Analyzing the Correlations between Accommodation Disorder and Substance Abuse Among the Latino Community in the Worcester Area

This research analyzes the impact of acculturation and adjustment disorders and substance abuse in the Latino Community of Worcester. The data was collected through a survey that was translated into three languages: English, Spanish, and Portuguese.

Major Qualifying Project (MQP)

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Abstract

This project is a product of three major requirements, Biotechnology, International and Spanish Studies. This project investigated the correlation between substance abuse and accommodation disorder in the Latino population of Worcester, MA. These correlations were obtained by quantitative and qualitative data collected from a survey that was administered to the Latino community at different community centers. The survey was distributed at locations selected based on non-probability convenience sampling. The results obtained from this study are by no means representative of the whole Latino population in Worcester. The responses of 26 subject samples were analyzed quantitatively. The results indicated a possible correlation between acculturative stressors leading to accommodation disorder and substance abuse. The purpose of this project was to create a framework that would assist future studies that would have the means to administer this survey with a larger sample size.

1- Introduction

1.1 Purpose Statement

This project investigated the possible correlations between substance abuse and mental illness in the Latino population of Worcester, MA. These correlations were obtained by quantitative and qualitative data collected from a survey administered to members of the Latino community. The survey was distributed at locations selected based on popularity and significance to the Latino community in the hope of obtaining a representative sample, however this was not possible due to various restrictions at some of the community centers that were approached. Informal interviews with professionals, such as those in health care and social services, were conducted in order to better understand the health care and treatments available for substance abusers within the Latino community.

The first hypothesis for this project was the existence of a positive correlation between substance abuse and mental illness, more specifically that individuals were self-medicating with controlled substances to mask the symptoms of an undiagnosed or untreated mental illness. We furthermore hypothesized that stresses from moving to a new country (for new immigrant Latinos) and stresses incurred from not being part of the mainstream American culture (referred to as acculturative stresses) were at least partially causing or instigating mental illnesses like anxiety and depression (called accommodation disorders) among Latinos. Therefore, the survey addressed several acculturative stresses (for example, feeling discriminated against or stereotyped or the need to be more "American"), five symptoms of accommodation disorders, and frequency of substance abuse. All the questions were constructed in the hope of identifying whether substance abuse causes mental illness or if an existing mental illness provokes substance abuse and what role if any acculturation plays in substance abuse and mental illness. If a cause-

and-effect pattern can be pin pointed, suggestions can be made to help decrease the prevalence of co-morbid substance abuse and mental illness.

1.2 Reasons for Studying the Latino Community

Latinos were chosen as a sample group because they compose a large portion of the United States population. In Worcester, Massachusetts, Latinos compose only 17.7% of the population but account for over one-third of the city's drug arrests (Dr. Castiel). This startling statistic has caused many in Worcester to question what factors are causing such high rates of substance abuse.

Another benefit of studying the Latino population is the language equivalence that this study provided. Administering surveys in English, Spanish, and Portuguese ensured that all Latinos were represented by eliminating potential language barriers. Additionally, it is more natural and comfortable to communicate in one's native or primary language, and in the state of Massachusetts, 44% of the Latino population speaks English "less than very well" according to the 2006 Census (U.S. Census Bureau 2006). For all of the aforementioned reasons, this project seemed to best incorporate all three majors (Biology, International Studies, and Hispanic Studies) and allow us to help the city of Worcester at the same time.

1.3 Summary of Results

The distribution of this survey resulted in 26 completed surveys (although some of the respondents did not answer every question so the number of responses for questions fluctuates) and ten of those completed belonged to individuals who admitted having a substance abuse

problem. Due to the small response, it is our hope that this research will serve as a framework for future efforts of similar research.

Based on the data that was obtained, however, there seems to be a correlation between substance abuse and mental illness in the Latino community. Most of the substance abusers (7 out of 10) said that they had self-medicated for the accommodation disorder symptoms they had felt. However, 8 of the 10 also said that they had used a controlled substance prior to symptom onset, so it is nearly impossible to determine a timeline of substance abuse and mental illness. Most of the substance abusers, as well as the overall survey sample, suffered from acculturative stresses, particularly feeling Latinos are stereotyped and discriminated against.

2- Background

The background chapter contains information about the Latino population on national, state, and city levels as well as some broad observations of the Latino culture. Also, there is information about mental illness and substance abuse. All of this research was used to create the survey and help to interpret the results.

2.1 Demographics & Socioeconomic Status of Latinos

The United States Census Bureau has made great efforts in recent years to collect and extrapolate data based on ethnicity on the national, state, and city levels. One such endeavor is the American Community Survey (ACS), which is a continuous, on-going survey sent to a sample of the population. The ACS was developed to be an alternative to the decennial census that is still able to collect detailed information about population characteristics and housing. Following a successful trial period between 2000 and 2004, the ACS has been distributed to approximately 3.5 million addresses in the United States and Puerto Rico (Design and Methodology: American Community Survey). Most of the statistical information in this section was provided by the ACS 2006 data available on the United States Census Bureau's website.

2.1.1 The United States

In recent years, the Latino population of the United States has shown steady increase, culminating in the 2006 population of 44.3 million (14.8% of the total population – 299 million). In fact, between 2000 and 2006 Latinos accounted for approximately half of the population growth in the United States. The growth rate of the Latino population alone was more than three times that of the overall population (24.3% growth for Latinos compared to overall growth rate of 6.1%) which can be attributed at least in part to the fact that Latinos are responsible for 52.4%

of the country's net international immigration. Based on the steadily increasing population, it is projected that by 2050 there will be 102.6 million Latinos living in the United States, which is expected to be roughly one quarter of the total population (American Community Survey 2006). Although the reason will be explained in the later chapter about acculturation, no distinction was made at the time of survey distribution about country of origin because both immigrants and natural-born citizens were of interest for this project.

The 2006 American Community Survey gathered more in-depth information about the Latino community, including typical occupations and salaries, education level, and country of origin. The Latino population is generally younger than the non-Latino American population (the mean age is 8-10 years younger) which is consistent with the data indicating that Latinos were responsible for 22.5% of births in the United States between 2000 and 2006. In terms of education, Latinos are four times more likely to have less than a ninth grade education and nearly fifty percent less likely to have attained a Bachelor's Degree or higher when compared to the non-Latino population. The relatively low level of education achieved seems to account for the most common occupations and salaries of the Latino population. The occupations most common in the Latino community are in the service industry and the production and transportation industry. There is also a disproportionately low number of Latinos in the professional sector (13.7% for males and 22.5% for females compared to 31.0% male non-Latinos and 37.3% female non-Latino). On average for 2006, Latino men earned roughly $15,000 less than non-Latino men, and there was an $8,000 salary difference between Latino and non-Latino women (American Community Survey 2006).

2.1.2 The State of Massachusetts

In the state of Massachusetts, Latinos account for approximately 8% of the population. Although this is lower than the national percentage of Latinos, it is consistent with the fact that the Northeast region of the United States has the second lowest population and population increase rates of the four geographic regions. The other regions, in decreasing order of Latino population, are the West, South, and Midwest, which was the only region having a lower Latino population than the Northeast. Nearly one-fifth of Massachusetts residents over the age of five speak a language other than English at home, with Spanish accounting for 6% of the population (Massachusetts Census 2006)

The American Community Survey data for Massachusetts residents speaking Spanish at home contains information about poverty, education level, and English proficiency. Consistent with national statistics, nearly 40% of those who speak Spanish at home are foreign born. Additionally, more than a quarter of the Spanish speakers are not yet citizens of the United States. Roughly 55% of Spanish speakers reported speaking English "very well" based on personal perceptions of their language abilities. Senior citizens (65 years of age or older) comprised the majority of those who could not speak English "very well." For people between the ages of 18 and 64, there was a nearly even split between those who could speak "very well" and those who could not. Not surprisingly, Spanish speakers between the ages of 5 and 17 had the highest portion of English proficiency, with more than three-quarters of this subgroup speaking English "very well." (Massachusetts Census 2006)

There is alarming data for the low level of education and high level of poverty for Massachusetts residents speaking Spanish. In the 12 months preceding administration of the American Community Survey of 2006, more than one quarter (27.2%) of the Spanish speaking

population was living below the poverty level. Nearly one third of this non-English speaking population who were over the age of 25 had not completed high school, compared to the 8.5% of persons speaking only English at home who have not received a high school level education. When it comes to college education, 38.7% of persons speaking only English at home have earned at least a Bachelor's degree whereas only 18.1% of Spanish speakers have earned the same degree (Massachusetts Census 2006).

2.1.3 The City of Worcester, Massachusetts

The percentage of Latino population in Worcester is more than twice that of the state of Massachusetts (17.7% of Worcester compared to only 8% of Massachusetts). In Worcester and Massachusetts, Puerto Rican Latinos are the most common, accounting for 66% of the Worcester Latino population (Worcester City, Massachusetts Census 2006). Nationwide, however, Mexican or Mexican-American Latinos comprise a definite majority (64% of the Latino population) (American Community Survey 2006)

According the American Community Survey of 2006, 82% of Worcester residents over the age of five speak Spanish. This is almost fourteen times more than statewide data. Nearly one-third (32.6%) of the Spanish speaking population lived below the poverty level in the 12 months preceding the administration of the American Community Survey. One may hypothesize that the relatively high rate of poverty is universal in Worcester due to various reasons including poor job market or high cost of living, but this does not seem to be entirely the case since only 14.6% of English speakers (those who speak only English at home) lived below the poverty level. More evidence against believing the level of poverty among Spanish speakers is due to the job market or living cost is the unemployment rate for Worcester Latinos, which is only 15.3% (Worcester City, Massachusetts Census 2006).

Spanish speakers in Worcester had education levels consistent with statewide data with one-third having less than high school education and only 11.8% earning a Bachelor's Degree or higher. Given that this data deals with a single city, one might hypothesize that the low high school graduation rate is attributable to a poor school system but this once again does not seem to be the case given the education level of Worcester residents who speak only English at home. While only 13.1% of English speakers do not have a high school education, 31.0% have earned a Bachelor's Degree or higher (Worcester City, Massachusetts Census 2006).

2.2 Acculturation

This project seeks to examine possible correlations between mental illness and drug abuse aggravated by acculturative stresses. It is therefore important to discuss and define, in general and specifically for this project, the phenomena of acculturation.

2.2.1 Definition

Acculturation as a concept emerged during the period of European colonial expansion as a way to describe how customs and beliefs changed when people from different cultures coexisted. The term acculturation is thought to have been first used in 1880 by white Americans to describe the changes in the Native American population due to increased contact between the two (Hunt, 2004). In all the years between 1880 and present day, there has yet to be a universally accepted definition and measurement of acculturation. While a definition from the Social Science Research Council of 1954 classified acculturation as a "culture change that is initiated by the conjunction of two or more autonomous cultural systems," more contemporary definitions make distinctions between the two cultures involved. For example, in 1991 Rogler, Cortes, and Malgady defined acculturation as "the process whereby immigrants change their

behavior and attitudes toward those of the host society." By distinguishing between foreign immigrant and native mainstream, a greater pressure and responsibility has been placed on members of the foreign culture to change and become homogenous with the mainstream culture. The distinction also seems to discount the mixing interaction of the two cultures which was allowed by the 1954 definition (Hunt 2004).

In recent years, two different and often opposing positions concerning immigration have emerged among sociologists. These polarized positions are typically referred to as the assimilation position and the pluralist position. Sociologists of the assimilation position look at acculturation like Rogler *et al* in 1991, as a process by which immigrants strive to meld with a hegemonic culture. Conversely, sociologists following the pluralist position view acculturation in a way similar to the 1954 definition in which two cultures mix but each culture still maintains its own identity. This second position is also referred to as "ethnic retention." Herbert Gaines describes acculturation as "the newcomers' adoption of the culture (*i.e.* behavior patterns, values, rules, symbols, etc.) of the host society (or rather an overly homogenized and reified conception of it)" (p. 877), and suggests immigrants begin to acculturate almost instantly and can be completely acculturated in the first generation. However, Gaines distinguishes between *acculturation* and *assimilation*. According to Gaines, assimilation depends largely on the economic and political atmosphere that in turn portrays the immigrants as either attractive or threatening to the mainstream culture. Additionally, acculturation is a process that the immigrant undertakes while assimilation is achieved only via "permission" of the mainstream culture. For these reasons, acculturation can occur quickly but assimilation may not be achieved for generations despite the fact that many aspects of the native culture are no longer present (Barry 2001).

2.2.2 Effects on Health

Several longitudinal studies have investigated the effects of the acculturation process on human health with similar results. In 2000, Finch, Kolody, and Vega found a connection between perceived discrimination and depression symptoms among Mexican Latinos in California. Their data indicated that a greater proportion of time spent in the United States positively correlates to perceived discrimination as well as higher rates of depression. That is to say that discrimination is more often perceived among Mexican Latinos who have lived in the United States for long periods of time, and these same Latinos are more likely to suffer from depression. Additionally, the more discrimination that is perceived, the more likely depression becomes. This correlation was amplified for native residents (Mexican Latinos born in the United States) in that the experience of discrimination had greater effects on depression. Another interesting finding from this study was the effects of education and perceived discrimination. Finch *et al* showed that perceived discrimination increased as education level increased. One possible explanation is the finding that immigrants and migrants with lower proficiency of English are typically residentially isolated and less aware of the subtleties of the mainstream culture. Also, lower English proficiency would make it more difficult to understand subtle innuendos of a discriminating nature (Finch *et al* 2000).

2.2.3 Limitations on Definition

The most common variables used to measure acculturation include the following: one's use of English rather than the native language, self-identification of a specific ethnic group, identification of one's friends and associates into ethnic groups, the country of birth for oneself and parents as well as grandparents, knowledge of minor historical facts about one's native country (or that of one's parents, etc.), and adherence to family and gender roles indicative of a

specific ethnic group. Despite the many options available to measure the level of acculturation, most researchers have employed a subject's use of English almost exclusively. This does not provide an accurate measure of acculturation as an immigrant could quite easily learn English but maintain an ethnic identity and specific gender and familial roles typical of certain ethnic groups (Barry 2001).

2.3 Mental Illness

2.3.1 Definition & Prevalence Among Latinos

With 40.0% of Latinos nationwide being foreign born (American Community Survey 2006), acculturation and the related stresses are widespread. Acculturative stresses are defined as environmental stressors immigrants experience when first moving to the United States. The majority of Latino immigrants admit to having experienced familial, social, and environmental stressors upon immigrating. Such stressors vary and can include discrimination, missing extended family members, and financial worries or employment (Caplan 2007). One study comparing a sample of Puerto Ricans living in San Juan, Puerto Rico with a similar sample who had migrated to New Haven, Connecticut found that 7 out of 10 participants at both sites had at least one clinically diagnosed, lifetime psychiatric disorder. The most common of the psychiatric disorders were anxiety disorders, which applied to nearly half of the participants with substance use disorders. The second most common psychiatric disorder was affective disorders such as depression. The study also found that participants with substance use disorder were more likely to have multiple co-morbid psychiatric disorders than only one. For 56% of the Puerto Ricans who had migrated to New Haven, the onset of substance use disorders occurred

after the migration process. Additionally, for the affective and anxiety disorders, the first onset or most recent episode followed migration in a majority of cases (Conway *et al* 2007).

