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History of Psychiatry in the Dominican Republic

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Abstract: *Objective*: To trace the history of psychiatry in the Dominican Republic.

Method: Historical accounts are reviewed from the archival history of the DR.

Results: The part of the island of Hispaniola which would one day become the Dominican Republic was the site of the first European settlement in the American continent, yet for more than three and a half centuries it was forgotten and neglected by its European colonial masters. Organized mental health care began in this newly independent republic at the end of the nineteenth century, but it later underwent a period of paralysis that began to change after the arrival of the first trained psychiatrists in the 1940s. The decade of the 1970s fostered great progress with development of a community mental health infrastructure and the creation of the first psychiatry residency training programs.

Conclusions: Although much progress has been made, to this date, there is no formal training in child and adolescent psychiatry or other any of the other psychiatric subspecialties. New economic prosperity and globalization offer great hopes for the improvement of mental health care for the Dominican population.

Keywords: History, psychiatry, Dominican Republic.

SOME GENERAL FACTS ABOUT THE DOMINICAN REPUBLIC

The Dominican Republic is located in the eastern two thirds of the island of Hispaniola, which it shares with Haiti. It's the second largest Caribbean nation after Cuba, with 18,704 square miles, and has an estimated population of ten million. It was visited by Columbus during his first voyage in 1492 and was the site of the first European settlement in the American continent. The capital of Santo Domingo served as the earliest headquarters for Spanish colonization of the Americas. The country gained independence from Spain in 1821 and was soon invaded by Haiti, from which it became independent in 1844. The official language is Spanish, the majority of the population is mulatto (mixed African and European), and the official religion is Catholicism. After a very bloody and turbulent history, The Dominican Republic has been able to secure uninterrupted democratic elections since 1966 and is now considered an example of democracy and free speech in Latin America. The Dominican Republic has the 9th largest economy in Latin America in the second in the Caribbean with a gross domestic product (GDP) growth rate of 4.5% in 2011. The island had a traditionally agricultural economy and possesses mineral deposits of gold, bauxite, silver and ferronickel. Tourism has developed rapidly in the past three decades and now accounts for 67% of the GDP. The median age of the population is 26, the average life expectancy is 77 years and the hospital bed density is 1/1000. There are an estimated 57,000 people living with HIV/AIDS, making the country 51st in the world in this category (C.I.A World Factbook, 2011). This problem has worsened as a result of the growing tourism industry (Padilla, 2007; Rojas *et al*., 2011). Even though the country is categorized in the lower-middle income group by the World Bank, the proportion of the health budget to GDP is 1.4, one of the lowest in the region, and only 1% of the health budget is allocated for mental health. In spite of these realities, there has been great progress in the provision of mental health services to the Dominican population in the last three decades. A National Ten-Year Health Plan (2006-2015). Will focus on the future integration of mental health services into primary care (WHO-AIMS, 2008).

MENTAL HEALTH CARE

Mental Health during the Spanish Colonization (1492-1822)

In 1492, when the first Europeans arrived, the island of Hispaniola was populated by the Taino Indians, who descended from the Arawaks of the Orinoco River Basin in South America. Soon after their arrival, the Spaniards enslaved the Native inhabitants and forced them into brutal physical labor, mining gold and constructing stone fortresses and settlements. The ruthlessness of the Spanish colonization and the lack of immunity to new diseases were so devastating that only 25 years after the arrival of the Spaniards, less than 25% of the Indian population survived and only a century later, the Tainos had disappeared completely (Serna Moreno, 2010). The early colonial history of the island is replete with accounts of Indian rebellions, followed by retaliations in the form of mass assassinations of the native inhabitants by the Spanish troops. It is well documented that the native Taino Indians committed acts of mass suicide, including the poisoning of their young children in order to avoid the abusive conditions imposed by the Spaniards.

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These conditions later extended to the African slaves, who began arriving at the island in 1503. In 1697 the western third of the island was ceded to France under the *Treaty of Ryswick* (Moya Pons, 1995).

