile accidents, strokes, Parkinson's, drug use, anemia, malaria, typhoid fever, diabetes, hypertension, acid reflux, ulcers, fever, or undiagnosed chronic pain or inflammation. Many of these patients reported believing their physical ailments were also caused by *sent spirits* – particularly when they were chronic – and had not sought appropriate medical care. Others complained that quality medical care was not accessible from where they lived. However, SSMMP has a primary care physician on staff and requires all patients to see the doctor at each visit, after the psychological assessment has been completed. This ensures that physical illnesses can be treated alongside mental illnesses, thereby decreasing the impact that physical disorders or pain have on mental distress.

Importantly, this study also identified that the more patients return for follow-up care at SSMMP, the lower their depression and anxiety symptoms. While this study did not examine the effectiveness of mental health care treatment at SSMMP, these data are a first indication that treatment is likely having a positive impact overall.

Limitations

The findings of this study should be viewed in the context of several limitations. Firstly, there was a potential for selection bias in this study, as only patients who came to SSMMP during the study period were offered the opportunity to participate. On the one hand, since this population is overwhelmingly poor and rural with few resources to pay for mental health services, the sample may include more severe cases. However, on the other hand, as cases of psychosis and other more extreme illness were excluded from participating due to inability to respond to the questionnaire, this study perhaps captured the least severe cases seen at SSMMP. Additionally, because of the cross-sectional design of the study, a causal link between demographic factors and current mental health symptoms cannot be established. As indicated in the theoretical model, multiple factors affect depression, anxiety, and functional ability.

Secondly, with only 92 participants, the study's sample size is relatively small. In addition, with only 28 male participants, it was difficult to determine significant relationships in the data with regard to gender. However, despite difficulties recruiting male patients due to high rates of psychosis among men seeking care at SSMMP, the last month of the study was spent recruiting only men so as to increase this portion of the sample. Next, other studies using these instruments in Haiti have mentioned the ambiguity inherent in many terms used in depression, anxiety, and functionality scales as clinicians and researchers encounter different understandings

among patients based on context (Kaiser et al., 2013). Additionally, as this study interviewed patients who often had severe mental illness, ensuring mutual understandings was at times difficult. Lastly, as previously described, social desirability bias may have influenced some participant responses, particularly with regards to traditional beliefs and experiences seeking treatment with Vodou priests.

Conclusion

This study uniquely examined the characteristics of patients at the first and only mental health clinic in the north of Haiti. We found evidence of strong associations between factors that influence depression, anxiety, and functional ability on multiple levels in this population. In particular, high levels of traumatic experiences or other adverse events influenced many of the patients' illnesses. In addition, there were important phenomena related to traditional beliefs and healing that impacted views of illness etiology and care seeking behaviors. As many patients believed their illnesses – both mental and physical – were due to *sent spirits*, Vodou priests were often the first recourse when seeking treatment, with some patients delaying appropriate biomedical care for years. Overall, our study points to the importance of quality mental health treatment such as that offered by SMMPP in Northern Haiti for the first time.

Chapter 5: Conclusion

The purpose of this dissertation project was to assess mental illness and treatment in northern Haiti, including trauma-related etiologies and traditional care practices. Prior to the founding of SSMMP outside Cap-Haïtien in 2016, there were few to no biomedical treatment options available for people with mental illness to seek care locally. During a six-week period during the summer of 2019, formative research was conducted at the clinic to examine its patient population and gain a deeper understanding of the complex needs and unique cultural and religious constructs that mental health care clinicians face in this environment. In addition to conducting qualitative research during this period, trusting relationships were established with the local team which was essential in the elaboration of this dissertation project. By collaborating with the Haitian psychologists at SSMMP, researchers were not only able to have a site at which to perform the study, but they also had a group of local experts that could guide and inform the ongoing research throughout the investigations. This ensured correct interpretation of data, deepened understandings of complex local customs and concepts, and allowed for a true international research project. All three chapters were developed and conducted in concertation with local clinicians and researchers.

Commonalities and Linkages Between Chapters

The three chapters of this dissertation were intended to utilize different approaches and perspectives to assess mental health and psychological well-being of populations in this region of Haiti. In addition, there were many commonalities in these chapters in terms of theoretical frameworks, approaches, and results. For example, they all applied a "cells to society approach"

in which both contextual and individual factors were considered. While some chapters, such as Chapter 3, examined more large-scale factors such as society-level crises of peyi lòk and the coronavirus pandemic, and other chapters, such as Chapter 2, focused on more individual-level dynamics such as the perspectives and experiences of different Vodou priests, both chapters attempted to incorporate factors on both societal and individual levels into final analyses. Additionally, this dissertation was intended to be transdisciplinary in its approach, not solely limited to examining the problem from one specific disciplinary lens. For example, Chapter 2 examined the perspectives and experiences of Vodou priests from an anthropological lens while Chapter 4 looked at determinants of mental illness through social work and public health approaches. By utilizing different approaches from different disciplines, this project aimed to dissolve the boundaries between conventional disciplines so as to organize the research around the construction of meaning in the context of real-world problems and themes.

In terms of findings, there were many linkages between the three chapters of this dissertation. Starting with Chapter 2, we examined local traditional beliefs in depth and discovered Vodou explanatory models of mental illness that differ significantly with biomedical explanatory models broadly accepted in the West. In Chapter 3, we studied the impact of traumatic events through the lens of society-scale crises, which have significant impacts on both mental and physical health. And in Chapter 4, these factors came together in terms of our findings in relation to traditional beliefs (*sent spirits* and visits to Vodou priests for mental health treatment) and predictors of mental illness (traumatic events and physical health).