The results of the aforementioned comparative study support the hypothesis linking acculturative stresses with co-morbid substance and psychiatric disorders, however there is also a body of evidence suggesting that the risk of substance and psychiatric disorders increases with the time spent in the United States (Aleria *et al*, Conway *et al*, Finch *et al*). Supporters of this theory cite dismal socioeconomic prospects and other societal strains as possible explanations for this seemingly counterintuitive hypothesis (Aleria *et al* 2007).

2.3.2 Anxiety and Depression Symptoms

Approximately 40million people in the United States over the age of eighteen are diagnosed with at least one anxiety disorder each year. There are several types of anxiety disorders, including post-traumatic stress disorder (PTSD), panic order, obsessive compulsive disorder (OCD), social phobia, specific phobias, and general anxiety disorder (GAD). According to the National Institute of Mental Health, "anxiety disorders commonly occur along with other mental or physical illnesses, including alcohol or substance abuse, which may mask anxiety symptoms or make them worse." (NIMH Anxiety Disorders)

Depression, like anxiety disorders, has many subgroups. The most notable are major depressive disorder, dysthymic disorder, psychotic depression, postpartum depression, and seasonal affective disorder (SAD). Via Magnetic Resonance Imaging (MRI), it has been established that depressive disorders result from malfunctions of the human brain. The portions of the brain responsible for regulating mood, thinking, sleep, appetite, and behavior seem to function abnormally in depression sufferers when compared to those who do not have depression. Additionally, the neurotransmitters with which neurons communicate are not at

normal homeostatic balance. As with anxiety disorders, the National Institute of Mental Health has found "alcohol and other substance abuse or dependence may also co-occur with depression." (NIMH Depression)

2.3.3 Anxiety and Depression Treatments

Anxiety disorders and depression disorders have similar treatment methods involving medication and psychotherapy. The most common medications are Selective Serotonin Reuptake Inhibitors (SSRIs), tricyclics, and Monoamine Oxidase Inhibitors (MAOIs) (NIMH Anxiety Disorders, NIMH Depression). Individuals with anxiety disorders may also be prescribed benzodiazepines to deal with symptoms (NIMH Anxiety Disorders). In terms of psychotherapy, both anxiety and depression disorders suggest Cognitive-Behavioral Therapy (CBT) to help change the way patients think about even the simplest of daily tasks (NIMH Anxiety Disorders, NIMH Depression). Those suffering from depression disorders may also participate in Interpersonal Therapy (IPT) which helps patients understand and work through any troubled relationships that may be worsening or even causing their depression. If none of the aforementioned treatments alleviate the symptoms of depression, Electroconvulsive Therapy may be prescribed (NIMH Depression). It is also important to note that if anxiety or depression disorders accompany substance abuse or dependence, it is often vital to treat the substance abuse prior to treating the anxiety or depression disorder (NIMH Anxiety Disorders, NIMH Depression).

2.3.4 Adjustment Disorders

In trying to link acculturative stresses with mental illness, a distinction must be made. If a subject's depression or anxiety is a result of acculturative stresses, the aforementioned mental illness must be categorized as an adjustment disorder. Adjustment disorder is commonly defined

as a significantly more difficult adjustment to life situations, for example taking more time to adjust to one's new surroundings than another person or experiencing symptoms of depression while adjusting to life in a new area.

2.3.5 Latino Definitions and Perceptions of Mental Health

Given the fact that Latinos have a distinct culture, studies were conducted to determine how Latinos cope with and think of mental health issues. In the city of Worcester, Sara Trillo Adams administered many surveys within the Latino community concerning mental health. According to her results, most Latinos turn to family or prayer to cope with symptoms of mental health disorders. Additionally, most Latinos would discuss their mental health symptoms with a priest or other religious figure rather than a doctor (Cardemil *et al* 2007). These actions may impede proper, medical treatment for mental illnesses and may lead to self-medicating with illegal or unhealthy substances.

2.4 Substance Abuse

2.4.1 Reasons for Choosing Substances

Substance abuse is considered to be the dependence upon or addiction to either alcohol or drugs/controlled substances. According to the US Department of Health and Human Services, about 11% of individuals who have used cocaine in their lifetime were Latino. This percentage comes from a sample size of 35,298 individuals (Office of Applied Studies 2008). In terms of marijuana consumption, 9.14% of the individuals from the same study who used the drug in their lifetime were Latino. The data for heroin is different and more difficult to describe because the study divided drug use by method of consumption. All the percentages calculated are representative of individuals who are twelve years or older. The data from the US Department of

Health and Human Services represents the drugs abused by each ethnic group in the United States.

Medical practitioners treat substance abuse as a "longer term illness" (US Department of Health and Human Services 2008). According to the United States Drug Enforcement Administration, the drugs most commonly abused in Massachusetts, and Worcester in particular, are cocaine, heroin and marijuana. The addictive effects of both cocaine and heroin are responsible for its popularity and widespread use, but marijuana remains the most commonly used of the three drugs.

2.4.2 Heroin and Cocaine

Cocaine is an alkaloid extracted from the coca plant, *Erythoxylon*. It can be consumed in various ways, from injection to inhalation. When using cocaine, the neurotransmitter dopamine is trapped in the synaptic gap of brain neurons because cocaine blocks the reuptake mechanism of the pre-synaptic neuron. The increased dopamine in the synaptic gap increases the pleasure senses. Due to the high concentrations of dopamine in the synaptic gap, interacting with the post-synaptic neuron, the user experiences a "high," typically described as immense amounts of pleasure that last for an hour or less. However, when cocaine is taken with alcohol, the "high" effect lasts much longer. When the dopamine reuptake receptors are no longer blocked by cocaine, the concentration of dopamine decreases in the synaptic gap. The return to homeostatic dopamine levels causes the user to experience the complete opposite of what was experienced during the "high." The most common discomforts include exhaustion, mood swings and depression. Chronic cocaine users suffer from several side effects depending on its method of consumption. If the user is consistently abusing cocaine intravenously, the user might experience problems with blood pressure as well as cardiac arrhythmias. When inhaled via the

nasal pathway, cocaine constricts the arteriole which decreases the ability to absorb cocaine over time, leading to greater amounts of cocaine being needed to achieve the same "high." Necrosis and perforation of nasal tissue also occur due to the constriction of the blood vessels (Cardoso 1999).

The neurobiological effects of heroin are different from those of cocaine. Heroin is a depressant that binds to opioid receptors in the brain stem. When the opioid receptors are blocked by ingested heroin the user's pain sensors are hindered. Intravenously ingested heroin follows a path similar to morphine, preventing the user from feeling pain or discomfort. Constant heroin use can lead to infections in several organs, such as the heart, kidneys, and liver; but cessation of heroin causes the user to experience several withdrawal symptoms, such as muscle and bone pain, vomiting, diarrhea, and drastic temperature changes. In order to minimize those symptoms, withdrawal treatments like Methadone are prescribed. Methadone is a synthetic opiate that binds to opiate receptors and is prescribed to gradually decrease the user's need for heroin. Other drugs like Buprenorphine, and Naltrexone are also prescribed for heroin withdrawal symptoms (InfoFacts:Heroin 2008).

2.4.3 Marijuana

Marijuana is a drug derived from the Cannabis hemp plant that is widely used throughout the United States. Marijuana can either be ingested or smoked to obtain its active ingredient delta-9-tetrahydrocannabinol, commonly known as THC. The neurobiological effects of marijuana result from THC binding to the cannabinoid receptors in the brain. These receptors are located throughout the brain and are responsible for sensory, pleasure and memory. Currently there is no pharmaceutical treatment for withdrawal from marijuana. Instead of pharmaceutical methods, therapy is often used to distance the user from the drug. There have been several

studies that indicate positive correlations between the use of marijuana and mental illness, like depression and anxiety (InfoFacts:Marijuana 2008).

2.4.4 Substance Abuse Treatments

Treatment for the abuse of any substance begins with detoxification, during which time drug consumption is ceased. During the detoxification period, the individual may be medicated with a prescription drug like methadone to sooth the withdrawal symptoms. If there is no prescription drug available to ease the pain of withdrawal, as is the case for marijuana, the user will undergo the often painful effects of withdrawal without any medical comfort. It is imperative that during the detoxification period the patient is prevented from using the drug so that their bodies can become accustomed to functioning without it. After detoxification, there are several treatment paths the patient can follow. One path is inpatient care, in which the user is hospitalized during rehabilitation. There are also residential programs in which the patients live in the rehabilitation clinic where treatment is constantly being given. Third, for the partial hospitalization treatment the patient receives care in a hospital while residing in another location. Outpatient programs are similar to the partial hospitalization method but care is provided by clinics and health centers rather than hospitals. Opioid treatments, like methadone, are treatments in which patients are prescribed a drug to decrease the symptoms of opioid withdrawal. The effectiveness of each treatment is evaluated on a case to case basis. Lastly, the duration of the treatment is another factor in determining the effectiveness of substance abuse treatment (US Department of Health and Human Services 2004).

2.5 The Latino Family

The family is the most important institution in the social organization of the Latino community, both in the United States and the countries of origin. Family is what dictates how individuals interact with society as a whole. While this is true for nearly all cultures and peoples, Latinos have consistently placed special emphasis and value on family. Additionally, the family and its core elements are vital to the acculturation and adaptation process of Latinos in the United States. For many Latinos new to the United States, family members are the only source of employment opportunities and housing as well as future social networks. Also, the changes in family composition due to acculturation often serve as stresses in the lives of Latinos, both new to the United States and native (Kanellos 1993).

Although each particular Latino group – Mexican/Chicano, Puerto Rican, Colombian, Brazilian, etc – has evolved the concept of family in a slightly different way, the basic elements of family are consistent throughout the Latino community. Most non-Latino Americans consider family to mean the nuclear family, which consists of a man, woman, and their children; however, the Latino family includes the concept *la familia* – the greater, extended family consisting of parents, grandparents, aunts, uncles, and cousins on both sides of the nuclear family. In order to discuss the large social network of mutual support and reciprocity that is *la familia*, a distinction must be made between household and family. Anthropologists have defined households as groups of people tied together by a place (the home) whereas families are people tied together by feelings of kinship. In essence, households are units of residence in which people and resources are connected and distributed (Kanellos 1993).

La familia has many supporting elements that allow it to function and flourish, namely the extended family, *parentesco, compadrazgo, confianza,* and family ideology. For Latinos,

family ideology is more than just a way people think about family; it is the ideal standards each individual member strives to achieve. Family ideology maintains that rule that family is the central and most important institution in life which holds individuals together, and to that end, individuals should always put family before personal concerns or needs. Ideal roles and behaviors of family members are also defined by family ideology. Given the long tradition of *machismo* in the Latino community, it is not surprising that the ideal family is patriarchal, led by a strong male. Although this is the ideal, it is often not the case as women are frequently authority figures within the family in both subtle and direct ways. Children in an ideal family follow the commonly heard adage that children are to be seen and not heard, showing *respeto* (respect) for all elders (Kanellos 1993).

Living in the United States has resulted in families that no longer follow the family ideal discussed above, primarily in the roles of women and children. Latina women are stereotypically expected to be housewives concerned only with child-rearing and maintaining a household while obeying their "men" (husband, boyfriend, fiancée, etc.), but many Latino households are now being headed by women. That is to say women are becoming the primary "bread winners" in Latino families. Family ideology, however, still maintains a patriarchal system even if it is not often attained. Children's roles have also changed in Latino families. Since children are being taught English in school and likely interacting with non-Latinos more often than their parents, children have begun brokering social exchanges between their parents and English speakers, for example store employees. This dependence upon the children has had great effects on *la familia* and the children themselves (Kanellos 1993).

Some form of the extended family is present in the life of all Latinos and as such is a very important element of *la familia*. Most Latinos, especially those who have lived in the United

States for many years or who were born here, favor a household of just the nuclear family with grandparents, aunts, uncles, and cousins in separate households. Extended family households are typical during the transitional stages to living in the United States when the newcomers need extra help adjusting to life in a completely new environment. The extended Latino family also transcends geographical borders, having members in the United States and native country that function similarly to an extended family living in a single country or area (Kanellos 1993).

The importance of the Catholic religion to the majority of the Latino community also serves as a means of expanding *la familia* through the rituals of baptism and marriage. The baptism of a child creates an important component of the Latino family called *compadrazgo* (godparenthood). Parents typically choose *padrinos* (godparents) for their children from either family or very close friends, which strengthens already existing familial relationships or extends kinship to nonrelatives. The term *compadrazgo* comes from the idea that the godparents are actually more like *compadres* (co-parents) with special responsibilities pertaining to their *ahijado/a* (godchild), for example raising the child should the parents pass away or be otherwise unable to parent the child. Godparents have a special relationship of reciprocity and mutual help with the parents, to the point where many refer to the other as *comadre* (co-mother) or *compadre* (co-father). Because *compadres* are expected to care for one another in times of need, be readily available during crises, and provide mutual help, *compadrazgo* is particularly important during the early stages of immigration. In fact, *compadres* have frequently provided jobs and shelter to newcomers as well as help acclimating them to a completely new environment immediately following arrival in the United States (Kanellos 1993).

Another way in which *la familia* is extended to include nonrelatives is the through *parentesco* (kinship sentiment) in which the family network grows to incorporate nonrelatives

from similar geographical areas. The idea of *parentesco* evolved from the need to establish support networks in new areas of settlement and the fact that historically speaking, similar regions of origin indicated at least distant kinship. To express the closeness of the relationship, many Latinos use the terms *primo/a* (cousin) or *tío/a* (uncle/aunt) for members of the network who have been included through *parentesco* (Kanellos 1993).

For both *parentesco* and *compadrazgo*, the idea of *confianza* (trust) is incredibly important for Latinos in the United States. Confianza in the Latino community goes much farther than simply trusting a person, it is the basis of forming lifelong, reciprocal relationships. Establishing *confianza* in a friendship will frequently lead to *compadrazgo* and *parentesco* later in life (Kanellos 1993).

2.5.1 The Family Structure of Puerto Ricans

Puerto Ricans constitute the second-largest Latino group in the United States. The structure of most Puerto Rican families has deviated from the idealized version described above in ways that directly reflect events of the twentieth century (Kanellos 1993).

The first group, of noteworthy size, of Puerto Ricans arrived in New York City in the last years of the nineteenth century, as the Spanish-American War raged on. Most of these immigrants who had fled Puerto Rico were fighting for Puerto Rican independence from within the borders of the island's ally. After the United States obtained Puerto Rico from Spain, many members of the freedom-fighting group returned to Puerto Rico, but most felt betrayed when the United States refused to support the liberation movement and relinquish control of the island (Kanellos 1993).

The power held by the United States in Puerto Rico had dire effects on the economy of the small island. As the capital interests of the United States gained ownership of most of the

land, the Puerto Ricans became increasingly more dependent upon cash crops for labor and outside commodities. The changes caused by United States control also induced high rates of unemployment, which when coupled with a very large working-age population and a decreased death rate spelled disaster for the Puerto Rican economy and society as a whole (Kanellos 1993).