The French colony, located in the western, more mountainous third of the island became known as *Saint Domingue* and when it became independent from the French, it took back the Taino Indian name of *Haiti* (High-Land). The eastern side of Hispaniola remained under Spanish colonial rule, with the name of *Santo Domingo* and the economy diversified to include tobacco and cattle. Cattle farming lent itself to a more egalitarian social order, and in contrast with Haiti's racially segregated society, the descendants of Africans and Spaniards in Santo Domingo mixed the races forming a majority Mulatto population. In Haiti, the African slaves rebelled, slaughtering their French colonial rulers and declaring the first independent black republic in the world in 1804. The Spanish side of Hispaniola declared independence from Spain in 1822, but they were overrun by the Haitian army a month later, followed by a military occupation and "annexation" that lasted until 1844, at which time the Mulatto inhabitants of Santo Domingo organized an army and repelled the Haitians, proclaiming the new, independent, Dominican Republic (Moya Pons, 1995).

In Spain, the Catholic Friar Juan Giliberto Joffre founded one of the first European insane asylums in the year 1404. This facility, *Hospital para Inocentes, Bobos y Orates,* (the Hospital for Innocents, Fools and the Deranged) was the first psychiatric hospital in the world to use a medical model to treat the mentally ill (Barcia, 1996). Unfortunately, none of these developments reached the colony of Santo Domingo, which after the 1600's was severely impoverished and neglected by Spain. During the Spanish colonial period, mentally ill patients were housed in general hospitals and often restrained by pillories, or chained and secluded in cells. They were cared for by members of the various religious orders that existed on the island, who sheltered them from the abuse they would suffer in the streets and at the same time, protected the population from the more aggressive mentally ill patients (Sanchez Martinez, 2006).

The Mentally Ill in the New Independent Dominican Republic (1844-1881)

The only institutionalized care for the mentally ill that existed during this period of Dominican history took place in the capital city of Santo Domingo, where the Military Hospital had two cells devoted to the care of psychiatric patients. In the countryside and in the smaller towns around the island, mentally ill relatives of the well-to-do families were confined to the private homes and farms. The indigent mentally-ill roamed around homeless, or were confined to the community jails (Moscoso Puello, 1983, p. 31).

Father Francisco Xavier Billini: The Founder of the First Insane Asylum (1881)

Francisco Xavier Billini (1837-1896) was born in the city of Santo Domingo to a Cuban mother and an Italian father in the midst of the Haitian occupation of the Dominican Republic. Billini recognized the urgent need to deal with the growing mental health needs of the traumatized population of the Dominican Republic, which in the XIX Century had endured multiple invasions, wars and ongoing political strife. Father Billini wrote in *La Cronica* (The Chronicle), one of the two newspapers which he founded: "The sadness of the present, the uncertainty of the future and the terrible agitations of political life have harmed many brains," adding, "an asylum for the insane is one of the most pressing needs of the Republic in general" (1882). He also brought attention to the increasing rates of alcoholism (1888, Nov. 3) and to the increasing number of suicides that were observed in the general population during this time (1888, August 14). In addition to the wars and political turbulence that affected the Dominican Republic in the XIX century, the population suffered from a sense of confusion and dislocation due to the rapid change from a small agricultural society that had survived through two and a half centuries of virtual neglect and isolation by Spain, to a rapidly industrializing agricultural capitalistic nation, with many new immigrants. This created a sense of anomie and alienation in the population, who suffered a rupture with the familiar values and traditions of a more simple and predictable past (Hoetink, 1992).

Father Billini campaigned intensely, struggling against the social stigma and indifference that existed in the general population with regards to the mentally ill. His tireless efforts finally convinced the then president, Francisco Arturo de Merino, to sign a presidential decree on November 21st. 1881 assigning a budget of $20,000 (Dominican Pesos) for the construction of an insane asylum. The government gave Billini permission to restore the ruins of the old Franciscan Monastery, to be used as the insane asylum. This grand structure was located on top of a hill overlooking the city and was built in 1508 by the Spanish governor, Nicolas de Ovando. It was the first monastery of the American continent, but by that time it had been destroyed by the many wars and invasions, including a raid conducted by the troops of the pirate Francis Drake. On May 25, 1882, restoration work of the monastery began, and on December 30, 1885 the first insane asylum was inaugurated on the island (Sanchez Martinez, 2006). The opening of the *Asilo de Dementes* (Asylum for the Demented) filled a great vacuum in the new nation and within its first weeks of operation, 80% of the patient admissions consisted of referrals from small towns and the distant rural areas. The patients were classified into four categories*: los mansos* (the meek), *los arrebatados* (the enraptured—who were agitated and aggressive), *aquellos cuya enfermedad es el alcohol* (those whose illness was liquor) and *los curados* (the cured).