With regards to traditional beliefs, these findings provide important background describing the unique religio-cultural systems that influence belief in spirit-based mental illness etiology as well as care seeking behaviors among Haitians. The results of Chapter 2 in particular

highlight the magico-religious background of the Haitian spirit world and how locals view mental illness ultimately as a product of spirit possession. This also means understanding the construct of mental illness through the lens of medical versus supernatural illness, with mental illnesses often considered supernatural in origin. The findings in Chapter 3 touched on some of these beliefs as well describing coronavirus prevention through prayer as well as use of teas and other leaf-based traditional treatments. Finally, in Chapter 4, results showed that explanatory models of mental illness as conceived through the lens of *sent spirits* were embraced by the vast majority of patients. In addition, a large percentage of patients consulted Vodou priests prior to seeking biomedical care at SSMMP to treat their mental illness. These results therefore emphasize that taking fully into account local religious and culture understandings and conceptualizations is essential in a context such as Haiti, which has many distinct cultural differences when compared to other countries in North and South America.

The results of this dissertation also highlight the extreme suffering that many Haitians experience due to structural factors such as widespread violence, political gridlock, and poverty that have a strong relationships to traumatic experiences and poor physical health. As described in Chapter 3, Haiti is plagued by multiple crises simultaneously which impact the most vulnerable populations in terms of their traumatic experiences, physical health, and psychological well-being. Even more clearly, Chapter 4 highlights how these traumatic experiences and physical ill-health impact mental health directly, with increased rates of depression, anxiety, and low functional ability. In short, until structural factors that result in entrenched poverty, violence, and political and social chaos can be addressed, already high levels of trauma, and poor physical and mental health, will likely continue to rise.

Obstacles to Research

Despite the success of this research and the possibilities for future investigations in northern Haiti, there are significant hurdles that one encounters when conducting research and expanding mental health services in this setting. These barriers represent significant limitations to conducting rigorous, high quality research in Haiti. First, with few transportation options and poor quality of roads, moving around can be time-consuming, costly, and difficult. Particularly in rural areas, quality of transport is poor to nonexistent and represents a serious barrier for patients to come in for appointments or for mental health service providers to perform home visits in a cost-effective and timely manner.

Second, with low numbers of trained personnel, it is difficult to find mental health professionals with which to interview or collaborate. In Haiti in particular, the few mental health professionals with master's or doctorate degrees completed them in other countries – such as the United States, Canada, Cuba, Mexico, and France – as, within Haiti, the bachelor's degree is the highest degree awarded in psychology or social work (Nicolas et al., 2012). Additionally, there is no formal licensing board in the Haitian mental health system, nor are there any regulations (Nicolas et al, 2012). In this sense, no governing body exists to perform oversight or regulate practitioners or researchers. The quality of practice and research is therefore not subject to standards of any kind.

Lastly, ongoing social and political instability in Haiti prevents virtually any work from being completed. As the state lost control of several parts of the country over the course of 2019 during the unrest of peyi lòk, gangs have proliferated resulting in increased conflict and more extreme forms of violence as discussed in Chapter 3 (Pierre Louis, 2020). As police officers and other arms of the state have still not regained control of many zones around the country,

kidnapping has become rife, particularly in large cities. In Cap-Haïtien itself the government demolished an entire neighborhood of roughly one square mile near the city center in June 2020 due to inability of police services to evict violent gangs from the zone (Boko, 2020). The rubble was never cleared, giving the area an appearance of a warzone.

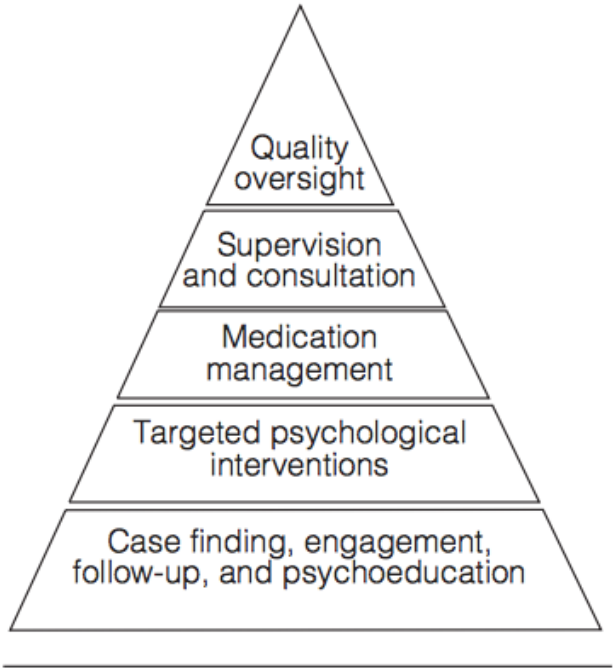
Until more stable institutions can ensure a minimum of stability, the country will continue to be afflicted by repeated crises and increasing violence. In 2021, kidnapping and political violence has remained widespread as the opposition calls for the president to resign in anticipation of elections to be held before the end of the year (Charles, 2021). While the coronavirus also resulted in the three month countrywide lockdown starting in March 2020, the impact of the virus compared to ongoing political and social violence in Haiti has been minimal (Etienne, 2020). In order to educate, train, and retain competent biomedical professionals such as psychologists and psychiatrists to serve in local communities, Haitian leaders will need to foster an environment with increased political, social, and economic stability.

Future Research and Mental Health Services

Moving forward, research in mental health in northern Haiti could promote several goals when looking to the future of mental health in the region. Firstly, more biomedical services to treat mental illness are needed, particularly ones that understand fully and serve the communities in which they are based. Recent scholarship has determined that there is broad international consensus about the need to train non-specialist health workers in low- and middle-income settings to diagnose and manage mental disorders, referred to as “task shifting” (Kagee, 2013; Van Ginneken, 2013). Northern Haiti is an ideal location to institute task shifting as a way to expand such services. Yet, it is difficult to ensure that task shifting improves mental health

service delivery, therefore significant training and support from specialists is required. Core groupings of skill sets essential for scaling up these services have been elaborated by one group of experts as seen in Figure 2 (Belkin et al., 2011). Although some research has studied how this expansion of services and training could be elaborated, additional investigation is needed (Galvin & Michel, 2020).