Between 1898, when the Spanish-American War ended, and the beginning of World War II for the United States, Puerto Rican immigration to the United States could be described as a slow, but steady stream with most Puerto Ricans leaving the overwhelmingly unemployed island for jobs in the United States. The majority of Puerto Ricans immigrated to New York City, where the first group of Puerto Ricans had settled during the Spanish-American War. In fact, by 1940 87% of the roughly 70,000 Puerto Ricans in the United States were living in New York City. World War II slowed immigration greatly due to the dangers involved with traveling in the Atlantic although flights between New York City and Puerto Rico had become regular and relatively inexpensive. Following the end of the war in 1945, these flights became the primary mode of transportation for what has become known as the "Great Migration." With the economy of Puerto Rico continually worsening and the unemployment rate continuing to rise, huge numbers of Puerto Ricans sought out jobs in the United States (Kanellos 1993).

The move to the United States did not, however, solve the issue of poverty for many Puerto Ricans. With the economy of Puerto Rico long in disarray, the educational system had also begun to fail. Therefore, most of the young men, who established themselves before sending for spouses and children as was traditional with many Latino groups, had low skill levels and little to no education, so the jobs available paid quite poorly (Kanellos 1993).

The "Great Migration" ended in the 1970s when the "revolving door" migration phenomena began. Since the Jones Act of 1917 granted United States citizenship to all Puerto

Ricans, many moved back-and-forth between the island and the mainland. Puerto Ricans are the only Latino group granted citizenship from birth and this fact has had interesting effects on the Puerto Rican family structure in that extended family ties that would normally be weakened or lost by migration have actually been maintained or strengthened. Additionally, many Puerto Ricans born in the United States have recently returned to Puerto Rico (Kanellos 1993).

The aforementioned low skill and education level led to lower pay rates and higher unemployment among the Puerto Rican population which consequently put stress on the family, often causing fragmentation of households. The following household templates emerged among Puerto Ricans: dual-parent household with no employment, dual-parent household with at least one parent employed, single-parent household with employment, and single-parent household without employment. These households demonstrate the support system provided by the extended family in the Latino culture. Particularly for instances when both parents are unemployed the households are supported by extended family members living in the area, and in both cases of single-parent households, area family members provide help and support. Most Puerto Rican families fall into one of two broad categories. This reciprocal exchange of support is one of the family changes brought about by the urban lifestyle of Puerto Ricans in the United States (Kanellos 1993).

Another significant change to the Puerto Rican family is the increased role of women. Although the ideal family institutions of *parentesco*, *compadrazgo*, and *confianza* as well as patriarchy are still maintained among Puerto Ricans, women have gained more influence in the family since beginning to work. In many cases, women have actually become the primary breadwinners for their families or single-parent heads of households. As a result, women have begun taking on more traditional male roles in the family but since the men have not taken on

traditional female tasks in the family, the women must continue to maintain those roles as well (Kanellos 1993).

2.5.2 The Family Structure of Dominicans

As with Puerto Ricans, Dominicans began immigrating to the United States at the beginning of the twentieth century. However, mass immigration of Dominicans did not begin until the 1960s due to the political situation on the island nation until that point. The United States had strong influences in many of the Caribbean islands and the Dominican Republic was no exception. North Americans and Europeans began to invest in the coffee, cacao, sugar, and cattle ranching that were abundant in the Dominican Republic, which created a young labor force heavily dependent on foreign cash crop markets just like in Puerto Rico. In fact, the economic situation in the Dominican Republic became so dire that the United States engaged in an eight-year occupation during which time major changes in the education and healthcare systems took place. Under the guidance of the United States' government, schools and hospitals were built where none had existed, roads and bridges were constructed to connect once remote areas, and the political power of local leaders was neutralized as the government became centralized. However, these benefits should not overshadow that effects that foreign, especially American, interests had on the Dominican Republic (Kanellos 1993).

Dictator Molina Trujillo took control of the island nation by working his way up the ranks of the American-established Dominican Republic National Guard and remained in power for thirty years. President Trujillo, as he was called, established many pro-national programs during the reign commonly called the "Trujillato." With the population restricted to the island, immigration to the United States was barely noticeable. As a way to create a strong national labor force, and perhaps respond to a long-standing dispute with Haiti, Trujillo developed a

program to promote population growth. And during his thirty year reign, the population of the Dominican Republic doubled from 1.5million people to 3million. Unfortunately for the Dominican Republic, when Trujillo died the pro-national programs fell into disarray and the island was left with a disproportionately large, young labor force and high rates of unemployment (Kanellos 1993).

Just as Puerto Ricans left their economically disadvantaged island for the jobs of New York City and the Northeastern United States in general, the Dominicans began to immigrate to the United States in huge numbers. In the decade preceding Trujillo's death only 9,800 Dominicans entered the United States, but in the two years following his death there was a six-fold increase. Unlike Puerto Ricans who, being American citizens, were able to move at anytime, many Dominicans have entered the United States illegally. Some enter the United States on nonimmigrant visas and simply never leave while others first travel to Mexico then cross the border as many Mexicans and Central Americans do (Kanellos 1993).

The ways in which Dominicans utilize the extended family to initiate migration, adaptation, and settlement are more obvious than for most Puerto Ricans. For Dominicans, it is the job of a few select family members to enter the United States and use the institutions of *confianza* and *parentesco* with other Dominicans to form large networks based on reciprocal support in order to facilitate the immigration of other family members. This direct and maintained contact with the Dominican Republic has facilitated a very strong ethnic identity among the Dominican population in the United States. The fact that there has been a relatively steady stream of immigration means that a large portion of the population is first generation Americans who have a very strong ethnic attachment to the Dominican Republic. Lastly, most Dominicans settle in areas with large, pre-existing Latino populations (Kanellos 1993).

The role of Dominican women has changed in response to immigration to the United States in two very different ways. As with the Puerto Rican population in the United States, many Dominican women have taken on the role of primary breadwinner/head of household, thereby diminishing the patriarchy of the ideal Latino family. Family templates similar to those in the Puerto Rican community have emerged in the Dominican community (single-parent employed, double-parent both employed, etc.), also frequently augmenting the role of women. However, not all Dominican women have gained power after immigrating to the United States. Women who are not employed are typically confined to the house where they care for their children, having few contacts outside their own households or families (Kanellos 1993).

In addition to changing roles of women, the size of Dominican nuclear families has also changed. Financial restrictions have caused Dominicans in the United States to have fewer children, on average, than those living in the Dominican Republic. Additionally, the high cost of housing, food, clothes, and other necessities in the United States has made it nearly impossible for most women to remain the full-time caregivers of their children. However, with the cost of outside childcare skyrocketing, most families also cannot afford to hire caregivers. Faced with these financial dilemmas, many Dominicans with young children have brought their parents or other extended family members to the United States to serve as caregivers so that both parents are able to work (Kanellos 1993).

The way in which Dominicans enter the United States in waves of sort, with young men typically going first in order to gain employment and housing before sending for the rest of the family, has had interesting effects on the conjugal relationships. The *union libre* (free union) in the Dominican culture allows men to have more than one "wife." While this polygamous idea is not common or legal in the United States, it is socially and legally acceptable in the Dominican

Republic. Free unions allow young men to share expenses, households, and relations in the United States while still maintaining families in the Dominican Republic, with the woman considered the legal wife in the United States (Kanellos 1993).

3- Methodology

This section outlines the processes and methods by which data was collected. The survey was designed based on research and consultations with professionals in the fields of public health, statistics, and psychology. The survey was then pretested to ensure that its material and content were conducive to the target audience in which there is a wide range of educational levels. In an attempt to eliminate language barriers, the survey was translated from English into Spanish and Portuguese. The survey was distributed in community centers frequented by the Latino community of Worcester.

3.1 Project Design

The objective of this project was to create a framework that could assist with future research for understanding accommodation disorders and substance abuse among the Latino population. As mentioned in previous sections, acculturation can impose either a positive or negative emotional effect on an individual, based on environmental factors. In this study some of the negative stressors imposed by acculturation were explored in attempt to find correlations between accommodation disorders and substance abuse.

A survey was chosen as the form of data collection because it retrieves specific information from a sample population without the need to conduct formal interviews. Surveys are not only time efficient but also completely anonymous. Anonymity was particularly

important for this survey because it included the topics of mental illness and substance abuse, both of which are considered taboo in the Latino community. Additionally, surveys allow for wide distribution to the sample population, which gives more validity to the results. Lastly, due to the taboo nature of the subject matter, the anonymous and slightly impersonal nature of the survey was thought to promote response honesty. With surveys, the possible answers are already provided so that the respondent need only select the option befitting his/her opinion, which also makes response analysis easier. There are several variables that should be taken into consideration when working with human subjects, including the way in which each individual is approached. In order to preemptively eliminate bias about the survey, each individual was approached in exactly the same way, following a written research protocol that was IRB approved.

The weaknesses of using a survey for data collection were also considered when initially selecting a data collection method. During survey distribution, the subject could lose the desire to complete the survey and either refuse to participate in the study or provide inaccurate information. Limiting the amount of personal contact could also be a factor that negatively affects the survey response. Because Latinos are the sampled population, the social context in which this survey is distributed should be adequate to their culture and accustomed social behavior. Another limitation is the fact that the answers presented on the survey might not satisfy a subject's opinion and he/she may feel obligated to choose a provided response which could consequently misrepresent the Latino community. Therefore, the survey was constructed in a way that best eliminated potential bias and limited answers. Several community centers known to be frequented by members of the Latino community of Worcester were contacted via email or phone however, not all of the contacted locations allowed for survey distribution, and as a result

the actual sample population was selected based on convenience. It is therefore important to note that there was a built in bias in the project whereby only the individuals who attend such community centers were represented in the survey data, which unfortunately excludes the Latinos in Worcester who do not attend the community centers.

Another inherent bias was a self-selection bias on the part of the individuals who completed the survey. That is to say, individuals elected to take the survey or not (self-selection). These biases were taken into consideration during the data analysis. The results obtained from this project are not in any way representative of the whole Latino community of Worcester. The main purpose of the data obtained from the survey is to better understand the potential effects of acculturative stresses on the Latino community.

3.2 Data Collection via Survey

This section outlines the procedures and methods that were implemented to generate a survey based on researched best practices and professional consultations. There were several phases to the survey construction in order to ensure that the survey was designed to adequately target the sample population.

3.2.1 Defining the Survey Sample

Before generating questions for the survey, it was necessary to better understand the target population by gathering information based on Ford and Tortora's checklist. The checklist included defining the following: population, frame used (guideline for population selection), population structure, sampling unit, and other parameters in sample design. The population was defined as the Latinos in Worcester, Massachusetts. The frame, or selection guidelines, was Latinos who attended the community centers selected for survey distribution. This frame was

defined as such because the population structure of the Latino community is spread out and distributing the survey in the community centers was thought to be the most effective way to target a broad population. The sampling unit was considered to be the Latino subject completing the survey (Ford 1978).

The information discussed and outlined in the Background chapter served as the base for understanding the culture and behavior of the Latino population. After reviewing the sampling methods presented by Fink, it was decided that the sampling method most appropriate for this study was convenience sampling, which is a non-probability sampling method. A non-probability sample is one in which data is only collected from some of the 'targeted population based on the needs of the survey' (Fink 1995). Because convenience sampling acknowledges the fact that the sampled individuals are not representative of the entire Latino community, it was the best fit for this project. That fact was particularly important for this project because survey distribution was based on the permission and availability of the centers. The Research Protocol document in the Appendix contains a list of said community centers.

3.2.2 Survey Construction

This section describes the phases of survey construction. There are four sub-sections of this Survey Construction section, the first being "Survey Layout and Content" which describes how the survey content was decided upon and how the content affected the layout of the survey. The second section, "Generating Questions for the Survey," outlines the way in which the questions for the survey were generated. The third section, "Psychology of Survey Response," describes how the psychology behind survey responses affected the construction and specific characteristics of the survey. The background knowledge gathered was used to estimate the reaction of the Latino community to the questions. Finally, the "Maintaining Anonymity"

section describes how the survey's construction protects the identity of the sampled subjects according to the Institutional Review Board (IRB) requirements.

3.2.2.1 Generating Questions for the Survey

The survey questions were constructed based on the background research for substance abuse, accommodation disorders, and acculturation. The questions included demographic information, symptoms indicative of accommodation disorders, emotional responses to acculturation, and substance abuse. Each of the aforementioned topics was given its own section in the survey.

A checklist from Fink's book, "How to Ask Survey Questions" was used to ensure that the questions did not present bias, ambiguity, or guided answers. To avoid further biases or guided questions Lohr's checklist was also used when phrasing the survey questions (Lohr 1999). The checklist included "learning the characteristics of the survey's targeted respondents, deciding on the appropriate level of specificity, asking exact information in an open-ended format, using current worlds and terminology, and deciding comparability" (Fink 1995). In addition to the information compiled in the Background chapter, meetings with community leaders like Reverend Sarai Rivera and Doctor Matilde Castiel made it possible to fulfill both checklists. The language used in the survey was simple and informal, in order to ensure that subjects with various educational backgrounds and ages would be able to understand the questions. Fink provided another checklist to help determine if a question should be open-ended or not, and after reviewing that information, it was determined that closed questions would be most appropriate because closed questions put limits on the responses provided.

To further assist the statistical analysis of the survey responses, categorical and numerical response choices where used. Categorical choices are defined as given choices to a specific

question, which limits the responses of the sample population. In order to allow for individual responses and avoid directed answers, the "other" option was available. Numerical responses in the survey were all evenly numbered (four options rather than five) in order to force the subjects to express a definite opinion on the subject matter. In terms of psychology, an even numbered response choice would not be appropriate because it forces the subject to take a stance on the subject matter for which he/she may not have an opinion. (Appendix: Prof. Doyle's Survey Corrections). Statistically speaking, presenting an even number of response options is ideal because it restricts the response parameters within a small surveyed sample.

3.2.2.2 Survey Layout and Content

The survey was constructed based on the advice from a statistician, Prof. J. Petruccelli, and a psychologist, Prof. Doyle, who are both faculty members of Worcester Polytechnic Institute (WPI). Sanouri Ursprung, a member of the University of Massachusetts Memorial Health Center and WPI alum was also interviewed due to her experience with survey construction and distribution (Appendix: Notes from Sanouri Usprung). When meeting with these professionals, the purpose and objective of the survey were presented such that the advice and suggestions were adequate and specific to the survey.

The questions were divided into sections to guide the respondents through the survey. Labeling the sections ensured that the respondents understood the purpose of each question and the subject matter to which it pertained. "Introductory Questions" (Section 1) did not impose any significance on the results but rather were used to ease the subject into the survey. The purpose of Section 2, "Quantifying Acculturation Stressors," was to analyze the presence of acculturative stresses felt by members of the Latino community. The acculturative stresses included language barriers, cultural embarrassments, and experiences of prejudice. Section 3

"Analyzing Symptoms of Accommodation Disorder," outlined the symptoms pertaining to accommodation disorders. Five phrases describing a symptom were presented along with a quantitative bar measuring the frequency and severity at which the subject experienced the symptom. Section 4 "Substance Abuse Information," listed the substances most commonly used in Worcester and asked the respondent to indicate his/her frequency of use for each substance as well as any attempts to cease use. Section 5 "Demographic Information," included questions pertaining to the individual's cultural background, education, and age (Appendix: English Version of Survey).

At the very top of the first page of each survey was a paragraph that explained the purpose of the survey. It also outlined the subject's right withhold information or cease participation at any time. Identity protection and anonymity was also explained in this introductory paragraph, ensuring subjects that the information they provided would not be disclosed and no information could be traced back to them. All of the information in this introductory paragraph satisfied the guidelines set out by WPI's Institutional Review Board.