The role of the asylum was to protect the mentally ill from the mistreatment, neglect and abuse they were likely to suffer if they were left in the streets and to isolate these patients from society. However, the first trained psychiatrists would not arrive in the Dominican Republic until 1939, and the physician's responsibility was mainly to attend the medical needs of the psychiatric patients. The everyday operation of the asylum and the care of the patients fell in the hands of a few dedicated and able Catholic nuns. In the latter part of the XIX century, access to modern medicine was still not available in many of the small towns and rural areas around the island and the population relied on folk medicine and folk-healers, who utilized a variety of herbal preparations to treat disease.

The Arrival of the XX Century and the First American Occupation (1916-1924)

On May 15 1916, American President Woodrow Wilson ordered U.S. Marines to land in Dominican soil and a military government was established. Although unpopular and rejected by many Dominicans, the American occupation made important contributions to the medical care of the population, which included the maintenance of patient clinical records in all the hospitals, the organization of the public health system into a cohesive government-run entity, and the introduction of many American pharmaceutical products, including sedative-hypnotics, which had not been available before. The American government of occupation also improved the conditions in the insane asylum. It greatly expanded and modernized the old facility, which was still located on the ruins of the old Franciscan convent. A new wing was added, eliminating the old jail-like holding cells and cages, which were regarded as a sanitary disaster, and a new kitchen was built. The staff was reorganized and new beds and sheets were introduced, the medical supplies were restocked, and the water system was modernized. In 1919, the hospital had a census of 74 patients, of which 32 were male and 42 were female. The American military government also passed a decree in 1920 prohibiting the unauthorized discharge, expulsion or neglect of any patient residing in any hospital, shelter, insane asylum or orphanage, declaring this as an offense punishable by law (Sanchez Martinez, 2006). Four years into the American occupation a newspaper article described the newly restored insane asylum, which sat atop a hill overlooking the city as, "a tranquil destination, fresh, well-aired, with a magnificent ocean view; a paradise for rest and quietude, the noble and charitable purpose for which it has been destined" (La Cronica, 1920). Another fortuitous contribution of the American occupation of the Dominican Republic would prove to be the construction of the American Military Jail in 1917, located approximately 25 miles west of the capital of Santo Domingo. Its original purpose was to punish the U.S. Marines who committed abuses, such as rape, against members of the local population, yet in later years it would go on to play an important role in the birth of psychiatry in the Dominican Republic (Romero, 2005; Sanchez Martinez, 2006).

Psychiatry During the Trujillo Dictatorship (1930-1961)

After the departure of the American troops in 1924, the Dominican national infrastructure and agricultural production improved markedly. The small country began functioning more efficiently and became a trading partner, under the political and economic influence of the United States. The Americans left a democratically elected president, Horacio Vazquez, who was defeated in a re-election bid by General Rafael Leonidas Trujillo, the head of the Armed Forces. Trujillo had been trained and educated by the U.S. Marines during the American occupation and was seen very favorably by the United States as a disciplinarian and straight-shooter, who could rule the previously chaotic country by maintaining a much needed climate of law and order. Dominicans embraced their new president enthusiastically, appreciating the stability and efficiency that characterized his governing style. Unfortunately, Trujillo would later go on to become one of the most cruel and bloody Latin American dictators of the Twentieth Century. The abuse that was committed during his dictatorship caused deep psychological scars to the Dominican people that continue to transcend over several generations (Crassweller, 1966; Diederich, 2000).

The Destruction of the Insane Asylum by a Hurricane (1930) and the Move to the former American Military Jail