Figure 2. Five Core Skills Sets for Building Mental Health Care Pathways



Moreover, while SSMMP has three psychologists and could serve as a base for expanding these types of services, additional expertise would likely be necessary, either from other parts of Haiti or from abroad.

Next, there could be further research that promotes collaboration between traditional healers and biomedical practitioners in Haiti, and investigates new ways to promote partnerships. Currently, there are relatively high levels of mistrust and suspicion between the two groups, and

if biomedical services are going to take root there will need to be further collaboration with Vodou priests in particular. Part of the problem could be related to the specialist training received by many mental health professionals that puts them at odds with traditional healers and patients who use various explanatory models of health problems that are incompatible with biomedical psychiatry. In this sense, local biomedical practitioners should all be well-versed in local explanatory models, as well as the risks of over-medicalization of complex social and psychological problems in contexts such as rural Haiti. Future mental health care in this region would best be served by community-based psychosocial practitioners that can provide a corrective to the medicalizing and "biologizing" tendencies of modern psychiatry. However, it is also important for these practitioners to understand the dangers of certain traditional healing practices in rural Haiti that involve serious physical and psychological abuse of patients.

Thirdly, additional research can further examine the extent to which Haitians suffering from mental illness receive care from traditional healers such as Vodou priests. No existing studies have spoken with patients experiencing mental illness about the type of care and the quality of services that they received from traditional healers. Understanding treatment and healing approaches from the patient perspective could provide unique insights into the care that traditional healers in this context are currently providing. While this likely will involve stories of abuse, it may also reveal instances in which patients were helped by traditional healers in their community. By better understanding traditional healing in Haiti, biomedical practitioners can formulate culturally-adapted care that melds with local explanatory models. In terms of future research, this work on traditional beliefs and healing is the primary area that I would be most interested in pursuing in faculty researcher role.

Lastly, there could be additional research into how patients can be supported in northern Haiti, as currently there are no inpatient mental health services for patients who are in crisis or in need of inpatient care. Given the high levels of serious mental illness, it is important to get both local and national government, as well as international non-governmental organizations (NGOs) involved in the provision of inpatient care. Additionally, as many patients in this region with severe mental illness cannot currently afford outpatient care or their medications, other mechanisms of payment and service provision will need to be considered to ensure that all patients are able to receive the care they require. Increasing access to care in this way could have important implications for public mental health.

In conclusion, this dissertation's examination of mental illness in Haiti highlights the ways in which individuals plagued by mental illness are influenced primarily by the larger social, political, religious, and cultural forces that swirl in the world around them. My hope is that this research – and future research – will not only help SSMMP and other initiatives like it to further the important work they are doing to treat these individuals, but may also garner interest and support from others to build additional culturally-appropriate evidence-based biomedical treatment and support services for those suffering from mental illness in Haiti.

References

Abbo, C., Ekblad, S., Waako, P., Okello, E., Muhwezi, W., & Musisi, S. (2008). Psychological distress and associated factors among the attendees of traditional healing practices in Jinja and Iganga districts, Eastern Uganda: a cross-sectional study. *International Journal of Mental Health Systems*, *2*(1), 16.

Abbo, C., Okello, E. S., Musisi, S., Waako, P., & Ekblad, S. (2012). Naturalistic outcome of treatment of psychosis by traditional healers in Jinja and Iganga districts, Eastern Uganda–a 3-and 6 months follow up. *International journal of mental health systems*, *6*(1), 13.

Addlakha, R. (2008). *Deconstructing mental illness: An ethnography of psychiatry, women, and the family*. Zubaan.

Afram Plains: Residents Search for Hair in Bible to Prevent Coronavirus. (2020). Retrieved from https://www.ghanaweb.com/GhanaHomePage/entertainment/Afram-Plains-Residents-search-for-hair-in-Bible-to-prevent-coronavirus-905668

Akol, A., Moland, K. M., Babirye, J. N., & Engebretsen, I. M. S. (2018). "We are like co-wives": Traditional healers' views on collaborating with the formal Child and Adolescent Mental Health System in Uganda. *BMC health services research*, *18*(1), 258.

Ainsworth, K. S. (2013). *Sacred devotion or shameless promotion?: Modern Voodoo in New Orleans* (Doctoral dissertation).

Albert, Hadson Archange. 2019. Dépression, Suicides… Les Troubles Mentaux Tuent en Haïti. *Ayibo Post*. Retrieved from https://ayibopost.com/depression-suicides-les-troubles-mentaux-tuent-silencieusement-en-haiti/

American Psychiatric Association, 2013. *Diagnostic and Statistical Manual.* 5th Edition (DSM

5).

APA (American Psychiatric Association). (2020). Retrieved from https://www.psychiatry.org/psychiatrists/practice/dsm

Aristide, Jean-Bertrand. (2011). "Haïti-Haitii: Pwezi filosofik pou dekolonizasyon mantal"

Auguste, E., & Rasmussen, A. (2019). Vodou's role in Haitian mental health. *Global Mental Health*, *6*.

Barthélemy, G. (1991). *L'univers rural haïtien le pays en dehors*. Editions L'Harmattan.

Bartoll, X., Palència, L., Malmusi, D., Suhrcke, M., & Borrell, C. (2014). The evolution of mental health in Spain during the economic crisis. *The European Journal of Public Health*, *24*(3), 415-418.

Béchacq, D. (2004). Commerce, pouvoir et compétences dans le vaudou haïtien.

Beck, A.T., Steer, R.A., Brown, G.K. (1996). *Manual for Beck Depression Inventory II (BDI-II)* San Antonio, TX: Psychology Corporation

Beckett, G. (2020). Unlivable Life: Ordinary Disaster and the Atmosphere of Crisis in Haiti. *Small Axe: A Caribbean Journal of Criticism*, *24*(2 (62)), 78-95.