After the introductory paragraph, Section 1 presented four yes or no questions relating to community safety and unity. These types of questions were suggested by Professor Doyle as a way to ease the subjects into the survey that deals with rather taboo topics (Appendix: Prof. Doyle's Survey Corrections). The topics of this first section were selected because they did not require deeply personal information from the subjects. As mentioned in the background, Latinos are generally very social and value social interactions and unity in their community, so questioning their social surroundings was intended to evoke positive emotions regarding the survey. These positive emotions would hopefully encourage the subject to respond to the questions about the negatively perceived topics of mental illness and substance abuse.

Section 2 presented a set of five phrases and a quantification scale that allowed the subject to select the extent to which each phrase applied to him/her. The five phrases are closed questions regarding prejudice and other acculturative stresses. The acculturative stresses listed are commonly referred to as "culture shock" and social alienation caused by being of a different cultural background. For each phrase there was a numerical scale ranging from 1 to 4, where 1 represented *Strongly Disagree,* 2 indicated *Disagree,* 3 indicated *Agree,* and 4 represented *Strongly Agree.* Each respondent was instructed to indicate to what degree they agreed or disagreed with each phrase.

Section 3 presented five symptoms expressed as simple phrases. Each symptom had a section where the respondent was asked to numerically evaluate the frequency and severity of each symptom experienced. The *frequency* describes how often the symptom is experienced, with 1 being "not at all" and 4 meaning "very often". *Severity*, on the other hand, described how bothered the subject was by each symptom, the same numerical scale as *frequency* was used.

Symptoms from the Diagnostic and Statistical Manual of Mental Disorders (DSM) and International Classification of Disease and Related Health Problems (ICD) from the World Health Organization (WHO) were compared in order to avoid any culturally-bound discrepancies(Appendix: Symptoms Overlap Analysis of ICD and DSM). A cross reference of symptoms relating to mental illness and behavior disorders due to psychoactive substance abuse and those of accommodation disorders was made, resulting in the five symptoms presented in the survey.

Section 4 explored the substance use of the sampled subjects. A grid with that listed specific substances and a numerical scale so that the subject could numerically indicate the frequency of use for each substance using the scale where 1 represented *Tried it Once* and 5

meant *Daily*. The substances presented in this section – marijuana, cocaine, heroin, and alcohol – were selected based on the research in the Background chapter of this paper which cite marijuana, cocaine, and heroin as the most commonly abused drugs in Massachusetts. Alcohol was added as a choice because it was also seen as an abused substance in the Latino community but it was not illegal like the other substances. The subject was also asked to select the all the reasons why he/she began using the aforementioned substances from a list of the most common reasons, and once again the "other" option was available. Questions regarding rehabilitation and attempts to cease substance abuse were also presented. This information would help evaluate the accessibility and availability of medical and rehabilitation centers in Worcester for the Latino community. In addition to a question about self-medicating practices, the subjects were asked whether the substances were used before or after the symptoms listed in section 3 were first experienced. It was hoped that these two questions would help establish a timeline for substance abuse and mental illness – did one precede the other or not.

Section 5 was meant to extract demographic information, including age, sex, nationality, education and employment status of those surveyed. The information from this section would help determine if the sample of respondents is representative when compared to census data for Worcester. Also, the responses would be useful in determining if correlations exist between substance abuse and mental illness based on age, gender, country of origin, etc.

The closing paragraph thanked the respondent for his/her participation and offered the respondent the opportunity to participate in an anonymous phone interview in order to further elaborate on any of the topics covered in the survey.

3.2.2.3 Psychology Behind Survey Response

An important aspect to be considered when writing the survey questions was the psychology behind survey response. Due to the sensitive nature of the subject matter, there was a possibility that the respondent might erroneously respond to the questions, thereby providing unreliable information. Therefore, information from the Tourangeau *et al* book was used to create a survey layout and research protocol based on psychology. Once the survey was created Prof. Doyle's input was considered the first phase of survey pre-testing.

Tourangeau *et al* describes four survey "response processes that a responder experiences when given a survey," which include "comprehension of the item, retrieval of relevant information, use of that information to make required judgments, and selection and reporting of an answer" (Tourangeau *et al* 2000) The way a question is phrased can affect the way in which a respondent comprehends the questions and formulates his/her answer. There is a known human tendency to answer questions based on socially accepted ideas in an attempt to avoid being isolated or considered different. Each question was therefore constructed with Cannell, Miller and Oksenberg's flowchart of survey response process always in mind (Tourangeau *et al* 2000). The flowchart begins with the respondent's comprehension of a question. Once the question is understood, the respondent internalizes the question and evaluates it while organizing his/her ideas. Throughout this process, the respondent evaluates his/her response based on several factors, including the interviewer's appearance or introduction, the previous question, or on his/her personal values and thoughts. When analyzing survey data, it is difficult to determine the validity of the answers provided by the respondents because the respondent may have withheld information or not been entirely honest. The respondent's reasons for withholding accurate

information could be due to either a "conformity, desirability, or acquiescence biases" or the misunderstanding or misinterpretation of a question.

3.2.2.4 Maintaining Survey Anonymity

As mentioned previously, substance abuse and mental illness are considered taboo in the Latino culture. It was therefore imperative that the sampled individuals knew that anonymity would be maintained throughout the data collection process. One can argue that the impersonal nature of surveys can induce feelings of comfort in some respondents because the information gathered from the survey is anonymous. At the same time, a certain degree of trust between the survey respondent and administrator should be attained in the hope of augmenting the feelings of comfort and trust when the survey is being completed. Honesty, trust, and respect are all characteristics that the investigator should have when approaching the surveyed individual according to Tourangeau (2000).

A consent form was neither created nor required for the subjects because the form itself would disclose the identity of the participants. In place of a consent form, the introductory paragraph of the survey and the research protocol were used to ensure that each participant's rights were clearly understood prior to participating in this study.

Tourangeau emphasizes the importance of privacy and anonymity when a survey is conducted, particularly when the subject matter is of such a sensitive nature as mental illness and substance abuse. According to Tourangeau, this will likely minimize the amount of "nonresponsive" surveys where the respondent refuses to answer the question, omitting information. Nonresponsive surveys would cause significant alterations in the data analysis and limit the sample size.

In summation, surveys were the ideal form of data collection for the Latino community because it was an impersonal way to extract information. Anonymity was considered at all times to ensure that all information collected could not be used against any of the subjects, thereby satisfying the IRB guidelines. Additionally, the IRB review ensured that those conducting the research were aware of the procedures of identify protection necessary when working with human subjects. IRB approval was granted by Professor Rissmiller of the WPI Social Science & Policy Study department after reading and reviewing the English version of the survey along with the written research protocol.

3.2.3 Phases of Construction: Translation and Pre-testing

The survey was translated into Spanish in order to eliminate language barriers and other biases. To ensure the accuracy of the translation, two Spanish professors were asked to evaluate the translated survey. This evaluation process removed language and meaning ambiguities due to colloquialisms in both languages. Given that the two professors were of different nationalities (Professor Matos-Nin is from Puerto Rico and Professor Alvarez is from Spain), two different alterations were often suggested. Therefore, the alterations made to the survey were a combination of the two suggestions in an attempt to accommodate the varying dialects of Spanish spoken in the Caribbean, Central and South America. English speaking professors from the departments of Mathematics and Psychology, Professor Petruccelli and Professor Doyle respectively, were asked to critique the survey based on the Survey Evaluation Form. These pre-testing phases ensured that both versions of the survey had been reviewed and processed so that limited ambiguities were present. The items outlined in the Survey Evaluation Form are based on the background research of the best practices of surveying as well as template information obtained from several conversations with Sanouri Ursprung. Survey structure and question

phrasing were the primary concerns of the evaluation form. This whole process was defined as pre-testing Phase-I.

The second phase of pre-testing allowed for more modifications following the first round of surveying at Centro Las Americas. The modifications pertained to minor language and layout alterations. The language was further simplified and certain words were bolded to put further emphasis on the questions.

3.2.4 Survey Distribution in Selected Locations

A list of potential community organizations and health clinics was proposed by Sara Trillo Adams of the Central Massachusetts Area Health Education Center (CMAHEC) and Dr. Matilde Castiel, a doctor working within the Latino community. Once the list was compiled, every location was investigated in order to better understand the people who attended each facility, allowing the researchers to potentially select and focus the survey distribution on a specific age group. Profiling this way would help ensure the validity of the data collected and the correlations identified. Survey distribution criteria were formulated in order to maintain consistency in survey distribution, avoiding a large range of potential inconsistencies. A letter was sent via email to the suggested organizations outlining the objectives, purpose and significance this study will have on the community (Appendix: Introductory Letter). That being said, selection of the institutions where the survey was administered was based on convenience as well as which locations allowed survey distribution following IRB approval. Unfortunately many locations did not grant permission for survey distribution due to certain liability issues or interrupted communication, but the survey was distributed at Centro Las Americas, Jeremiah's Inn, and the Hector Reyes House.

3.2.5 Evaluating Survey Validity and Reliability

A protocol was written to ensure that all the sampled individuals were approached in the same manner. This consistent approach helped eliminate bias imposed on the respondents based on the survey administrators' appearance or mood, thereby increasing the validity of the data collected (Link 1995).

4- Results and Conclusions

The results gathered from the survey did show a positive correlation between acculturative stresses and substance abuse. Due to the small sample size it cannot be considered representative of the Worcester Latino population. Therefore the results obtained from this study are merely potential indications that such correlations exist within the community. The results seem to support the hypothesis that there is a correlation between acculturative stresses and substance abuse, although the results are not statistically significant enough to fully support the hypothesis. For that reason, the main purpose of this project is to create a framework which can assist further research, and suggestions have been outlined to assist future researchers in the administering the survey. These suggestions were generated based on the results and experiences gathered while distributing the survey. Similar, more statistically significant, correlations would likely be obtained if the suggestions are followed.

In addition to suggestions, a set of potential options to decrease the acculturative stresses felt by Latinos living in Worcester. These options are based on observations made during the survey distribution as well as information gathered from the sampled population. The suggested options also support rehabilitation treatments specifically catered to Latinos. Implementing a

rehabilitation environment specifically for Latinos is believed to more effectively assist with the recuperation process of Latino substance abusers.

Finally, this project acknowledges the presence of acculturative stresses and potential accommodation disorders among Latinos in Worcester. Based on the data obtained, there was not a strong indication of accommodation disorders, but there was a consistent although less severe pattern of acculturative stresses. Future investigations could further support these observations with a larger sample size. The acculturative stresses felt by Latinos should be further evaluated because of they may effect a majority of American immigrants, not just Latinos. There was evidence from the data collected that the Latino family composition changes upon immigration to the United States, and this alteration could be, in large part, a reason for the social and acculturative stresses Latinos experience.

4.1 Reactions to Survey Distribution

The research protocol was followed every time a person was approached and a survey was distributed. A constant environment had not been created specifically for the survey distribution which may have altered the way in which the survey was perceived by respondents. Potentially, if a specific location or infrastructure had been assigned for survey distribution, the survey may have been perceived to have more academic weight and validity, which would consequently generate more accurate results because the individual will be in a more appropriate environment for the survey. Survey distribution was always altered slightly in order to best suit the environment of each center. For example, when the survey was distributed in a location with many potential participants, an announcement was made to the whole room regarding the study and then each individual was approached and spoken to. Gaining the undivided attention of all

individuals was nearly impossible since they were usually socializing, but when a formal introduction was made to a specific individual, their attention was on the survey administrator.

4.2 Results and Analysis of Surveys

The results were collected and analyzed using an Excel spreadsheet and the data was divided into the same sections as the survey. Nine graphs were generated from the data and they are presented in the Appendix. The discussion of the results is divided by graph.

Graph -1: Response Distribution for Introductory Questions

The majority of the questions generated positive responses about the Latino community. The questions acknowledged topics such as community safety, enjoyment, participation in activities and unity. There was a slight decrease in the number of individuals who indicated feeling a sense community unity. This may be an indication that the social structure of the Latino population in Worcester has changed, potentially causing some acculturative stresses. These four questions were used as an easy, non-threatening introduction to the survey. Understanding how Latinos feel about their community provided some insight to understanding their social behavior. Overall, the results from Section 1 indicate that the Latino community is still seen as an enjoyable social network in Worcester. However, the conclusions generated are only applicable to the small sample size obtained in this project.

Graph -2: Response Distribution for Education Level

The majority of individuals had at least some high school education. The response rate for this section was 69% (18/26), therefore these results do not carry much weight when describing the overall education level of the sampled population. From the data collected, 39% of Latinos completed some high school level education and 28% of those sampled held either a high school degree or GED. About 67% of all sampled subjects had a high school diploma,

GED, or at least some high school education. Only 11% held a Bachelors degree or some college education. Combined, 28% of the subjects had at least some college level education, with some holding bachelor's degrees and even some post-graduate education. Only 5% of the sample had no formal education. Based on these results, it is possible to say the Latino community has basic educational levels; but once again, these results cannot be used to draw conclusions about the Latino population as a whole because the results are from a small sample of 26.

Graph -3: Response Distribution for Language Proficiency

In this section the subjects were asked to identify their proficiency in Spanish, English and Portuguese. Since none of the subjects were Brazilian or spoke Portuguese, only the data for English and Spanish are presented. Spanish was identified as the language the majority of subjects spoke at home and on a daily basis. About 77% of the respondents selected a 4 (comfortable in conversation), the highest numerical choice to evaluate proficiency in Spanish. About 19% of respondents selected a 1 (few words) in describing their English ability and about 15% described their English proficiency as a 4. In this particular section the response rate was of 100%. As previously mentioned, the results are not representative of the whole Latino population, but the results may indicate some of the language characteristics of Latinos.

Graph -4: Response Distribution for Acculturation Questions

This section asked Latinos how they are perceived. The questions included whether they felt a need to be more American, if they were stereotyped, if they were discriminated against, if they avoided speaking Spanish in public places, and if they felt comfortable interacting with non-Latinos. The subjects were given numerical categories from 1 (Strongly Disagree) to 4 (Strongly Agree) to identify how much they agree with each statement. For the first question, whether

Latinos felt a need to be more "American," 65% either agreed or strongly agreed to this statement, while 35% disagreed or strongly disagreed. The response rate for this particular question was of 100%, having with a sample number of 26. As for question two, whether Latinos felt stereotyped, about 76% either agreed or strongly agreed and 24% disagreed or strongly disagreed. The response rate for this question was lower than the first question, with 81% of respondents answering it (21 out of 26). The third question asked if Latinos felt discriminated against and the response rate for this question was about 77% (20 out of 26). Out of those 20 subjects, 60% either agreed or strongly agreed with the statement while 40% disagreed or strongly disagreed. The forth question had a response rate of 88% (23 out of 26). The question asked if subjects avoided speaking Spanish in public. The responses showed that 65% disagreed or strongly disagreed and 35% agree or strongly agreed with the statement. The last question of the section had a response rate of 92% where 58% agreed or strongly agreed to the statement that indicated difficulty interacting with non-Latinos. On the other hand, 42% disagreed or strongly disagreed with this statement.