On September 3, 1930 only 18 days into Rafael Leonidas Trujillo's presidency, the Dominican Republic was hit by one of the most destructive hurricanes in its history. The *San Zenon*, a category 2 hurricane with winds of more than 175 miles per hour, directly hit the capital of Santo Domingo completely destroying the city and its infrastructure. At that time the city had approximately 70,000 inhabitants and many of the newer houses were built out of wood with zinc roofs. The hurricane plowed into the city with such force that after it ended, very few structures remained standing and it left behind a toll of four thousand dead and twenty thousand wounded. Many more died in the subsequent weeks due to starvation and disease. The insane asylum walls collapsed during the hurricane, killing most of the psychiatric patients who had been left confined to their cells. In the subsequent weeks the surviving patients began to roam aimlessly around the city streets. President Trujillo personally took charge of the relief efforts, but the national disaster had an even more devastating effect due to the concurrent onset of the Great Depression and the collapse of the international markets, which deeply affected the county's finances. For the next decade, the Dominican Republic began a very gradual recovery and in 1934 there were some meager reconstruction efforts to clean up and restore parts of the insane asylum which by then had become known as the *Hogar del Alienado* (Home for the Alienated) (Sanchez-Martinez, 2006). Yet, by the end of the decade the asylum remained in deplorable conditions and in 1939, Hector Ichaustegui-Cabral, one of Trujillo's ministers, requested the president do something to relieve the primitive living conditions of the psychiatric patients. The imperious and intimidating Trujillo allegedly responded, "right now we don't even have enough to provide for the sane, let alone for the insane," which abruptly ended the conversation (Romero, 2005, p. 41). However, Trujillo later reconsidered the petition and on March 9th, 1940 ordered the patients of the insane asylum to be transferred to their new home at the old American Military Jail in the village of Nigua (Romero, 2005; Sanchez Martinez, 2006).

After the departure of the American occupying troops in 1924, the American Military Jail was taken over by the Dominican government of President Horacio Vazquez (1924-1930). And turned into the National Penitentiary, which housed common criminals. In 1940 the common criminals were transferred to the new penitentiary of *La Victoria* and the psychiatric patients were then transferred to the former American Military Jail. The new facility was named the *Manicomio Padre Billini* (Father Billini Insane Asylum). The transfer of the psychiatric patients from the decrepit reconstructed ruins of the Franciscan Convent to the former military jail represented an improvement in terms of space and the physical conditions of the facility. However, the number of admissions automatically increased and after only a few months, 400 to 600 psychiatric patients were subsist-

ing in an isolated location with minimal care. The available treatments were hydrotherapy with cold or hot water, insulin therapy, electroshock therapy, phenobarbital, novocaine, multivitamins, cod liver oil, and the much dreaded turpentine injections. The latter were administered to aggressive-agitated patients intramuscularly on both thighs. The injections, known popularly as "the twins," produced a painful abscess that succeeded in immobilizing and tranquilizing the patient. A vivid, first-hand testimony of the experience of being a psychiatric patient during this period of Dominican history can be found in the works of the alcoholic writer, Julio Gonzalez Herrera, who was psychiatrically hospitalized multiple times due to delirium tremens. In *Trementina, Cleren y Bongo* (Turpentine, Moonshine and Drumbeats) and *Cosas de Locos* (The Stuff of Crazy People), this author depicted a frightening account of the limitations and often inhumane treatments that were administered to psychiatric patients at that time (Gonzalez Herrera, 1943; 1949). Electroshock therapy was first introduced to the Dominican Republic on November 15, 1943 by the hospital director Dr. Armando Ortiz, who ordered the first machine. Electroshock therapy, as in the rest of the world at that time, was used indiscriminately to treat all modes of mental illness and was applied without anesthesia, employing male orderlies to physically restrain the patient while the shocks were being administered. Dr. Ortiz presented a scientific review paper describing the results of the administration of more 10,000 electroshocks, which took place over a six-year period in the new insane asylum (Ortiz, 1946). Insulin therapy had very limited use in the Dominican Republic. In April, 1952, Dr. Walter Freeman, a neurologist from Washington DC, visited the psychiatric hospital and performed several trans-orbital lobotomies on the patients. It is unclear whether the procedure was performed in the DR prior to this date, but it appears that it never became commonplace. In spite of these modest treatment advances, some aggressive-agitated patients were still chained to the walls. Another important turning point in the decade of the 1940s occurred with the arrival to the Dominican Republic of the first formally trained psychiatrists. These physicians were refugees from the Spanish Civil War and brought along with them new knowledge and expertise. In turn, their influence encouraged Dominican physicians to seek, for the first time, formal psychiatric training abroad (Romero, 2005; Sanchez Martinez, 2006).