Belik, S. L., Cox, B. J., Stein, M. B., Asmundson, G. J., & Sareen, J. (2007). Traumatic events and suicidal behavior: Results from a national mental health survey. *The Journal of nervous and mental disease*, *195*(4), 342-349.

Belkin, G. S., Unutzer, J., Kessler, R. C., Verdeli, H., Raviola, G. J., Sachs, K., . . . Eustache, E. (2011). Scaling up for the "bottom billion": "5 x 5" implementation of community mental health care in low-income regions. *Psychiatric Services (Washington, D.C.), 62*(12), 1494-1502. doi:10.1176/appi.ps.000012011 [doi]

Benoist, J. (1996). *Soigner au pluriel: essais sur le pluralisme médical*. Paris: Karthala.

Bernard, J. M., & Desormeaux, J. (1996). Culture, santé, sexualité à Cité Soleil.

Bhargava, R., & Gupta, N. (2020). Social unrest and its impact on mental health. *Indian Journal of Social Psychiatry*, *36*(1), 3.

Bibb, A., & Casimir, G. J. (1996). Haitian families.

Bijl, R. V., de Graaf, R., Hiripi, E., Kessler, R. C., Kohn, R., Offord, D. R., ... & Wittchen, H. U. (2003). The prevalence of treated and untreated mental disorders in five countries. *Health affairs*, *22*(3), 122-133.

Bijoux, L. (2010). Évolution des conceptions et de l'intervention en santé mentale en Haïti. *Revue haïtienne de santé mentale*, *1*, 83-90.

Bilham, R. (2010). Lessons from the Haiti earthquake. *Nature*, *463*(7283), 878-879.

Blanc, J., Rahill, G. J., Laconi, S., & Mouchenik, Y. (2016). Religious beliefs, PTSD, depression and resilience in survivors of the 2010 Haiti earthquake. *Journal of affective disorders*, *190*, 697-703.

Boko, Hermann. (2020). En Haïti, un bidonville totalement rasé après des affrontements entre gangs. *France 24*. Retrieved from https://observers.france24.com/fr/20200625-haiti-bidonville-totalement-rase-apres-affrontements-entre-gangs

Bolton, P., & Tang, A. M. (2002). An alternative approach to cross-cultural function assessment. *Social psychiatry and psychiatric epidemiology*, *37*(11), 537-543.

Bolton, P., Surkan, P. J., Gray, A. E., & Desmousseaux, M. (2012). The mental health and psychosocial effects of organized violence: A qualitative study in northern Haiti. *Transcultural psychiatry*, *49*(3-4), 590-612.

Boyd, K., Legha, R., Raviola, G., Eustache, E., Therosme, T., Reginald, F., . . . Verdeli, H.

(2015). Taskshifting: Translating theory into practice to build a community based mental health care system in rural Haiti. *Intervention (15718883), 13*(3), 248-267. Retrieved from http://libproxy.wustl.edu/login?url=http://search.ebscohost.com.libproxy.wustl.edu/login.aspx?direct=true&db=a9h&AN=111021366&site=ehost-live&scope=site

Brewis, Wutich, Galvin & Lachaud (2020). Risk Environments and Syndemic Suffering in Haiti: A Comparison of Three Communities. *Social Science and Medicine.*

Burns, J. K., & Tomita, A. (2015). Traditional and religious healers in the pathway to care for people with mental disorders in Africa: a systematic review and meta-analysis. *Social psychiatry and psychiatric epidemiology*, *50*(6), 867-877.

Cadichon, J. M., Lignier, B., Cénat, J. M., & Derivois, D. (2017). Symptoms of PTSD among adolescents and young adult survivors six years after the 2010 Haiti earthquake. *Journal of loss and trauma*, *22*(8), 646-659.

Cadichon, J. (2019) "Narrations du Sensible: Récits post-traumatiques de survivants du séisme du 12 janvier 2010 en Haïti". Editions de l'Université d'Etat d'Haïti

Carrazana, E., DeToledo, J., Tatum, W., Rivas-Vasquez, R., Rey, G., & Wheeler, S. (1999). Epilepsy and religious experiences: voodoo possession. *Epilepsia*, *40*(2), 239-241.

CDC (2014). Cholera in Haiti. Centers for Disease Control and Prevention. Retrieved from https://www.cdc.gov/cholera/haiti/index.html

Cénat, J. M. (2020). The vulnerability of low-and middle-income countries facing the COVID-19 pandemic: The case of Haiti. *Travel medicine and infectious disease*.

Charles, J. (2020). "Haiti declares early victory over coronavirus, plans to reopen factories." *Miami Herald.* Retrieved 18 April 2020.

Charles, J. (2021). "Haiti civic leaders and former US diplomat to House Foreign Affairs: 'Haiti

is a Mess.'" *Miami Herald*. Retrieved 14 March 2021.

CIA. (2020). The World Factbook. Retrieved from https://www.cia.gov/library/publications/resources/the-world-factbook/fields/343.html

Clérismé, C., Antoine, J. R., & Lyberal, J. (2003). Etude sur la situation de la médecine traditionelle en Haiti. *Pan-American Health Organisation*.

Crawford, T. A., & Lipsedge, M. (2004). Seeking help for psychological distress: The interface of Zulu traditional healing and Western biomedicine. *Mental Health, Religion & Culture*, *7*(2), 131-148.

Das, J., Do, Q. T., Friedman, J., McKenzie, D., & Scott, K. (2007). Mental health and poverty in developing countries: Revisiting the relationship. *Social science & medicine*, *65*(3), 467-480.

Davis, W. (1988). *Passage of darkness: The ethnobiology of the Haitian zombie*. Univ of North Carolina Press.

Delbeau, J. C. (1990). *Société, culture et médecine populaire traditionnelle: étude sur le terrain d'un cas, Haïti*. Impr. Deschamps.

Deren, M. (1953). Divine Horsemen: The Living Gods of Haiti. 1953. *Kingston, NY: McPherson*.

Desrosiers, A., & St. Fleurose, S. (2002). Treating Haitian patients: Key Cultural Aspects. *American Journal of Psychotherapy* 56(4): 508– 521.