In conclusion, the sampled Latinos of Worcester expressed feeling some sort of social alienation from the mainstream American culture. A majority of Latinos denied avoiding speaking Spanish in public areas where the majority of individuals spoke English. This is an indication that although Latinos feel they are negatively perceived, they still maintain their identity as a Latino by speaking their native language in public. This phenomenon can be explained in two ways. Perhaps Latinos are proud of their heritage and feel comfortable when speaking their own language, or perhaps that they do not want to learn English because they are negatively perceived.

Graph -5: Response Distribution for Adjustment/Accommodation Disorder Symptoms

The five symptoms for accommodation disorders generated from the cross-comparison of the ICD and DSM-IV (described in the Methodology chapter) were presented in this section. For each symptom the individual was asked to numerically evaluate the frequency and severity in which the symptom was felt where 1 was *never* and 4, *all the time*. An average of the frequency and severity was calculated and presented in Graph-5. For the first symptom, *I do not feel socially functional or able to complete my daily activities*¸ 61% of the sampled subjects expressed never or sometimes experiencing the symptom, while 39% described having it often or all the time. The second symptom, *I feel stressed, frustrated, and/or irritated*, had 56% of respondents never or sometimes experiencing the symptom and 44% experiencing it often or all the time. The response rate for both these questions was only 69%, which is quite low especially considering the small sample size. For the third symptom, *I feel sad and unmotivated to perform certain daily activities*, 65% of the respondents felt the symptom often or all the time and 35% described never or sometimes having the symptom. The response rate for this question was lower than the previous two symptoms, at a mere 65%. The fourth symptom, *I feel anxious, having heart palpitations and sweating*, showed 56% of the respondents often or all the time experienced these symptoms, and 44% of respondents expressed that they either never or sometimes experienced the symptom. The response rate for the fourth question was 62%. The final and fifth symptom, *I have mood swings, and my emotions change quickly*, showed that about 62% of the respondents never or sometimes experienced the symptom, and 38% of the respondents felt it often or all the time. Of all the symptoms, this had the lowest response rate (50%).

In conclusion, most of the symptoms were not shown to have been experienced by the Worcester Latino community. The results presented in Graph 5 show the data obtained from all the sampled individuals, but it is difficult to make a correlation between substance abuse and the existence of these symptoms because not all respondents were substance abusers. For that reason, the data of those who admitted to substance abuse was analyzed separately to better determine if such a correlation was present within the sample. The low and inconsistent response rate of this section could have been due to the fact that mental illness is a taboo in the Latino community and acknowledging such symptoms is very rare.

The data analysis below will focus solely on the data for the ten individuals who admitted to substance abuse. Out of the ten who admitted to substance abuse, 4 were born in the United States and 6 were born aboard and/or in Puerto Rico. Seven of the ten admitted to using substances as a form a self-medication but eight of the ten used substances before experiencing any of the provided symptoms. These contradictory results could show that the symptom onset occurred as a result of substance abuse and in order to decrease the symptoms more substances were used. There is also a possibility that such symptoms are not genetically linked because only two of the ten mentioned family history, but in order to confirm this more research should be performed.

Graph -6: Age Distribution for Substance Abusers & Graph -7: Quantification for Reasons for Using Substances

The age distribution of the ten participants who admitted substance abuse is described in Graph 6. It shows 60% of the respondents were between the ages of 26-35, 20% from ages 36-45, 10% were older than 46. When asked the reasons for substance abuse, the most common reasons were curiosity and friends. Respondents were allowed to select all the choices that

applied to them. The second most common choices were feeling alone, feeling sad and having family problems. The least common reasons were feeling angry and family influence.

Graph-8: Frequency of Accommodation Disorder Symptoms for Substance Abusers

The ten men were asked to indicate the frequency and severity of the accommodation disorder symptoms and an average of both quantifications was calculated and graphed. The symptoms described in the section are the same as those analyzed for the whole sample (see previous section for specific symptom phrases). For the first symptom, there was a 90% response rate from which 44% said they experienced the symptoms often or all the time and about 55% either did not experience the symptom or experienced it sometimes. The second symptom had a 100% response rate with 40% of respondents experiencing the symptom often or all the time and 60% did not experience the symptom at all or only sometimes. The third symptom presented a response rate of 80% from which 25% expressed feeling the symptom often or all the time and 75% experienced the symptom sometimes or not at all. Symptom four also had a response rate of 100% where 60% experienced the symptom often to all the time and 40% experienced the symptom either sometimes or not at all. Finally the fifth symptom had a response rate of 90% where 33% did not experience the symptom or experienced it only sometimes and 67% did show signs of the symptom either often or all the time.

The positive correlation between accommodation disorders and substance abuse can be seen more clearly when the data is visually analyzed in Graph 8, which shows consistency in the expression of symptoms at a frequency of *often*. As previously mentioned, the reasons most commonly identified by respondents for substance abuse seemed to be either feeling alone or sad, curiosity, and friends. These reasons are indicative of the individuals experiencing social

pressures prior to using the substance. This also means that further investigation of these symptoms could indicate a possible presence of accommodation disorder.

Graph-9: Frequency Distribution for Substances Abuse

The frequency of abuse of the four selected substances was quantified in Graph 9. The frequency could be described as daily, weekly, monthly, yearly or tried it once. Most of the respondents showed substance abuse on a daily basis. Most of the respondents abused marijuana, cocaine and heroin on a daily basis. The highest and most common drug abused was heroin, with 6 respondents using it on a daily basis. Alcohol was not abused by many of the respondents and represented the least common substance abused. Pills and PCP were drugs that were identified in the section *other* where the respondents identified their frequency of use as daily. These results show that the consistent use of these three drugs is popular among Latino substance abusers, although further investigation could indicate otherwise.

4.2.1 Biases Presented in Survey

Several biases unavoidably existed in the survey and protocol, one being self-selection. The survey followed a convenience sampling where only the locations that approved survey distribution were used, which is not appropriate for generating significant statistical data due to built-in biases. Having a convenience sampling and a research protocol that allows for self-selection are both factors that weaken the validity of the data obtained.

The self-selection bias could not be avoided because every participant approached had the right to skip questions or not take the survey at all. Because there was no motivation for individuals to participate, the survey was often perceived as a nescience. This opinion may have resulted from a miscommunication about the importance of the research as well as how crucial a large sample was for the results. The very nature of the survey, addressing the topics of mental

illness and substance abuse, could have been another factor that limited survey participation. In order to determine which factor had a greater effect it would be necessary to evaluate survey responses after implementing several different distribution methods.

4.2.2 Comparison between Obtained Results and Worcester's Demographics

The data from all respondents was compared to the statistics available for Worcester, MA to determine how representative the sample was. First, this sample was compared for gender percentages and then age breakdown. In Worcester, the Latino population has a pretty even split between males (49.1%) and females (50.9%) (U.S. Census Bureau), so it seems that the respondents to this survey were disproportionately male, with only 32% identifying themselves as female. It is important to note that, as was the case with age, not all of the subjects responded, so the aforementioned 32% was derived from only 19 individuals who identified their gender rather than the 24 individuals who completed the surveys. It was difficult to compare age data from the survey with census information due to different age breakdowns. For example, the census identifies people as being 18 or older and 65 or older but the survey had more age brackets and did not have a 65 or older category. However, when comparing the oldest age brackets, the survey results closely match the census data in that 12.9% of Worcester Latinos are 65 years or older (U.S. Census Bureau) and 13% of our survey respondents were 66 years or older. It seems mute to compare the percentages of Latinos over the age of 18 (78.3% in Worcester) to the respondents who were at least 18 years old since only adults were able to complete the survey in order to avoid liability and IRB issues (U.S. Census Bureau). Based on the comparisons presented so far it would seem that the survey sample was representative of the Latino population of Worcester, but we do not believe this to be true. The Latino population is a young one, with a median age of 34 years (U.S. Census Bureau), and there is no way the median

age for this sample is 34. Although it is not possible to calculate the median age of the survey sample because no exact ages were provided, the fact that 17 of the 23 respondents who provided an age range were older than 35 seems to negate the possibility of having a median age even close to 34.

Next, the survey sample was compared to Census data in terms of social components like education level and place of birth. Only 5 of the 23 respondents who answered the question about place of birth were born in the United States which is equivalent to 22%. This is very low compared to the census data for Worcester Latinos that shows 82% of the population being born in the United States. Additionally, 88% of the survey sample being foreign born is very high compared to only 18% of the Worcester Latinos (U.S. Census Bureau). We offer two possible reasons for the discrepancies. First, the survey sample overall was older than the Latino population of Worcester, so it seems likely that most of the respondents would be foreign born having come to the United States during the "Great Migration" period but we hypothesize that most of their offspring were born in the United States. Additionally, although many of the respondents were Puerto Rican and therefore American citizens, they generally identified themselves as being foreign born. This tendency seems to allude to the many intricacies of the Puerto Rican population given the island's status as a commonwealth and its inhabitants' status as American citizens.

In terms of education, the survey sample was rather consistent with census data in that 44% of survey respondents had not completed high school level education, compared to one-third for the city of Worcester (American Community Survey 2006, Worcester City, MA). With three of the eighteen people who answered the education section of the survey having achieved a

bachelor's degree or higher (equating to 17% of the survey sample), the survey sample has exceeded the 11.8% of Worcester Latinos who achieved the same level of education.

4.3 Suggestions for Future Research

Due to the limited sample size, the results obtained from this study should not be seen as conclusive, but even with a small sample it is possible to find positive correlations between substance abuse and acculturative stresses. Therefore, if this study were to be further investigated and implemented on a large scale, certain modifications should be made in order to improve the validity of the results. Below are outlined several suggestions for future research.

The results showed most of the substance abusers had been influenced by friends who were using drugs. It would therefore be interesting to analyze whether these substance abusers were members of a gang and if substance abuse was a component of that subculture. Research about gang culture and its effects on young Latinos would be vital to such future endeavors and may provide insight to how young Latinos cope with acculturative stresses (if that is in fact the case) differently than their adult counterparts. It is possible that the construction of the gang subculture was a method to escape acculturative stresses by becoming a member of a group with a clearly defined cultural identity.

While conducting the survey, some individuals were asked to participate but declined because they were not sufficiently motivated to participate in the study even after the objectives and purpose of the experiment were described to them. It is highly recommended that participants be provided with some form of compensation upon completing the survey as extra motivation. Offering compensation to participants psychologically increases the validity of the survey because the desired information will be seen as crucial and necessary enough to warrant a

reward. It is also hypothesized that compensation will increase the sample number because more individuals will complete the survey.

As previously mentioned, constructing a sample by convenience presented several biases. First, only the individuals who actually attend the community center were surveyed. Consequently, the Latinos who do not attend that specific location were automatically excluded from the research study. Future distribution of the survey should therefore include individuals who might not attend community centers via cluster samples based on Latino distribution in Worcester. This would ensure that a wider range of Latinos are targeted to participate in the survey, although such a method would require collecting addresses, which might not be readily accessible to researchers. Another possible method is to randomly distribute the survey door-to-door or by phone, both of which would increase the sample number while simultaneously decreasing the amount of bias possible in survey distribution. Once again, Latinos who do not attend community centers could still be reached. These are only two suggested methods of administering the survey, but there are many other methods that could be used to distribute the survey. One must remember that implementing these methods could present new biases and restrictions in the survey distribution and data collection. For that reason, each sampling method should be analyzed and its strengths and weaknesses weighed prior to implementation. In the case of this study, non-probability convenience sampling was the most appropriate based on several restrictions, such as time and resources available.

Another condition likely to have affected the outcome of the survey is the fact that subjects were sitting in close proximity to each other while completing the survey, thus decreasing the amount of privacy each subject had. It is advised that in the future, subjects be separated during survey distribution to ensure complete privacy. Creating such a private

environment would likely make the subjects feel comfortable and willing to respond honestly to the survey questions. Ensuring that each subject's privacy is protected might have decreased the number of non-responses received.

Only Spanish and English surveys were used despite the fact that a Portuguese version was available so future studies should also include the Brazilian population. That data would be a good way to compare acculturation differences between Brazilians and Hispanics. By making this comparison it might be possible to understand how a large immigration population affects the rate of acculturation for a sampled population. For example, it might be easier for a Hispanic Latino to acculturate because there is a larger, more established population than there is for Brazilians. Of course this data would differ from city to city depending on the concentration of each group in that specific location.

An alteration should also be the survey. The results have indicated that the introductory questions used for psychological purposes are not effective because the questions had no significant analytical purpose. These questions were intended to ease the subject into the survey, making them comfortable, while also not taking attention from the more pertinent survey questions about accommodation disorders and substance abuse. Unfortunately, the introductory questions did in fact take attention from the actual survey questions, as evidenced by the number of blank demographic pages (the last page).

The sample included a wide age range and as a result, some words and terms were understood by the younger generation but not the elderly. One such word was "stereotype," which was unknown by many of the older generational participants. The use of stereotype was important because it had a specific meaning that the researchers wanted to address. In the future

it would be most appropriate to make another version of the survey specifically targeting the elderly, since some words and phrases were only understood by the youth.

4.4 Potential Solutions if Hypothesis is True

The results indicated a positive correlation between feeling symptoms pertaining to accommodation disorder and substance abuse, although there is a need for further research with a larger sample size. But if acculturative stresses that lead to accommodation disorders were found to have a very strong correlation with substance abuse, certain measures could be implemented to avoid the increase of substance abusers among the Latino community. One such measure would be rehabilitation treatments that cater exclusively to Latinos. Latino-specific rehabilitation facilities could increase the rate of treatment Latinos seek out and receive while helping cease the substance abuse problem in the Latino community.

The Hector Reyes House is a new rehabilitation establishment in Worcester that is currently offering innovative methods for substance abuse treatment. The experiences of distributing the surveys showed that being bilingual is important when targeting the Latino community. The data further supports this observation in that the majority of Latinos surveyed claimed to be more proficient in Spanish than English. Therefore creating a bilingual rehabilitation program, with bilingual medical professionals, for Latinos would be very effective because it would put the patients at ease while also creating an informal atmosphere between doctor and patient. Social informality is another cultural characteristic of the Latino population and such an environment could prove useful during the rehabilitation process during which time the patients must entrust doctors with rather taboo information like mental illness symptoms and

substance abuse issues. These are the reasons that motivated Dr. Castiel to open the Hector Reyes house after working in the community for 15 years.

In addition to creating an informal, bilingual environment, the Hector Reyes House staff uses cognitive behavioral therapy to assist in the rehabilitation process of Latinos. This innovative treatment allows patients to have consistent psychological treatment. An educational program is also implemented in the Hector Reyes House, offering the opportunity for patients to earn their GED (General Education Development) and learn English as a second language. Both of these opportunities will help decrease the acculturative stresses the patients may experience when leaving the rehabilitation center. This in turn will hopefully decrease the probability that the patients will return to substance abuse.

In conclusion, if future research presents concrete evidence linking accommodation disorders with substance abuse it is highly recommended that more programs like that of the Hector Reyes House be installed communities with large Latino populations. Such programs will ensure that Latinos are placed in an environment that is culturally accommodating, which not only facilitates the treatment process but also makes it more effective. Offering English classes and other education programs that prepare the patients for life after rehabilitation is a good method for decreasing potential acculturative stresses patients might encounter in their future endeavourers.