Construction of the New Insane Asylum (1959)

The decade of the 1950s brought important psychiatric advances to the Dominican Republic, including the arrival of the first tricyclic antidepressant (imipramine), the first MAO inhibitor (iproniazid, or Marsalid®), the first benzodiazepine (chlordiazepoxide, or Librium®). and the first antipsychotic (chlorpromazine, or Thorazine®), which was known by the French brand name Largactil®. The new decade also received the arrival of the first Dominican foreign-trained neurologist in 1950 and, a year later, of the first electroencephalographic machine. A department of psychiatry was started at the Salvador B. Gautier Hospital, which provides medical services for workers of all the government owned entities. In 1955, a young Dominican psychiatrist of Lebanese descent who had trained in Spain assumed the directorship of the psychiatric hospital, which was still located at the old military jail. Dr. Antonio Zaglul (1920-1996) alongside a handful of foreign-trained colleagues began a movement to humanize and modernize the practice of psychiatry. Zaglul wrote numerous articles in the newspapers, participated in radio and television programs which, for the first time interpreted the dynamics of mental functioning and described the medical origins of mental illness, bringing the formerly taboo topic to the forefront of Dominican life, contributing greatly to demystify and to de-stigmatize mental illness (Zaglul, 1966; 2011).

Dr. Antonio Zaglul has been regarded as a leader and a visionary and is considered the worthy successor of the work that was started by Father Billini on behalf of the mentally ill of the Dominican Republic and is considered to be the Father of Modern Dominican Psychiatry (Romero, 2005; Sanchez Martinez, 2006).

Psychiatric Reform and the Creation of the Community Mental Health System (1965-2000)

On May 30 1961 the Dominican dictator Rafael Leonidas Trujillo was assassinated by a group of patriotic dissidents, bringing about chaos and upheaval. The tyrannical Trujillo regime had oppressed the Dominican people for 31 years and it took several more years and considerable bloodshed to dismantle one of the most oppressive political and military infrastructures that existed in Latin America during the first part of the twentieth century (Crassweller, 1966; Diederich, 2000). These efforts culminated in a bloody civil war in 1965, followed by the second American military intervention, which was soon replaced by an international peace-keeping force (Bartlow Martin, 1966). However, since 1966 the Dominican people, so eager for freedom and justice, have turned the Dominican Republic into an examplar of democratic rule and political stability. After democracy was restored, notable advances have taken place in the field of mental health. The Dominican Psychiatric Society was created in 1968, as well as inpatient and outpatient psychiatric units at the Army and Air Force Hospitals. The Father Billini Psychiatric Hospital introduced many reforms, which included occupational therapy, art therapy and gardening and agriculture. It also reduced the use of electroshock therapy to a negligible minimum and introduced the use of an anesthesiologist to aid in the procedure. Two new clinics were developed to attend the specific inpatient, outpatient needs of women and separate psychosocial rehabilitation programs for patients of each sex. In 1971, the Autonomous University of Santo Domingo officially inaugurated the Department of Psychiatry and the first Professorship and Chair, which was awarded to Dr. Antonio Zaglul.

In 1977, the first of the Community Mental Health Center (CMHC) clinics was inaugurated in the Santo Domingo slum of Guachupita and 55 more of these clinics now exist, covering every corner of the national territory. Crisis-intervention units were created at the Father Billini Psychiatric Hospital in 1993 and the Dr. Moscoso Puello General Hospital in 1994. In 1990, Dr. Nelson Moreno Ceballos created the Dominican Institute for the Prevention and Treatment of Depression and Suicide, with a 24 hour telephone hotline designated as *El Telefono de la Esperanza* (The Telephone of Hope). The decade of the 1990's the Minister

of Health, Dr. Altagracia Guzman Marcelino declared mental health as a priority of the National Health Plan and this decade welcomed the creation of new programs for treatment of alcoholism and drug dependency, domestic violence, a residential program for conduct disordered youth, a shelter for abused girls and women and international development and collaboration programs with the Pan-American Health Organization (PAHO), and the Ministries of Health of Cuba and Panama. In 1994 the Senate of the Dominican Republic officially designated October 10th as Mental Health Day and Ministry of Health elevated the importance of its mental health services by creating the, General Directorship of Mental Health. Finally, on February 3, 2006, President Leonel Fernandez promulgated Mental Health Law 12.06, which assures the respect for a citizen's civil liberties and spells out the letter of the law concerning the right to treatment, consent for treatment, consent for hospitalization and requirements for involuntary hospitalization, the standards of psychiatric care, including such things as the minimal allowable physical and hygienic conditions of hospitalization and emphasizes, whenever possible, the use of the least restrictive environment. This law applies to public as well as private institutions and has contributed to significant improvement in the quality of the mental health care of the Dominican population. However, there is currently no national human rights body in the Dominican Republic to oversee human rights inspections in mental health facilities, or to impose sanctions on those that violate patients' rights, which is of great concern given that 70% of the psychiatric hospitalizations are involuntary (WHO-AIMS, 2008). In addition to the public programs, there are a number of private psychiatric inpatient and outpatient clinics, some of which offer a very high standard of care comparable to programs Europe and North America, which are paid for by cash or insurance (Sanchez Martinez, 2006). Some of these private programs attract Dominican and Latin American patients who reside in the US because they offer good quality, long-term treatment and hospitalization at a fraction of the cost of these treatments in the U.S.