Etienne, C. (2006). French in Haiti. *History, Society and Variation: In Honor of Albert Valdman*, *28*, 179.

Etienne, W. (2020). Haïti face à la gestion de la pandémie du COVID-19: contraintes, stratégies et conséquences.

Eustache, E., Gerbasi, M. E., Smith Fawzi, M. C., Fils-Aimé, J. R., Severe, J., Raviola, G. J., ... & Becker, A. E. (2017). High burden of mental illness and low utilization of care among school-going youth in Central Haiti: A window into the youth mental health treatment gap in a low-income country. *International Journal of Social Psychiatry*, *63*(3), 261-274.

Falen, D. J. (2018). *African science: Witchcraft, vodun, and healing in Southern Benin*. University of Wisconsin Press.

Farmer, P. (1990). Sending Sickness: Sorcery, Politics, and Changing Concepts of AIDS in Rural Haiti. *Medical Anthropology Quarterly,* 4(1): 6–27.

Farmer, P., Bourgois, P., Fassin, D., Green, L., Heggenhougen, H. K., Kirmayer, L., ... &

Farmer, P. (2004). An anthropology of structural violence. *Current anthropology*, *45*(3), 305-325.

Fils-Aimé, J. R. (2016). Recovery from psychosis in rural Haiti: A qualitative study of lived experience. Doctoral Dissertation.

Flisher, A. J., Lund, C., Funk, M., Banda, M., Bhana, A., Doku, V., ... & Petersen, I. (2007). Mental health policy development and implementation in four African countries. *Journal of health psychology*, *12*(3), 505-516.

Foerschner, A. M. (2010). The History of Mental Illness: From" Skull Drills" to" Happy Pills". *Inquiries Journal*, *2*(09).

Foucault, M. (1961). *Madness and civilization*. Routledge.

Galvin, M. (2020). Effective Treatment Interventions for Global Mental Health: An Analysis of Biomedical and Psychosocial Approaches in Use Today. *Psychology and Mental Health Care.* doi: 10.31579/2637-8892/076

Galvin, M., & Michel, G. (2020). A Haitian-led mental health treatment center in Northern Haiti:

the first step in expanding mental health services throughout the region. *Mental Health, Religion & Culture*, *23*(2), 127-138.

Galvin, M., Chapnick, M., Antenor, L., Joseph, D., Dulience, B., Jean Louis, S., Iannotti, L. (2020). Transnational Educational Partnerships: Achieving Public Health Impact Through Cross-Cultural Pedagogical Approaches in Haiti. *International Journal of Health Promotion and Education.* doi: 10.1080/14635240.2020.1843187

Germain, Enomy. (2019). "Pourquoi Haïti Peut Réussir."

Giafferi, N. (2003). *Couleur et rang dans la Caraïbe: une ethnologue face aux discours et aux luttes du classement socio-racial dans la ville de Port-au-Prince (Haïti)* (Doctoral dissertation, Aix-Marseille 3).

Glaser B. G., & Strauss, A. L. (1967). The discovery of grounded theory: Strategies for qualitative research. Hawthorne, NY: Aldine.

Graeber, D. (2007). Lost People: Magic and the Legacy of Slavery in Madagascar. Indiana University Press.

Graeber, D. (2011). *Debt: The first five thousand years*. New York: Melville House.

Gray, A. E. L. (2008). Dancing in our blood. Dance/movement therapy with street children and victims of organized violence in Haiti. *Dance, human rights and social justice: Dignity in motion*, 222-236.

Greene, J. C. (2008). Is mixed methods social inquiry a distinctive methodology?. *Journal of mixed methods research*, *2*(1), 7-22.

Guest, G., Bunce, A., & Johnson, L. (2006). How many interviews are enough? An experiment with data saturation and variability. *Field methods*, *18*(1), 59-82.

Gureje, O., Nortje, G., Makanjuola, V., Oladeji, B. D., Seedat, S., & Jenkins, R. (2015). The role

of global traditional and complementary systems of medicine in the treatment of mental health disorders. *The Lancet Psychiatry*, *2*(2), 168-177.

Hagaman, A. K., Wagenaar, B. H., McLean, K. E., Kaiser, B. N., Winskell, K., & Kohrt, B. A. (2013). Suicide in rural Haiti: Clinical and community perceptions of prevalence, etiology, and prevention. *Social Science & Medicine*, *83*, 61-69.

Henrys, J. H. (2020). Haïti: d'une pandémie à l'autre, du choléra au Covid-19. *HAÏTI ET LE COVID-19*.

Hoffmann, L. F. (1990). *Haïti: couleurs, croyances, créole* (p. 203). Editions H. Deschamps.

Hurbon, Laënnec (1987). Dieu dans le vaudou haïtien. *Paris, Payot*.Merlo, C. (1973). Kerboull (Jean): Une enquête sur le vodou domestique en Haïti. *Outre-Mers. Revue d'histoire*, *60*(218), 131-132.

Huxley, F. (1969). *The Invisibles: Voodoo Gods in Haiti*. McGraw-Hill.

IESM-OMS. (2011). *Rapport sur Le Système de Santé Mentale en Haïti [Report on the system of mental health in Haiti].* Rapport d'évaluation du système de Santé mentale en Haïti à l'aide de l'instrument d'évaluation conçu par l'Organisation Mondiale de la Santé Mentale (OMS) pour les systems de Santé Mentale (IESM-OMS). World Health Organization.

Jaimes, A., Lecomte, Y., & Raphael, F. (2008). Haïti-Québec-Canada: Towards a partnership in mental health. In *Online symposium summary: www. haitisantementale. ca*.

James, L. E., Welton-Mitchell, C., Noel, J. R., & James, A. S. (2020). Integrating mental health and disaster preparedness in intervention: a randomized controlled trial with earthquake and flood-affected communities in Haiti. *Psychological medicine*, *50*(2), 342-352.