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6- Appendix

6.1- Introductory Letter

Alice J. Abou Nader
100 Institute Rd.
WPI Box. 117
Worcester, MA 01609

Dear [**Organization's Name**],

First, we would like to introduce ourselves as two Worcester Polytechnic Institute (WPI) students who are in their senior year. As a WPI requirement students in their senior year work on a thesis project related to their major, known as Major Qualifying Project (MQP). The purpose of project is to give students the opportunity to gain experience from their major prior to entering the workforce. Because we are both double majors in Biotechnology and International & Spanish Studies, a unique project was constructed to satisfy the requirements for both majors. This is a very exciting academic opportunity that has been given to us since it is the first of its kind in the Biotechnology Department.

Our project is addressing the issue of acculturative stressors leading to accommodations disorders and substance abuse among the Latino community in Worcester, MA. As a means of data collection, a survey was created consisting of questions addressing adjustment disorders, such as depression and anxiety, and the possible correlations that might have with substance abuse. The purpose is to examine the data collected from the surveys and generate correlations from the information obtained in hopes of better understanding the Latino community in the Worcester area. This will hopefully bring light to the growing problem of substance abuse among Latinos.

But in order to gather such information we need to distribute our survey. That is why we would like to ask permission to distribute our survey among your community and organization. This survey was constructed based on researched best practices, extensive interviews with professors, and was pre-tested. Anonymity and protection of information is something that was considered all throughout the construction of this survey. There are two versions of the survey, one in English and the other in Spanish. The Spanish translated version was reviewed by the Humanity & Arts Spanish Professors and Spanish speaking students who all were evaluators of the survey.

This project is in collaboration with Dr. Matilde Castiel. We are working with the orientation of Professors Jill Rulfs, Bland Addison, and Angel Rivera of WPI. If you would like further explanation of the topic please feel free to contact us. Attached is a copy of our survey, I hope you will find it adequate. Thank you for your attention and time.

Sincerely,

Alice J. Abou Nader & Kelley Murray
Class of 2009
Bachelors in Biotechnology & International/Spanish Studies
E-mails: ajnaders@wpi.edu / kmurray@wpi.edu

6.2- Research Protocol

This document outlines the procedures that will take place when the research is conducted. The two steps outlined describe how the community centers were contacted and how each research subject will be approached.

1- Contacting Community Centers for Research Participation

Each community center was sent an "Introductory Letter" which describes the research and outlines the purpose and objectives of the study. Once this letter was sent, a phone call was made contacting the individual from the community center to ensure that survey distribution was allowed. In addition, specific individuals were contacted to confirm survey distribution.

2- Greeting Survey Respondents

To create a randomized sample, the survey distribution will be based on the number of individuals who are present at the community center at that time. For example, if a large influx of individuals are present in the community center, every third or forth person will be asked to participate in the study. The survey will be personally distributed and a standardized introductory greeting will be said at every encounter. This ensures that all individuals approached are somewhat placed in the same social framework, maintaining consistency and minimizing potential biases that could arise during survey distribution. A box will be present when the community center is visited to show to the sampled subjects that the survey answers cannot be traced back to them after they have finished completing it.

Greeting Sample Subjects

Hello, my name is **Alice J. Abou Nader/ Kelley Murray**, I am a senior at the Worcester Polytechnic Institute and I am working on my senior project. I, along with my partner, **Alice J. Abou Nader/Kelley Murray**, have created a survey to gather information to better understand the Latino community in Worcester, MA. We intend to bring positive effects on the community with our study.

Please know that the information you put on the survey will be kept confidential and is completely anonymous. To make sure that your identity is protected, we will give you a survey and once you are finished we ask you to please place it into this box. This is for you to know that we have no means of tracing the survey back to you. We would really appreciate your honesty in this survey since the purpose of this survey is to better serve the Latino community and how to better the medical services provided. The survey is four pages long and should take around 10-15 minutes of your time. There are three versions that are available, English, Spanish, and Portuguese, so please select the language that you are most comfortable in. While completing the survey you have the right to withhold information as well as interrupt its completion. I hope that after knowing about out survey that you will be willing to participate in this study.

Would you be willing to fill out a survey, if so what language?

WORCESTER POLYTECHNIC INSTITUTE
Institutional Review Board
Application for Approval to Use Human Subjects in Research

WPI IRB use only
IRB # _____
Date: _____

If your project has any federal sponsorship (e.g. federal funding), either prime or pass-through, the WPI IRB is not authorized to perform a review. Please contact Christina DeVries in Research Administration at (508) 831-6716 for direction to an appropriate IRB. DO NOT submit an application to the WPI IRB.

This application is for: *(Please check one)* ☒ Expedited Review ☐ Full Review

WPI IRB use only

Principal Investigator (PI) or Project Faculty Advisor: *(NOT a student or fellow; must be a WPI employee)*

Name: Prof. Jill Rulfs Tel No: 508-831-5786 E-Mail Address: jrulfs@wpi.edu ☐

Department: Biology & Biotechnology

Co-Investigator(s): *(Co-PI(s)/non students)*

Name: Prof. W. B. Addison Tel No: 508-831-5190 E-Mail Address: addision@wpi.edu ☐

Name: Prof. Angel Rivera Tel No: (on sabatical) E-Mail Address: arivera@wpi.edu ☐

Student Investigator(s):

Name: Alice J. Abou Nader Tel No: 508-615-9287 E-Mail Address: ajnaders@wpi.edu ☐

Name: Kelley Murray Tel No: 978-270-3980 E-Mail Address: kmurray@wpi.edu ☐

Check if: ☒ **Undergraduate project** *(MQP, IQP, Suff., other)* Major Qualifying Project

☐ **Graduate project** *(M.S. Ph.D., other)* _____

Has an IRB ever suspended or terminated a study of any investigator listed above?
No ☒ Yes ☐ *(Attach a summary of the event and resolution.)*

Vulnerable Populations: The proposed research will involve the following (Check all that apply):
pregnant women ☐ human fetuses ☐ neonates ☐ minors/children ☒ prisoners ☐
students ☒ individuals with mental disabilities ☒ individuals with physical disabilities ☐

Collaborating Institutions: *(Please list all collaborating Institutions.)*
Dr. Matilde Castiel from Umass Medical is assisting us in our research

Locations of Research: *(If at WPI, please indicate where on campus. If off campus, please give details of locations.)*
We plan to distribute our Survey to different institutions around Worcester, such as the Great Brook River Valley Center, Centro de las Americas, Job Corps and other locations that are being contacted and sent an explanatory research form. (See attachment)

Project Title: Analyzing the Correlations between Accommodation Disorder and Substance Abuse Among the Latino Community in the Worcester Area

Funding: *(If the research is funded, please enclose one copy of the research proposal or most recent draft with your application.)*

Funding Agency: _____ WPI Fund: _____

Human Subjects Research: *(**All** study personnel having direct contact with subjects **must** take and pass a training course on human subjects research. There is a link to a web-based training course that can be accessed under the Training link on the IRB web site http://www.wpi.edu/Admin/Research/IRB/training.html. The IRB requires a copy of the completion certificate from the course or proof of an equivalent program.)*

Anticipated Dates of Research:

Instructions: Answer all questions. If you are asked to provide an explanation, please do so with adequate details. If needed, attach itemized replies. Any incomplete application will be returned.

1.) Purpose of Study: *(Please provide a concise statement of the background, nature and reasons for the proposed study. Insert below using non-technical language that can be understood by non-scientist members of the IRB.)*
To analyze and identify correlations between acconodation disorders and substance abuse among the Latino community in Worcester, MA.

2.) Study Protocol: *(Please attach sufficient information for effective review by non-scientist members of the IRB. Define all abbreviations and use simple words. Unless justification is provided this part of the application must not exceed 5 pages. Attaching sections of a grant application is not an acceptable substitute.)*

A.) For **biomedical, engineering and related research**, please provide an outline of the actual experiments to be performed. Where applicable, provide a detailed description of the experimental devices or procedures to be used, detailed information on the exact dosages of drugs or chemicals to be used, total quantity of blood samples to be used, and descriptions of special diets.

B.) For applications in the **social sciences, management and other non-biomedical disciplines** please provide a detailed description of your proposed study. Where applicable, include copies of any questionnaires or standardized tests you plan to incorporate into your study. If your study involves interviews please submit an outline indicating the types of questions you will include.

C.) If the study involves **investigational drugs or investigational medical devices**, and the PI is obtaining an Investigational New Drug (IND) number or Investigational Device Exemption (IDE) number from the FDA, please provide details.

D.) Please note if any **hazardous materials** are being used in this study.

E.) Please note if any **special diets** are being used in this study.

3.) Subject Information:

A.) Please provide the exact number of subjects you plan to enroll in this study and describe your subject population. *(eg. WPI students, WPI staff, UMASS Medical patient, other)*

Males: _____ Females: _____ Description: Values are based on those willing to participate in study

B.) Will subjects who do not understand English be enrolled?
No ☒ Yes ☐ *(Please insert below the language(s) that will be translated on the consent form.)*
Subjects who either speak Spanish or Portuguese will participate in this study but adequate material will be provided to statisfy the language requirements.

C.) Are there any circumstances under which your study population may feel coerced into participating in this study?
No ☒ Yes ☐ *(Please insert below a description of how you will assure your subjects do not feel coerced.)*
All participants are informed of the purpose of the study and that they have a right not to participate and/or withold informaiton from the survey supplied.

D.) Are the subjects at risk of harm if their participation in the study becomes known?
No ☒ Yes ☐ *(Please insert below a description of possible effects on your subjects.)*
The information that will be presented in the survey cannot be traced to any individual and the procedure for filling the survey is also constructed in a way in which those distributing the survey will not be able to identify the individual that completed it.

E.) How will subjects be recruited for participation? *(Check all that apply.)*

☐ Referral: *(By whom)* _____
☐ Other: *(Identify)* _____
☐ Database: *(Describe how database populated)*

☒ Direct subject advertising, including: *(Please provide a copy of the proposed ad. All direct subject advertising must be approved by the WPI IRB prior to use.)*

☐ Newspaper ☐ Bulletin board
☐ Radio ☐ Flyers
☐ Television ☐ Letters
☐ Internet ☐ E-mail

F.) Have the subjects in the database agreed to be contacted for research projects? No ☐ Yes ☐ N/A ☒

G.) Are the subjects being paid for participating? *(Consider all types of reimbursement, ex. stipend, parking, travel.)*
No ☒ Yes ☐ *(Check all that apply.)* ☐ Cash ☐ Check ☐ Gift certificate ☐ Other: _____

Amount of compensation _____

4.) Informed Consent:

A.) Who will discuss the study with and obtain consent of prospective subjects? *(Check all that apply.)*
☐ Principal Investigator ☐ Co-Investigator(s) ☒ Student Investigator(s)

B.) Are you aware that subjects must read and sign and Informed Consent Form prior to conducting any study-related procedures and agree that all subjects will be consented prior to initiating study related procedures? No ☐ Yes ☒

C.) Are you aware that you must consent subjects using only the IRB-approved Informed Consent Form? No ☐ Yes ☒

D.) Will subjects be consented in a private room, not in a public space? No ☐ Yes ☒

E.) Do you agree to spend as much time as needed to thoroughly explain and respond to any subject's questions about the study, and allow them as much time as needed to consider their decision prior to enrolling them as subjects? No ☐ Yes ☒

F.) Do you agree that the person obtaining consent will explain the risks of the study, the subject's right to decide not to participate, and the subject's right to withdraw from the study at any time? No ☐ Yes ☒

G.) Do you agree to either 1.) retain signed copies of all informed consent agreements in a secure location for at least three years or 2.) supply copies of all signed informed consent agreements in .pdf format for retention by the IRB in electronic form? No ☐ Yes ☒

(If you answer No to any of the questions above, please provide an explanation.)

5.) Potential Risks: *(A risk is a potential harm that a reasonable person would consider important in deciding whether to participate in research. Risks can be categorized as physical, psychological, sociological, economic and legal, and include pain, stress, invasion of privacy, embarrassment or exposure of sensitive or confidential data. All potential risks and discomforts must be minimized to the greatest extent possible by using e.g. appropriate monitoring, safety devices and withdrawal of a subject if there is evidence of a specific adverse event.)*

A.) What are the risks / discomforts associated with each intervention or procedure in the study?

Possible discomfort in the fact that the topics investigated by the survey might be of a social taboo.

B.) What procedures will be in place to prevent / minimize potential risks or discomfort?
A protocol was writen to explain to the subject the purpose and objectives of the experiement. The subjects are also informed that they have a right to withdraw informaiton from the survey and not participate. In addition, the

6.) Potential Benefits:

A.) What potential benefits other than payment may subjects receive from participating in the study?

Input from the survey might help improve the community services offered to the community

B.) What potential benefits can society expect from the study?

To better understand if there is a correlation between accomodation disorders and substance abuse

7.) Data Collection, Storage, and Confidentiality:

A.) How will data be collected?

Through either an English, Spanish, and Portuguese version of a survey.

B.) Will a subject's voice, face or identifiable body features *(eg. tattoo, scar)* be recorded by audio or videotaping?
No ☒ Yes ☐ *(Explain the recording procedures you plan to follow.)*

C.) Will personal identifying information be recorded? No ☒ Yes ☐ *(If yes, explain how the identifying information will be protected. How will personal identifying information be coded and how will the code key be kept confidential?)*

D.) Where will the data be stored and how will it be secured?
The surveys collected will only be given as a hard copy to the advisors when the research is complete and will not be duplicated, therefore only one advisor will poses the actual surveys.

E.) What will happen to the data when the study is completed?
The data will be processed using statistical methods in attempt to find correlations within the data with support the hypothess. Onec the stud is complete the surveys will be placed in the appendix of the research paper.

F.) Can data acquired in the study adversely affect a subject's relationship with other individuals? *(i.e. employee-supervisor, student-teacher, family relationships)*
No, the data acquired in the study will not affect the relationship with any individual because their identity will remain anonymous and cannot be traced to them in any shape or form. (Please see Research Protocol)

G.) Do you plan to use or disclose identifiable information outside of the investigation personnel?
No ☒ Yes ☐ *(Please explain.)*

H.) Do you plan to use or disclose identifiable information outside of WPI including non-WPI investigators?
No ☒ Yes ☐ *(Please explain.)*

8.) Deception: *(Investigators must not exclude information from a subject that a reasonable person would want to know in deciding whether to participate in a study.)*

Will the information about the research purpose and design be withheld from the subjects?
No ☒ Yes ☐ *(Please explain.)*

9.) Adverse effects: *(Serious or unexpected adverse reactions or injuries must be reported to the WPI IRB within 48 hours. Other adverse events should be reported within 10 working days.)*

What follow-up efforts will be made to detect any harm to subjects and how will the WPI IRB be kept informed?

No follow ups will be made since there is no possibility to link any information to the questioned individual.

10.) Informed consent: *(Documented informed consent must be obtained from all participants in studies that involve human subjects. You must use the templates available on the WPI IRB web-site to prepare these forms.* ***Informed consent forms must be included with this application.*** *Under certain circumstances the WPI IRB may waive the requirement for informed consent.)*

Investigator's Assurance:

I certify the information provided in this application is complete and correct.

I understand that I have ultimate responsibility for the conduct of the study, the ethical performance of the project, the protection of the rights and welfare of human subjects, and strict adherence to any stipulations imposed by the WPI IRB.

I agree to comply with all WPI policies, as well all federal, state and local laws on the protection of human subjects in research, including:

- ensuring the satisfactory completion of human subjects training.
- performing the study in accordance with the WPI IRB approved protocol.
- implementing study changes only after WPI IRB approval.
- obtaining informed consent from subjects using only the WPI IRB approved consent form.
- promptly reporting significant adverse effects to the WPI IRB.