The First Residency Programs and Academic Psychiatry in the Dominican Republic

In response to the pressing need to train new Dominican psychiatrists to treat the population and due to the financial difficulties involved in travelling abroad to obtain formal psychiatric training, plans were begun to create a formal residency training program. This occurred with the help and advice of experts from the Pan-American Health Organization (PAHO). In 1977, the Division of Mental Health of the Ministry of Health mandated the opening of the first psychiatry residency training program at the Father Billini Psychiatric Hospital, with rotations in other university affiliated hospitals. One year later, the residency program was accredited by the Medical School of the Autonomous University of Santo Domingo (the oldest educational institution of the American continent, formerly called the University of Saint Thomas Aquinas). The residency program was conceived with the idea of training psychiatrists to meet the specific mental health needs of the Dominican Republic, utilizing a bio-psycho-social paradigm. The residency program consists of a straight-year in internal medicine or primary care, followed by three years of psychiatry residency. In addition to rotations in inpatient and outpatient psychiatry, it consists of a rotation in consultation-liaison psychiatry at the Salvador B. Gautier Hospital, Child and Adolescent Psychiatry at the Dr. Robert Reid Cabral Pediatric Hospital, and rotations at the Fenix Foundation for the Treatment of Addictions, the Center for Human Sexuality and the Center of Japanese-Dominican Friendship, for the Study of Epidemiology and Imaging. In 2001 a new CMHC in the semi-rural community of Los Cocos de Pedro Brand, adjacent to the psychiatric hospital, was created in order to emphasize the focus on community psychiatry. The second psychiatric residency training program was started in 1989 at the Salvador B. Gautier Hospital, which is located in the city of Santo Domingo, in contrast to the Father Billini Psychiatric Hospital, which is located 20 miles outside of the city and both programs have the same academic requirements and share some of the same professors and rotations. The residents have to present a thesis after their fourth year of residency, which is judged by a committee of experts and is mandatory to accomplish graduation. The best works are published in the Dominican psychiatric journals. The first Dominican trained psychiatrists graduated in 1980 and since then, the two residency programs have graduated more than 125 psychiatrists (Sanchez Martinez, 2006). However, in medical schools around the country and in general hospitals and primary care clinics, only 3% of medical training is devoted to mental health (WHO-AIMS, 2008).

Child and Adolescent Psychiatry in the Dominican Republic

In 1972, the first Department of Child and Adolescent Psychiatry was initiated at the Dr. Robert Reid Cabral Pediatric Hospital in Santo Domingo by the eminent pediatrician, Dr. Hugo Mendoza. The following year, a child and adolescent psychiatry diagnosis and treatment team was formed, incorporating a child and adolescent psychiatrist, a clinical psychologist, a social worker, a speech and language therapist, an occupational therapist and the first psycho-educational evaluations were completed. The child and adolescent psychiatry service includes outpatient services, a pharmacology clinic, a psycho-educational evaluation team with support and placement services for learning disabilities, family therapy, cognitive-behavioral therapy and speech and language therapy. The clinic receives an average of 9 to 11 thousand patient visits per-year. A more modest child and adolescent psychiatry clinic was recently inaugurated at the Arturo Grullon Pediatric Hospital in Santiago, the country's second largest city and the Jaime Mota Hospital in the city of Barahona treats a high number of child and adolescent psychiatry patients, but does not have an specialized service for this purpose. Up to this date there are no inpatient, public or private child and adolescent psychiatry beds in the entire country. Of all the users treated in country's 56 outpatient psychiatric facilities, 40% are children and adolescents, yet only 4% of them offer services by a child and adolescent psychiatrist and most of these children are treated by general psychiatrists (WHO-AIMS, 2008). There is also no fellowship training in child and adolescent psychiatry in the Dominican Republic, in fact very few countries in Latin America offer training in child and adolescent psychiatry, among

these Mexico, Brazil, Puerto Rico, Argentina, Cuba and Uruguay (Sanchez Martinez, 2006).