Jean, Fritz Alphonse. (2019). "Haïti Une Economie de Violence: Instabilité Politique et

Violence Economique."

Jean-Charles, W. (2017). *Santé mentale & psychothérapie en Haïti: Approches intégratives & traitements multimodaux [Mental health & psychotherapy in Haiti: Integrative approaches & multimodal treatments]*. Centre de Spiritualité et de Santé Mentale.

Jean-Jacques, R. (2019). Les représentations de la maladie mentale en Haïti. *Revue haïtienne de la santé mentale,* 9.

JHU (Johns Hopkins University Coronavirus Resource Center). (2020). Retrieved from https://coronavirus.jhu.edu/map.html

Kagee, A., Tsai, A. C., Lund, C., & Tomlinson, M. (2013). Screening for common mental disorders in low resource settings: reasons for caution and a way forward. *International health*, *5*(1), 11-14.

Kaiser, B. N., Kohrt, B. A., Keys, H. M., Khoury, N. M., & Brewster, A. R. T. (2013). Strategies for assessing mental health in Haiti: Local instrument development and transcultural translation. *Transcultural Psychiatry*, *50*(4), 532-558.

Kaiser, B. N., Kohrt, B. A., Wagenaar, B. H., Kramer, M. R., McLean, K. E., Hagaman, A. K., ... & Keys, H. M. (2015). Scale properties of the Kreyòl Distress Idioms (KDI) screener: association of an ethnographically-developed instrument with depression, anxiety, and sociocultural risk factors in rural Haiti. *International Journal of Culture and Mental Health*, *8*(4), 341-358.

Kaiser, B. N., & Fils-Aimé, J. R. (2019). Sent Spirits, Meaning-Making, and Agency in Haiti. *Ethos*, *47*(3), 367-386.

Kajawu, L., Chingarande, S. D., Jack, H., Ward, C., & Taylor, T. (2016). What do African

traditional medical practitioners do in the treatment of mental disorders in Zimbabwe?. *International Journal of Culture and Mental Health*, *9*(1), 44-55.

Khoury, N. M., Kaiser, B. N., Keys, H. M., Brewster, A. R. T., & Kohrt, B. A. (2012). Explanatory models and mental health treatment: is vodou an obstacle to psychiatric treatment in rural Haiti?. *Culture, Medicine, and Psychiatry*, *36*(3), 514-534.

Kieling, C., Baker-Henningham, H., Belfer, M., Conti, G., Ertem, I., Omigbodun, O., ... & Rahman, A. (2011). Child and adolescent mental health worldwide: evidence for action. *The Lancet*, *378*(9801), 1515-1525.

Kiev, A. (1962). Psychotherapy in Haitian voodoo. *American journal of psychotherapy*, *16*(3), 469-476.

Kleinman, Arthur. (1978). Culture, Illness, and Care: Clinical Lessons from Anthropologic and Cross-Cultural Research. *Annals of Internal Medicine*, 88, 251-258.

Kline, N. S., & Mars, L. (1960). The Haiti Psychiatric Institute: Centre de Psychiatrie. *Psychiatry in the Underdeveloped Countries. Washington, DC: American Psychiatric Association*, 48-51.

Kohrt, B. A., & Mendenhall, E. (Eds.). (2016). *Global mental health: anthropological perspectives* (Vol. 2). Routledge.

Kolbe, A. R., & Hutson, R. A. (2006). Human rights abuse and other criminal violations in Port-au-Prince, Haiti: a random survey of households. *The Lancet*, *368*(9538), 864-873.

Kolbe, A. R., Hutson, R. A., Shannon, H., Trzcinski, E., Miles, B., Levitz, N., ... & Muggah, R. (2010). Mortality, crime and access to basic needs before and after the Haiti earthquake: a random survey of Port-au-Prince households. *Medicine, conflict and survival*, *26*(4), 281-297.

Kolbe, A. R. (2013). Revisiting Haiti's gangs and organized violence. *HASOW, Rio de Janeiro*.

Lai, B. S., Osborne, M. C., De Veauuse-Brown, N., Swedo, E., Self-Brown, S., & Massetti, G. M. (2020). Violence victimization and negative health correlates of youth in post-earthquake Haiti: findings from the cross-sectional violence against children survey. *Journal of affective disorders*.

Lalime, T. (2010). Croissance économique et instabilité politique en Haïti (1970-2008).

Legha, R. K., Gerbasi, M. E., Fawzi, M. C. S., Eustache, E., Therosme, T., Fils-Aime, J. R., ... & Severe, J. (2020). A validation study of the Zanmi Lasante depression symptom inventory (ZLDSI) in a school-based study population of transitional age youth in Haiti. *Conflict and Health*, *14*(1), 1-9.

Lemay-Hébert, N. (2014). Resistance in the time of cholera: The limits of stabilization through securitization in Haiti. *International Peacekeeping*, *21*(2), 198-213.

León, R. (1933). Le service d'higiène et dássistence publique en Haiti. *Boletín de la Oficina Sanitaria Panamericana (OSP); 12 (11), nov. 1933*.

Logie, C. H., Daniel, C., Ahmed, U., & Lash, R. (2017). 'Life under the tent is not safe, especially for young women': understanding intersectional violence among internally displaced youth in Leogane, Haiti. *Global health action*, *10*(sup2), 1270816.

Louis, B. M. (2011). Haitian Protestant views of Vodou and the importance of Karactè within a transnational social field. *Journal of Haitian Studies*, 211-227.

Louis-Jean, J., Cenat, K., Sanon, D., & Stvil, R. (2020). Coronavirus (COVID-19) in Haiti: A Call for Action. *Journal of Community Health*, 1-3.

Lund, C., Tomlinson, M., De Silva, M., Fekadu, A., Shidhaye, R., Jordans, M., ... & Patel, V.

(2012). PRIME: a programme to reduce the treatment gap for mental disorders in five low-and middle-income countries. *PLoS Med*, *9*(12), e1001359.