Signature of Principal Investigator _____ Date 4/5/2009

Print Full Name and Title Alice J. Abou Nader / Kelley Murray

Please return a signed hard copy of this application to the WPI IRB c/o Research Administration.
If you have any questions, please call (508) 831-6716.

6.4-English Version of Survey

(Layout of this document was altered to fit document's parameters)

Thank you very much for participating in this survey. All information from this survey will be kept completely confidential and anonymous. The information will only be used for Worcester Polytechnic Institute's (WPI) Major Qualifying Project as academic research. When the project is completed these surveys will only be presented in one hard copy what will be given to WPI faculty. Anonymity and confidentiality will be maintained throughout the process. You have a right to withhold information from this survey or stop completing the survey at any time. Please know that all the information you provide us with will be used for the betterment of the community and to better understand the services provided by the community.

Section 1: Please answer the following questions

Do you feel safe in your community?	□Yes	□No
Do you enjoy your community?	□Yes	□No
Do you take part in community events and celebrations?	□Yes	□No
Do you feel a sense of unity in your community?	□Yes	□No

Section 2: Please circle the number that best describes your opinion.

Questions	Strongly Disagree	Disagree	Agree	Strongly Agree
I feel I have to be more "American"	1	2	3	4
Latinos are very often stereotyped.	1	2	3	4
I have been discriminated against.	1	2	3	4
I avoid speaking Spanish in public areas where English is primarily spoken (e.g. stores)	1	2	3	4
I don't fit in with non-Latinos	1	2	3	4

<u>Section 3:</u> For the following questions, please circle the number you feel is appropriate for you with one being "not at all" and 4 being "very much". For each symptom, please indicate how often you have experienced them, which is labeled as "Frequency" (left column) and then how painful it was, "Severity".

Symptom 1 **I do not feel socially functional or able to complete my daily activities**									
Frequency:	1	2	3	4	**Severity:**	1	2	3	4

To help with this symptom, what would you do or what have you done?
□Talk to a medical professional □Talk to family, friends, or spiritual leader □Wait for it to go away
□Other: _____

Symptom 2 **I feel stressed, frustrated, and/or irritated**									
Frequency:	1	2	3	4	**Severity:**	1	2	3	4

To help with this symptom, what would you do or what have you done?
□Talk to a medical professional □Talk to family, friends, or spiritual leader □Wait for it to go away
□Other: _____

Symptom 3 **I feel sad and unmotivated to perform certain daily activities**									
Frequency:	1	2	3	4	**Severity:**	1	2	3	4

To help with this symptom, what would you do or what have you done?
□Talk to a medical professional □Talk to family, friends, or spiritual leader □Wait for it to go away
□Other: _____

Symptom 4 **I feel anxious, having heart palpitations and sweating**									
Frequency:	1	2	3	4	**Severity:**	1	2	3	4

To help with this symptom, what would you do or what have you done?
□Talk to a medical professional □Talk to family, friends, or spiritual leader □Wait for it to go away
□Other: _____

Symptom 5 **I have mood swings, and my emotions change quickly**									
Frequency	1	2	3	4	Severity	1	2	3	4

To help with this symptom, what would you do or what have you done?
□Talk to a medical professional □Talk to family, friends, or spiritual leader □Wait for it to go away
□Other: _____

The questions below refer to the five Symptoms listed above.

Have you ever used non-prescribed medication or other drugs to help with any of these symptoms?
□Yes □No

Had you used non-prescribed medication or other drugs before you felt these symptoms?
□Yes □No

Does anyone else in your family have symptoms like these?
□Yes □No

If yes, how common are the symptoms? How many people have similar symptoms?

Very few people Most of my family

1 2 3 4

How do you or your family members explain the symptoms?

_____

<u>Section 4:</u> Please answer the following questions as they apply to you.

Have you ever used non-prescribed medication or other drugs? □Yes □No

If you answered **Yes**, please answer the questions below, if you have answered **No**, **than please go to Section-5.**

	Tried it once	Yearly	Monthly	Weekly	Daily
Marijuana	1	2	3	4	5
Cocaine	1	2	3	4	5
Heroin	1	2	3	4	5
Alcohol	1	2	3	4	5
Other: _____	1	2	3	4	5

Finish the following sentence by selecting all that apply

I have used this substance(s) because…

□Problems in my family
□I was curious
□A lot of my friends were trying/using it
□My sibling/cousin/family member was trying/using it
□I was feeling sad
□I was feeling angry
□I was feeling alone
□Other: _____

Have you ever tried to stop using this substance/these substances? □Yes □No

Which of the following best describes you?

□I never tried to quit □I have unsuccessfully tried to quit □I have successfully quit

Did you get help when trying to stop using the substance(s)?

□No □Yes, then where?_____

<u>Section 5:</u> Please answer the following questions as they apply to you.

Gender: □Female □Male

Age: □15-20 □21-25 □26-35 □36-45 □46-55 □56-65 □66+

Were you born in the United States?

□Yes □No, than what country?_____

Are you a first-generation American?

□Yes □No, than what generation? □2nd □3rd □4th □5th

Where would you consider your family to be from? □South America □Central America □Caribbean
□Other: _____

What is the highest level of education you have received?

□ Did not receive formal education
□ Completed Elementary School
□ Completed Middle School
□ I have never attended high school
□Some high school
□High School (received a diploma or GED)
□Some college-level education
□Professional Degree
□Associate's Degree
□Bachelor's Degree
□Some post-graduate education
□Master's Degree
□Doctorate (PhD) Degree

What is your current employment status? □Full-Time □Part-Time □Not Employed

Please indicate your language proficiency:

	I know a few words			I feel very comfortable in conversation
English	1	2	3	4
Spanish	1	2	3	4
Portuguese	1	2	3	4

What language are you most likely to speak at home? (Please select all that apply to you)

□English □Spanish □Portuguese

How many people (family, friends, etc.) live with you at home? _____ □Homeless

Thank you very much for completing this survey. If you would like to discuss any of the questions or share your opinions about the subject matter, please leave your phone number and we will contact you for a phone interview.

Phone Number: _____

6.5- Survey Evaluation Form

Thank you for participating in the first pre-testing process of this survey. While reviewing our survey, please keep in mind the following guidelines below and the objective of this survey. The survey Objective is to gather quantitative and qualitative information that will support the correlation between accommodation disorders experienced by Latino in the Worcester Community and drug abuse.

Examining Question Format of Survey

Questions	YES	NO	Comments
Does the survey contain purposeful questions?			
Does the survey present concrete questions?			
Are the sentences and questions complete?			
Does the survey avoid abbreviations?			
Does the survey avoid jargon?			
Does the survey avoid the use of technical terms?			
Does the survey avoid slang and colloquial language?			
Does the survey contain loaded questions?			
Are basic Wording and phases are avoided?			
Are there two-edged questions?			
Are there negative questions present?			

Question Type (Fink 1995)

Purposeful: "questions that are related to the objectives of the survey"
Concrete: "question is precise and unambiguous"
Loaded: questions that try to ensure true answers from the respondents by describing scenarios
Two-edged: a questions that refers to two topics
Negative questions: questions that contain "NOT" causes respondents to use logical thinking

Overview of Survey Construction

1) **Is the survey is properly phrased?**

YES **NO**

If answered NO, please identify which items need correction:

_____

_____

_____

2) **Are the questions asked clearly written, avoiding any ambiguity?**

YES **NO**

If answered NO, please identify which items need correction:

_____
_____
_____

3) **The survey layout is appealing and non-intimidating.**

YES **NO**

If answered NO, please identify which items need correction:

_____
_____
_____

4) **The survey is not too lengthy and does not unmotivate those surveyed.**

YES **NO**

If answered NO, please identify which items need correction:

_____
_____
_____

References

Fink, Arlene. (1995) "How to Ask Survey Questions." Sage Publications: California

6.6- Symptoms Overlap Analysis

Table-1: Symptoms Comparison of DSM-IV and ICD

Table-1 presents the symptoms that most repeatedly were found in the Disorders listed. The disorders selected for cross-comparison where those that showed similarities to accommodation disorder. Therefore the symptoms that are presented in the survey were determined based on the frequency in which they appeared in these disorders.

	Symptoms						
Disorders	**Altered Sleep**	**Significant Weight Alteration**	**Heart palpitations**	**Sweating**	**Consistent Stress**	**Unhappiness**	**Emotional Disturbance**
Adjustment			X	X	X	X	X
Acute Stress Reaction	X		X	X	X		X
Generalized Anxiety			X	X	X		
Depression	X	X	X	X	X	X	X
Mixed Anxiety & Depressive	X	X	X	X	X	X	X
Persistent Mood						X	X
Nervioso (Culture Bound)			X	X	X		X
Ansiedad (Culture Bound)			X	X	X		X
1) Mental & Behavior						X	X
1.1) Cannabinoids						X	X
1.2) Opioids						X	X
1.3) Alcohol						X	X

Keep track of response rate!!!!
RR = # of completed surveys / # of people you asked to do the survey

Thank you very much for participating in this survey. All information from this survey will be kept completely confidential and anonymous. The information will only be used for Worcester Polytechnic Institute's (WPI) Major Qualifying Project and will be used for academic research. When the project is completed these surveys will only be presented in one hard copy what will be given to WPI faculty. Anonymity and confidentiality will be present throughout the process of this survey to protect your identify

put demographics at the end? Start more closely to the topic?

Section 1: Please answer the following questions as they apply to you.

Age: □15-20 □21-25 □26-35 □36-45 □46-55 □56-65 □66+

Gender: □Female □Male

what country

Were you born in the United States? □Yes □No If no, where? _____

Are you a first-generation American? □Yes □No If no, which generation? □2nd □3rd □4th □5th

Where would you consider your family to be from? □South America □Central America □Caribbean
□Other: _____

What is the highest level of education you have received?
- □ I have never attended high school
- □Some high school
- □High School (received a diploma or GED)
- □Some college-level education
- □Professional Degree
- □Associate's Degree
- □Bachelor's Degree
- □Some post-graduate education
- □Master's Degree
- □Doctorate (PhD) Degree

What is your current employment status? □Full-Time □Part-Time □Not Employed

Please indicate your language proficiency:

	I know a few words			I feel very comfortable in conversation
English	1	2	3	4
Spanish	1	2	3	4

What language are you most likely to speak at home? □English □Spanish □Both

Prefer 1 to 5 scale

How many people (family, friends, etc.) live with you at home? _____

homeless?

Section 2: Please circle the number that best describes your own opinion.

	Strongly Disagree	Disagree	Agree	Strongly Agree
I have to be more anglicized (more American)	1	2	3	4
Latinos are very often stereotyped.	1	2	3	4
I have been discriminated against.	1	2	3	4
I avoid speaking Spanish in public areas where English is primarily spoken (e.g. stores)	1	2	3	4
I don't fit in with non-Latinos	1	2	3	4

Section 3: Please circle the ~~number~~ fill out the grid and answer the following questions as they apply to you.
For ~~each~~ symptom, please indicate how often you have experienced it in the past (left column) and then ~~how~~ serious it was (for example, were you simply feeling sad or was it near suicide levels?)

Symptom 1 **I do not ~~feel~~ socially functional or able to complete my daily activities**

Frequency 1 2 3 4 Severity 1 2 3 4

To help with this symptom, what would you do or what have you done?
□Talk to a medical professional □Talk to family, friends, or spiritual leader □Wait for it to go away
□Other: _____

Symptom 2 **I ~~constantly~~ feel stressed, frustrated, and/or irritated**

Frequency 1 2 3 4 Severity 1 2 3 4

To help with this symptom, what would you do or what have you done?
□Talk to a medical professional □Talk to family, friends, or spiritual leader □Wait for it to go away
□Other: _____

Symptom 3 **I ~~frequently~~ feel sad and unmotivated to perform certain daily activities**

Frequency 1 2 3 4 Severity 1 2 3 4

To help with this symptom, what would you do or what have you done?
□Talk to a medical professional □Talk to family, friends, or spiritual leader □Wait for it to go away
□Other: _____

Symptom 4 **I ~~frequently~~ feel anxious, having heart palpitations and sweating**

Frequency 1 2 3 4 Severity 1 2 3 4

To help with this symptom, what would you do or what have you done?
□Talk to a medical professional □Talk to family, friends, or spiritual leader □Wait for it to go away
□Other: _____

Symptom 5 **I have mood swings, and my emotions change quickly**

Frequency 1 2 3 4 Severity 1 2 3 4

To help with this symptom, what would you do or what have you done?
□Talk to a medical professional □Talk to family, friends, or spiritual leader □Wait for it to go away
□Other: _____

The questions below refer to the five Symptoms listed above.

Have you ever used drugs to help with any of these symptoms? □Yes □No

Had you used drugs before you felt these symptoms? □Yes □No

Does anyone else in your family have symptoms like these? □Yes □No

If yes, how common are the symptoms? How many people have similar symptoms?

Very few people			Most of my family
1	2	3	4

How do you or your family members explain the symptoms? _____

Section 4: Please answer the following questions as they apply to you.

Have you ever used drugs? □Yes □No

If you answered Yes, please answer the questions below, if you have answered NO, than you have finished the survey.

	Tried it once	Yearly	Monthly	Weekly	Daily
Marijuana	1	2	3	4	5
Cocaine	1	2	3	4	5
Heroin	1	2	3	4	5
Alcohol	1	2	3	4	5
Other: _____	1	2	3	4	5

Finish the following sentence by selecting all that apply

I have used this substance(s) because…

□Problems in my family
□I was curious
□A lot of my friends were trying/using it
□My sibling/cousin/family member was trying/using it
□I was feeling sad
□I was feeling angry
□I was feeling alone
□ other: _____

Have you ever tried to stop using this substance/these substances? □Yes □No

Which of the following best describes you? □I never tried to quit □I have unsuccessfully tried to quit
□I have successfully quit

Did you get help when trying to stop using the substance(s)? □No □Yes
If yes, from where?_____

Thank you very much for completing this survey. If you would like to discuss any of the questions or share your opinions about the subject matter, please leave your phone number and we will contact you for a phone interview.

Phone Number: _____

6.8- Dr. Castiel Survey Corrections

Thank you for participating in the first pre-testing process of this survey. While reviewing our survey, please keep in mind the following guidelines below and the objective of this survey. The survey Objective is to gather quantitative and qualitative information that will support the correlation between accommodation disorders experienced by Latino in the Worcester Community and drug abuse.