Present State of Psychiatry in the Dominican Republic

Currently there are 178 psychiatrists, 272 bachelor or masters level psychologists, 138 psychiatric nurses, 12 social workers, 18 occupational therapists and 327 other mental health professionals currently licensed and practicing in the Dominican Republic. Of these, 42% of the psychiatrists and 59% of the psychologists are in full-time or part-time practice in the public sector. Compared to other areas of medicine, there are fewer nurses in the area of mental health. Regarding the workplace, 122 psychiatrists work in outpatient facilities, 17 in psychiatric inpatient units in general hospitals and 13 work at the mental hospital. There are a total of 9 inpatient units in general hospitals totaling 76 beds and there are a total of 150 inpatient beds at the mental hospital. This is equivalent to 2 psychiatrists per 100,000 persons, 0.22 psychiatrists per bed in the general hospitals and 0.09 psychiatrists per bed in the mental hospital, indicating a need to increase this human resource. Among those patients who are admitted to inpatient facilities, 69% suffer from mood disorders, 21% with schizophrenia and 5% with psychoactive substance abuse or other psychiatric disorders. Most inpatient and outpatient units have a least one psychotropic medication in each class (antipsychotic, antidepressant, mood stabilizers, anxiolytics and antiepileptics). The average length of stay is 19 days and it is estimated that 55% of the users are female. However, most of the mental health units outside of the mental hospital function using a crisis-intervention model and psychiatric hospitalizations tend to be short. In the entire country there are no public or private psychiatric inpatient beds for children or adolescents, except for drug users, which are managed by facilities in the private sector. The majority of adult patients are treated in outpatient clinics or inpatient units in general hospitals and there is little use of the day-treatment model. (WHO-AIMS, 2008).

The Dominican Republic has begun to develop primary care health standards according to the Panamerican Health Organization (PAHO) and all primary care centers in the country have a doctor. These centers, however, do not have assessment or treatment protocols for key mental health conditions. Initially, protocols were developed to diagnose and treat depression, but they have not been disseminated or implemented. The avenues for communication and referral of patients from primary care clinics to mental health facilities remain narrow and the integration between these two structures is still in its infancy. The implementation of mental health promotion, prevention and rehabilitation within the primary care structures now represents one of the greatest challenges to Dominican psychiatry and one of the priorities of the Dominican National Ten-Year Health Plan—2006-2015 (WHO-AIMS, 2008).

New Stressors Affecting the Mental Health of Dominican Youth and Adults

In the decade of the 1980s the Dominican Republic began to change rapidly from a rural- agricultural economy to one increasingly based on income from the tourism industry. This change has brought about a rural migration to the cities and to the beach resorts where employment opportunities are plentiful. It has also brought about problems like child exploitation in the form of heterosexual and homosexual prostitution and an increase in the rates of HIV/AIDS in the population (Rojas *et al.*, 2011). In addition, the tourism industry has brought about an erosion of traditional values in a country which, since colonial times, had undergone centuries of isolation and neglect.

After the assassination in 1961 of the dictator Rafael Leonidas Trujillo, who strongly controlled and discouraged foreign travel, Dominicans have embarked on a massive economic migration to the U.S. These immigrants have formed their ethnic-enclave in the city of New York, where 1.3 million Dominicans live and they are rapidly moving north, colonizing many of the industrial New England cities (Grassmuck & Pessar, 1991). Parents usually emigrate alone, leaving their children behind and hoping for a later re-unification in the U.S. once the parents become financially stable in the new country. This result from migration, known as "child fostering," is very common among working class immigrants from the Caribbean and Central America and brings about complicated family dynamics involving separation and loss, which frequently lead to adverse mental health outcomes, such as conduct disorders, depression and substance abuse. Many times children who develop conduct problems in the U.S. as a result of these dynamics are returned to schools back on the island. These schools are used to enforce discipline and to correct conduct disordered forms of behavior in these youth (Pumariega & Rothe, 2010; Rothe, Pumariega & Sabagh, 2011).