Mars, L. (1953). Nouvelle contribution à l'étude de la crise de possession. *Mémoires de l'Institut Français d'Afrique Noire*, *27*, 213-233.

Martsolf, D. (2004). Childhood maltreatment and mental and physical health in Haitian adults. *Journal of Nursing Scholarship*, *36*(4), 293-299.

Mena, A. I. P. (1998). Cuban Santeria, Haitian vodun, Puerto Rican spiritualism: A multiculturalist inquiry into syncretism. *Journal for the scientific study of religion*, 15-27.

Méance, G., Sutherland, P., Moodley, R., & Chevannes, B. (2014). Vodou healing and psychotherapy. *Caribbean healing traditions. Implications for health and mental health*, 78-88.

Métraux, A. (1958). Le vaudou haïtien. *Gallimard,* Paris.

Meudec, M. (2007). *Le kout poud: maladie, vodou et gestion des conflits en Haïti*. Editions L'Harmattan.

Michel, G. (2019). Bak Lakay. Port-au-Prince.

Mullet, A., & Thomas, F. (2020). Demonstrations, corruption, paralysis… Ten years after the earthquake of January 12, 2010, Haiti lives in a state of permanent crisis–Centre tricontinental.

Ngoma, M. C., Prince, M., & Mann, A. (2003). Common mental disorders among those attending primary health clinics and traditional healers in urban Tanzania. *The British Journal of Psychiatry*, *183*(4), 349-355.

Nicolas, G., Jean-Jacques, R., & Wheatley, A. (2012). Mental health counseling in Haiti:

Historical overview, current status, and plans for the future. *Journal of Black Psychology, 38*(4), 509-519. doi:10.1177/0095798412443162

Nortje, G., Oladeji, B., Gureje, O., & Seedat, S. (2016). Effectiveness of traditional healers in treating mental disorders: a systematic review. *The Lancet Psychiatry*, *3*(2), 154-170.

O'Brien, L. S. (1998). *Traumatic events and mental health*. Cambridge University Press.

O'Hare, M., & Hardingham, T. (17 March 2020). "Coronavirus – Which countries have travel bans?" *CNN*.

Ohrnberger, J., Fichera, E., & Sutton, M. (2017). The relationship between physical and mental health: A mediation analysis. *Social Science & Medicine*, *195*, 42-49.

Okello, E., & Musisi, S. (2015). The role of traditional healers in mental health care in Africa. *The culture of mental illness and psychiatric practice in Africa*, 249-261.

OPS/OMS, M. (2012). Politique nationale de Sante.

Ortiz, I., & Cummins, M. (2012). When the global crisis and youth bulge collide: double the jobs trouble for youth. *Available at SSRN 2029794*.

Ovuga, E., Boardman, J., & Oluka, E. G. (1999). Traditional healers and mental illness in Uganda. *Psychiatric Bulletin*, *23*(5), 276-279.

PAHO (Pan American Health Organization). (2020). "PAHO Director calls on each country to analyze trends of the pandemic before relaxing social distancing measures." *Pan American Health Organization* Retrieved 7 May 2020.

Patel, V., Rodrigues, M., & DeSouza, N. (2002). Gender, poverty, and postnatal depression: a study of mothers in Goa, India. *American journal of Psychiatry*, *159*(1), 43-47.

Patel, V., Saraceno, B., & Kleinman, A. (2006). Beyond evidence: the moral case for international mental health.

Patel, V., Saxena, S., Lund, C., Thornicroft, G., Baingana, F., Bolton, P., ... & Herrman, H. (2018). The Lancet Commission on global mental health and sustainable development. *The Lancet*, *392*(10157), 1553-1598.

Perice, G. A. (1997). Rumors and politics in Haiti. *Anthropological Quarterly*, 1-10.

Philippe, J. (1975). *Classes sociales et maladies mentales en Haïti [Social class and mental illnesses in Haiti]*: Presses Nationales.

Philippe, J., & Romain, J. B. (1979). Indisposition in Haiti. *Social Science & Medicine. Part B: Medical Anthropology*, *13*(2), 129-133.

Pierre, A., Minn, P., Sterlin, C., Annoual, P., Jaimes, A., Raphaël, F., ... & Kirmayer, L. (2010). Culture et santé mentale en Haïti: une revue de littérature. *Santé mentale au Québec*, *35*(1), 13-47.

Pierre Louis, S. (2020). Voilà pourquoi Haïti compte autant de gangs [Why Haiti has so many gangs]. *Ayibo Post.* Retrieved from https://ayibopost.com/voila-pourquoi-haiti-compte-autant-de-gangs/?fbclid=IwAR39dWtRtNz NuK76RQfvZku8oyEP3lHLkUshxZp0u9ZXtY4dBtsA6Gd_BU

Pierre-Paul, Monano. (2019) “Peyi Nou Ka Chanje.”

Pincus, H. A., & England, M. J. (2015). Improving the quality of psychosocial interventions for mental and substance use disorders: a report from the IOM. *Jama*, *314*(12), 1227-1228.

Ramachandran, V., & Walz, J. (2015). Haiti: where has all the money gone?. *Journal of Haitian Studies*, *21*(1), 26-65.

Ramsey, K. (2011). *The spirits and the law: Vodou and power in Haiti*. University of Chicago Press.

Rasmussen, A., Eustache, E., Raviola, G., Kaiser, B., Grelotti, D. J., & Belkin, G. S. (2015).

Development and validation of a Haitian Creole screening instrument for depression. *Transcultural psychiatry*, *52*(1), 33-57.

Raviola, G., Rose, A., Fils-Aimé, J. R., Thérosmé, T., Affricot, E., Valentin, C., ... & Verdeli, H. (2020). Development of a comprehensive, sustained community mental health system in post-earthquake Haiti, 2010–2019. *Global Mental Health*, *7*.

Régulus, S. (2012). Transmission de la prêtrise vodou: devenir ougan ou manbo en Haïti.

Rouzier, V., Liautaud, B., & Deschamps, M. M. (2020). Facing the monster in Haiti. *New England Journal of Medicine*, *383*(1), e4.

Shultz, J. M., Marcelin, L. H., Madanes, S. B., Espinel, Z., & Neria, Y. (2011). The" Trauma Signature:" understanding the psychological consequences of the 2010 Haiti earthquake. *Prehospital and disaster medicine*, *26*(5), 353.

Silverman, D. (2005). Instances or sequences? Improving the state of the art of qualitative research. In *Forum Qualitative Sozialforschung/Forum: Qualitative Social Research* (Vol. 6, No. 3).

Singh, R. J., & Barton-Dock, M. (2015). *Haiti: Toward a new narrative*. World Bank.

Sletten, P., & Egset, W. (2004). *Poverty in Haiti* (Vol. 31). Oslo: Fafo.

Smith-Fawzi, M. C., Eustache, E., Oswald, C., Louis, E., Surkan, P. J., Scanlan, F., . . . Mukherjee, J. S. (2012). Psychosocial support intervention for HIV-affected families in Haiti: Implications for programs and policies for orphans and vulnerable children. *Social Science & Medicine, 74*(10), 1494-1503. doi:10.1016/j.socscimed.2012.01.022

Sterlin, C. (2006). Pour une approche interculturelle du concept de santé. *Ruptures, revue transdisciplinaire en santé,* 11(1): 112–121.

Thompson, C. E., & Atindanbila, S. (2011). The role of African traditional healers in the

management of mental challenges in Africa. *Journal of Emerging Trends in Educational Research and Policy Studies*, *2*(6), 457-464.

Tiberi, O. (2016). Mental health in Haiti: beyond disaster relief. *The Columbia Journal of Global Health*, *6*(1), 14-20.

Trani, J. F., & Bakhshi, P. (2017). A multidimensional approach to poverty: implications for global mental health. In *The Palgrave Handbook of Sociocultural Perspectives on Global Mental Health* (pp. 403-428). Palgrave Macmillan, London.

Tremblay, J. (1995). *Mères, pouvoir et santé en Haïti*. Karthala Editions.

Tremblay, J., Pedersen, D., & Errazuriz, C. (2009). Assessing mental health outcomes of political violence and civil unrest in Peru. *International journal of social psychiatry*, *55*(5), 449-463.

Umoren, U. E. (1990). Religion and traditional medicine: An anthropological case study of a Nigerian treatment of mental illness. *Medical Anthropology*, *12*(4), 389-400.

UN (United Nations). (2016). "New UN System Approach to Cholera in Haiti."

UNDP (United Nations Development Programme). (2018). Gross Domestic Product per Country around the Globe.

US Embassy (2020). COVID 19 Information. Retrieved from https://ht.usembassy.gov/covid-19-information/

Uutela, A. (2010). Economic crisis and mental health. *Current opinion in psychiatry*, *23*(2), 127-130.

Valdman, A. (1988). Ann pale kreyol: An Introductory Course in Haitian Creole. *Valdman*, *28*, 179.

Van Ginneken, N., Tharyan, P., Lewin, S., Rao, G. N., Meera, S. M., Pian, J., ... & Patel, V.

(2013). Non-specialist health worker interventions for the care of mental, neurological and substance-abuse disorders in low-and middle-income countries. *Cochrane database of systematic reviews*, (11).

Ventevogel, P. (2016). *Borderlands of mental health: explorations in medical anthropology, psychiatric epidemiology and health systems research in Afghanistan and Burundi*. Peter Ventevogel.

Verner, D. (2008). Making Poor Haitians Count-Poverty In Rural And Urban Haiti Based On The First Household Survey For Haiti. *World Bank Policy Research Working Paper*, (4571).

Volpato, G., Godínez, D., Beyra, A., & Barreto, A. (2009). Uses of medicinal plants by Haitian immigrants and their descendants in the Province of Camagüey, Cuba. *Journal of ethnobiology and ethnomedicine*, *5*(1), 16.

Vonarx, N. (2008). Vodou et pluralisme médico-religieux en Haïti: du vodou dans tous les espaces de soins. *Anthropologie et Sociétés*, *32*(3), 213-231.

Wagenaar, B. H., Hagaman, A. K., Kaiser, B. N., McLean, K. E., & Kohrt, B. A. (2012). Depression, suicidal ideation, and associated factors: a cross-sectional study in rural Haiti. *BMC psychiatry*, *12*(1), 149.

Wagenaar, B. H., Kohrt, B. A., Hagaman, A. K., McLean, K. E., & Kaiser, B. N. (2013). Determinants of care seeking for mental health problems in rural Haiti: culture, cost, or competency. *Psychiatric Services*, *64*(4), 366-372.

Wampold, B. E. (2001). Contextualizing psychotherapy as a healing practice: Culture, history, and methods. *Applied and Preventive Psychology*, *10*(2), 69-86.

Watters, E. (2010). *Crazy like us: The globalization of the American psyche*. Simon and

Schuster.

Weniger, B., Rouzier, M., Daguilh, R., Foucaud, J., Robineau, L., & Anton, R. (1986a). La medecine populaire dans le Plateau Central D'Haiti. 1 etude du systeme therapeutique traditionnel dans un cadre socio-culturel rural. *Journal of ethnopharmacology*, *17*(1), 1-11.

Weniger, B., Rouzier, M., Daguilh, R., Henrys, D., Henrys, J. H., & Anton, R. (1986b). La medecine populaire dans le plateau central d'Haiti. 2 Inventaire ethnopharmacologique. *Journal of Ethnopharmacology*, *17*(1), 13-30.

Willman, A., & Marcelin, L. H. (2010). "If they could make us disappear, they would!" Youth and Violence in Cite Soleil, Haiti. *Journal of community psychology*, *38*(4), 515-531.

WHO, 2004. *International Classification of Disease.* 10th Edition (ICD 10).