A new representative study of 8,446 public high school students in the Dominican Republic demonstrates an increased risk for suicide attempts in youth that have more U.S. cultural involvement. This finding has been observed among other Hispanic youth but this study also indicates that suicide attempts are a major public health problem among Dominican youths residing on the island. The propensity to attempt suicide increased from 7.86% for youths with no friends who had lived in the U.S., to 10.56% for those who had five or more friends who had lived in the U.S. It also increased from 8.1% for youths who had never lived in the U.S., to 12.6% for those who had lived in the U.S. for a year or longer and 18.2% for those who had lived in the U.S. for more than one year. The risk for attempting suicide was higher among females, youths living in rural areas and in single parent homes. The explanatory causes for these findings in other studies involving different Hispanic youths are multivariate, but alienation from the parental culture and values appears to be an important causal factor. The findings of this study are of great concern given the circular pattern of migration that exists between the Dominican Republic and the U.S. and to the limited financial resources of that exist on the island (Pena *et al.*, 2012). Due to its strategic geographical location in the Caribbean, the Dominican Republic has recently become a relay station, or stopover for the transport of illegal drugs coming from South America into the U.S. This new phenomenon has generated corruption in the country's governmental and military structures, has caused an increase in the rates of

violent crimes, an erosion of social values, and an increase of illegal drug use among the population. In the last decade there has also been an increase in the number of drug-prevention programs, substance abuse treatment programs and of Dominican psychiatrists sub-specializing in the treatment of substance abuse (Sanchez Martinez, 2006). In spite of these changes, Dominican youths have less exposure and use of alcohol and drugs (Dormitzer *et al*., 2004) and tobacco (Vittetoe *et al*., 2002) than youths in the U.S. Another challenge facing the Dominican Republic has been generated by the country's change from an agricultural economy to one that is increasingly more dependent on industry and tourism. This has resulted in a massive migration from the rural to the urban areas, coupled with poor urban planning (Metz, 1999). The city of Santo Domingo now has the only underground urban-train transport system in the Caribbean, an attempt to relieve the suffocating traffic congestion. The conditions of urban overcrowding, coupled with poor urban planning, have brought about increased aggressive behavior in the population. Also, the industrialization of the country has provided new educational and employment opportunities for women, offsetting the traditional male-patriarchal role in the family. This has been reflected in the alarming increase of domestic violence and physical violence against women. In a recent study of 3,400 Dominican women, 44% responded that they had been victims of domestic violence; many of these crimes go unreported (Dominican Today, 2006). It was only in 1997 that the Dominican Republic established, *Law 24-97* or "Ley Contra la Violencia Domestica" (the Law against Domestic Violence) officially making it a crime punishable by law and with the help of international organizations the government authorities aim to take action by creating support organizations for victims and a nationwide educational campaign (Contemporary Dominican Republic, 2012).

Finally, the most daunting challenge for the Dominican Republic comes from the massive illegal immigration from the neighboring Haiti, the poorest country in the Western Hemisphere. This influx was increased after the earthquake that hit this country in 2010. The Haitian migration has provided cheap labor to Dominicans, but it has overwhelmed the already poorly funded public health system (Archibold, 2011).

CONCLUSIONS AND FUTURE DIRECTIONS

The Dominican Republic has one of the region's lowest percentages of GDP expenditure on its health budget and only 1% of the health budget is dedicated to mental health (WHO-AIMS, 2008). In spite of these realities, in the past three decades the country has made enormous strides in improving the mental health care of its population. This is partly due to the opening of two general psychiatry residency programs and nine medical school campuses spread across its national territory, all of which teach psychiatry in their curriculum. Globalization and the internet have also contributed greatly to improve the accessibility and quality of training for Dominican health professionals. Dominican psychiatrists are very active in utilizing television and radio to educate the population about mental health issues and to reduce stigma. Finally, the Dominican economy has greatly benefited from the development of a tourism industry and with one of the fastest growing economies of Latin America. There are great hopes that future governments will chose to invest more of the national budget on education and health.

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CONFLICT OF INTEREST

The authors confirm that this article content has no conflicts of interest.

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DISCLOSURES

None relevant to this work.

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