Examining Question Format of Survey

Questions	YES	NO	Comments
Does the survey contain purposeful questions?	X		
Does the survey present concrete questions?	X		
Are the sentences and questions complete?	X		
Does the survey avoid abbreviations?	X		
Does the survey avoid jargon?	X		
Does the survey avoid the use of technical terms?	X		
Does the survey avoid slang and colloquial language?	X		
Does the survey contain loaded questions?		X	
Are basic Wording and phases are avoided?			?
Are there two-edged questions?		X	
Are there negative questions present?		X	

Question Type (Fink 1995)
Purposeful: "questions that are related to the objectives of the survey"
Concrete: "question is precise and unambiguous"
Loaded: questions that try to ensure true answers from the respondents by describing scenarios
Two-edged: a questions that refers to two topics
Negative questions: questions that contain "NOT" causes respondents to use logical thinking

Overview of Survey Construction

5) **Is the survey is properly phrased?**

YES NO

If answered NO, please identify which items need correction:

_____

_____

_____

6) **Are the questions asked clearly written, avoiding any ambiguity?**

YES NO

If answered NO, please identify which items need correction:

_____

_____

_____

7) **The survey layout is appealing and non-intimidating.**

YES **NO**

If answered NO, please identify which items need correction:
It is a little long and therefore intimidating

8) **The survey is not too lengthy and does not unmotivate those surveyed.**

YES **NO**

If answered NO, please identify which items need correction:
it is a little long

References

Fink, Arlene. (1995) "How to Ask Survey Questions." Sage Publications: California

6.9- Prof. Petruccelli Survey Corrections

Thank you very much for participating in this survey. All information from this survey will kept completely confidential and anonymous. The information will be used for this project only and destroyed immediately upon project completion (no later than May 2009) to ensure anonymity and confidentiality.

Comment [jdp1]: What project? Will they be given a separate explanation?

Section 1: Please answer the following questions as they apply to you.

Age: □15-20 □21-25 □26-35 □36-45 □46-55 □56-65 □66+

Gender: □Female □Male

Were you born in the United States? □Yes □No If no, where?

_____

Are you a first-generation American? □Yes □No If no, which generation? □2nd □3rd □4th □5th

Where would you consider your family to be from? □South America □Central America □Caribbean □Other:

_____

What is the highest level of education you have received?

Comment [jdp2]: What if they have had no high school?

- □Some high school
- □High School (received a diploma or GED)
- □Some college-level education
- □Professional Degree
- □Associate's Degree
- □Bachelor's Degree
- □Some post-graduate education
- □Master's Degree or higher

Comment [jdp3]: These categories are not logical. Master's and higher may be considered professional degrees.

What is your current employment status? □Full-Time □Part-Time □Not Employed

Please indicate your language proficiency:

	I know a few words			I feel very comfortable in conversation
English	1	2	3	4
Spanish	1	2	3	4

What language are you most likely to speak at home? □English □Spanish □Both

How many people (family, friends, etc.) live with you at home? _____

Section 2: Please circle the number that best describes your own opinion.

	Strongly Disagree	Disagree	Agree	Strongly Agree
I have to be more anglicized (more American)	1	2	3	4
Latinos are very often stereotyped.	1	2	3	4
I have been discriminated against.	1	2	3	4
I avoid speaking Spanish in public areas where English is primarily spoken (i.e. stores)	1	2	3	4
I don't fit in with non-Latinos	1	2	3	4

Comment [jdp4]: I think you mean e.g.

Comment [jdp5]: Try to put this on the same page with the rest.

Section 3: Please fill out the grid and answer the following questions as they apply to you.

Comment [jdp6]: I find this format confusing.

For each symptom, please indicate how often you have experienced it in the past (left column) and then how serious it was (for example, were you simply feeling sad or was it near suicide levels?)

Symptom 1	**I do not feel socially functional or able to complete my daily activities**								
Frequency	1	2	3	4	Severity	1	2	3	4

To help with this symptom, what would you do?

□Talk to a medical professional □Talk to family, friends, or spiritual leader □Wait for it to go away

□Other: _____

Comment [jdp7]: "What would you do?" or "What have you done?"

Symptom 2	**I am constantly feel stressed, frustrated, and/or irritated**								
Frequency	1	2	3	4	Severity	1	2	3	4

To help with this symptom, what would you do?

□Talk to a medical professional □Talk to family, friends, or spiritual leader □Wait for it to go away

□Other: _____

Symptom 3	**I frequently feel sad and unmotivated to perform certain daily activities**								
Frequency	1	2	3	4	Severity	1	2	3	4

To help with this symptom, what would you do?

□Talk to a medical professional □Talk to family, friends, or spiritual leader □Wait for it to go away

□Other: _____

Symptom 4	**I frequently feel anxious, having heart palpitations and sweat**								
Frequency	1	2	3	4	Severity	1	2	3	4

To help with this symptom, what would you do?

□Talk to a medical professional □Talk to family, friends, or spiritual leader □Wait for it to go away

□Other: _____

Symptom 5	**I have mood swings, and change quickly my emotions**								
Frequency	1	2	3	4	Severity	1	2	3	4

To help with this symptom, what would you do?
□Talk to a medical professional □Talk to family, friends, or spiritual leader □Wait for it to go away
□Other: _____

Have you ever used drugs to help with any of these symptoms? □Yes □No

Had you used drugs before you felt these symptoms? □Yes □No

Does anyone else in your family have symptoms like these? □Yes □No

If yes, how common are the symptoms? How many people have similar symptoms?

Comment [jdp8]: Which symptoms? You have indicated 5 different ones.

Very few people Most of my family

1 2 3 4

How do you or your family members explain the symptoms?

Section 4: Please answer the following questions as they apply to you.

Have you ever used drugs? □Yes □No

	Tried it once	Yearly	Monthly	Weekly	Daily
Marijuana	1	2	3	4	5
Cocaine	1	2	3	4	5
Heroin	1	2	3	4	5
Alcohol	1	2	3	4	5
Other: _____	1	2	3	4	5

Comment [jdp9]: What if they never tried it?

Finish the following sentence by selecting all that apply

Comment [jdp10]: What if none of these applies?

I have used this substance(s) because…

□Problems in my family
□I was curious
□A lot of my friends were trying/using it
□My sibling/cousin/family member was trying/using it
□I was feeling sad
□I was feeling angry
□I was feeling alone

Have you ever tried to stop using this substance/these substances? □Yes □No

Comment [jdp11]: What if the answer is yes for some and no for others?

Which of the following best describes you?
□I never tried to quit □I have unsuccessfully tried to quit
□I have successfully quit

Did you get help when trying to stop using the substance(s)? □No □Yes
If yes, from where?_____

Thank you very much for completing this survey. If you would like to discuss any of the questions or share your opinions about the subject matter, please leave your phone number and we will contact you for a phone interview.

Phone Number: _____

6.10- Sanouri Ursprung Survey Corrections

Thank you very much for participating in this survey. All information from this survey will be kept completely confidential and anonymous. The information will only be used for Worcester Polytechnic Institute's (WPI) Major Qualifying Project and will be used for academic research. When the project is completed these surveys will only be presented in one hard copy what will be given to WPI faculty. Anonymity and confidentiality will be present throughout the process of this survey to protect your identify.

Section 1: Please answer the following questions as they apply to you.

Age: □15-20 □21-25 □26-35 □36-45 □46-55 □56-65 □66+

Gender: □Female □Male

Were you born in the United States? □Yes □No If no, where?

Are you a first-generation American? □Yes □No If no, which generation? □2nd □3rd □4th □5th

Where would you consider your family to be from? □South America □Central America □Caribbean □Other:

What is the highest level of education you have received?

- □ I have never attended high school
- □Some high school
- □High School (received a diploma or GED)
- □Some college-level education
- □Professional Degree
- □Associate's Degree
- □Bachelor's Degree
- □Some post-graduate education
- □Master's Degree
- □Doctorate (PhD) Degree

What is your current employment status? □Full-Time □Part-Time □Not Employed

Please indicate your language proficiency:

	I know a few words			I feel very comfortable in conversation
English	1	2	3	4
Spanish	1	2	3	4

What language are you most likely to speak at home? □English □Spanish □Both

Comment [IS12]: This might be a confusing wording for those with low literacy... maybe try "were you born here... were your parent's born here... etc)

Comment [IS13]: Do you need such narrow regions? Unless you have a reason to, perhaps you could ask "what nationality/ethnic group do you most identify as?" then you could always code each country into one of these categories... this way you could get at subtleties such as Colombian vs Brazilian vs. El Salvadorian...

How many people (family, friends, etc.) live with you at home? _____

Section 2: Please circle the number that best describes your own opinion.

	Strongly Disagree	Disagree	Agree	Strongly Agree
I have to be more anglicized (more American)	1	2	3	4
Latinos are very often stereotyped.	1	2	3	4
I have been discriminated against.	1	2	3	4
I avoid speaking Spanish in public areas where English is primarily spoken (e.g. stores)	1	2	3	4
I don't fit in with non-Latinos	1	2	3	4

Comment [IS14]: Again... we are required to write our surveys at a 5th grade level, to make sure we don't have to explain points any more than necessary. For some studies we are not allowed to explain at all outside of what is written... this keeps the results as untainted as possible...

Section 3: For the following questions, please circle the number you feel is appropriate for you with one being "not at all", and 4 being "very much".
For each symptom, please indicate how often you have experienced it in the past (left column) and then how serious it was (for example, were you simply feeling sad or was it near suicide levels?)

Comment [IS15]: When we do a Likert scale we often print out a card containing the scale with what each number stands for. We then show the subject the card so they know the range of options.

Symptom 1	**I do not feel socially functional or able to complete my daily activities**								
Frequency	1	2	3	4	Severity	1	2	3	4

To help with this symptom, what would you do or what have you done?
□Talk to a medical professional □Talk to family, friends, or spiritual leader □Wait for it to go away
□Other: _____

Symptom 2	**I constantly feel stressed, frustrated, and/or irritated**								
Frequency	1	2	3	4	Severity	1	2	3	4

To help with this symptom, what would you do or what have you done?
□Talk to a medical professional □Talk to family, friends, or spiritual leader □Wait for it to go away
□Other: _____

Symptom 3	**I frequently feel sad and unmotivated to perform certain daily activities**								
Frequency	1	2	3	4	Severity	1	2	3	4

To help with this symptom, what would you do or what have you done?
□Talk to a medical professional □Talk to family, friends, or spiritual leader □Wait for it to go away
□Other: _____

Symptom 4	**I frequently feel anxious, having heart palpitations and sweating**

Frequency	1	2	3	4	Severity	1	2	3	4

To help with this symptom, what would you do or what have you done?
□Talk to a medical professional □Talk to family, friends, or spiritual leader □Wait for it to go away
□Other: _____

Symptom 5 **I have mood swings, and my emotions change quickly**									
Frequency	1	2	3	4	Severity	1	2	3	4

To help with this symptom, what would you do or what have you done?
□Talk to a medical professional □Talk to family, friends, or spiritual leader □Wait for it to go away
□Other: _____

The questions below refer to the five Symptoms listed above.
Have you ever used non-prescribed medication or other drugs to help with any of these symptoms?
□Yes □No

Had you used non-prescribed medication or other drugs before you felt these symptoms? □Yes □No

Does anyone else in your family have symptoms like these? □Yes □No
If yes, how common are the symptoms? How many people have similar symptoms?

Very few people Most of my family

1 2 3 4

How do you or your family members explain the symptoms?
_____

<u>Section 4:</u> Please answer the following questions as they apply to you.

Have you ever used non-prescribed medication or other drugs? □Yes □No
If you answered Yes, please answer the questions below, if you have answered NO, than you have finished the survey.

	Tried it once	Yearly	Monthly	Weekly	Daily
Marijuana	1	2	3	4	5
Cocaine	1	2	3	4	5
Heroin	1	2	3	4	5
Alcohol	1	2	3	4	5
Other: _____	1	2	3	4	5

Finish the following sentence by selecting all that apply

I have used this substance(s) because…

- □Problems in my family
- □I was curious
- □A lot of my friends were trying/using it
- □My sibling/cousin/family member was trying/using it
- □I was feeling sad
- □I was feeling angry
- □I was feeling alone

Have you ever tried to stop using this substance/these substances? □Yes □No

Which of the following best describes you? □I never tried to quit □I have unsuccessfully tried to quit □I have successfully quit

Did you get help when trying to stop using the substance(s)? □No □Yes

If yes, from where?_____

Thank you very much for completing this survey. If you would like to discuss any of the questions or share your opinions about the subject matter, please leave your phone number and we will contact you for a phone interview.

Phone Number: _____

6.11- Notes from Sanouri Ursprung

Hi Alice & Kelly, I inserted some comments into your survey, but will add some of them here.

1) As noted we often have a printed out card with our likert scale and the respective categories on it. Eg.

1= not at all 5= extremely

2) Also, I noted that you may want to re-word some things to be understandable at a 5th grade level... We are required by our IRB to do so for surveys, and given the diversity of your population it would give you more consistant results.

3)you will most likely need a consent form or at least a verbal consent you read to them. I am attaching an example of our verbal consents, should you need it.

4) if this is an in person interview, I suggest having pre-written prompts that explain any potential confusion in wording that way everyone gets the same explaination, keeping your methods more consistant. Try and keep illustrative examples very vague as not to influence their responses. For example if they don't understand what kind of drugs you mean, you might answer "any substance you take that was not prescribed by a doctor" Then if they still don't understand you can give a list like "alcohol, marijuana, pills, cocaine, heroin, hallucinigens, etc."

This looks great so far! I will be away on sabbatical for one month, so I will have limited access to e-mail from next week through the 1st of May. Let me know if you need anything before then, and certianly keep me posted once I get back!

Sanouri Ursprung

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UMASS Medical School
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E: sanouri.ursprung@umassmed.edu

-----Original Message-----
From: Abou Nader, Alice [mailto:ajnaders@WPI.EDU]
Sent: Wednesday, March 18, 2009 9:33 PM
To: Ursprung, Sanouri
Subject: MQP Survery Pre-testing

Dear Sanouri,

Kelley and I would truly appreciate it if you could give us your input on the survey we have constructed. The purpose of this survey is to investigate the correlation between accommodation disorder and substance abuse among the Latino community in the Worcester area. This survey will be pre-tested twice, this being the first pre-test. We truly appreciate your participation and expertise on survey construction. Attached is the survey itself and the evaluation form that we would like you to fill out. We hope that we did not take too much of your time and if you have any questions about our MQP project or survey please feel free to ask.

Thank you and all the best,

Alice J. Abou Nader and Kelley Murray
Worcester Polytechnic Institute
Class of 2009
Bachelors in International & Spanish and Biotechnology

6.12- Spanish Translation of Survey

(Layout of this document was altered to fit document's parameters)

Gracias por participar en este estudio. Toda la información presentada es confidencial y anónima. Las respuestas serán usadas para completar el proyecto final de Worcester Polytechnic Institute (WPI). Cuando el proyecto termine, este documento será destruido. Su anonimato y confidencialidad son muy importantes y por eso serán protegidos siempre durante este estudio. Tiene el derecho de no responder preguntas o también no terminar este estudio. Este proyecto intenta mejorar los servicios para la comunidad Latina en Worcester.

Sección 1: Por favor complete las siguientes preguntas.

¿Se siente se seguro en su comunidad (aquí en Worcester)?	□ Sí	□ No
¿Disfruta viviendo en su comunidad?	□ Sí	□ No
¿Participa en eventos o celebraciones en la comunidad?	□ Sí	□ No
¿En su opinión, hay un sentimiento de unidad en la comunidad?	□ Sí	□ No

Sección 2: Por favor circule el número que mejor describa su opinión.

	Desacuerdo Fuertemente	Desacuerdo	Acuerdo	Fuertemente Acuerdo
Necesito ser más americano para sentirme parte de la cultura	1	2	3	4
Hay un estereotipo de latinos	1	2	3	4
Ya he vivido el prejuicio por ser latino	1	2	3	4
Evito hablar español en público en sitios donde la mayoría habla ingles (ex. tiendas o supermercados)	1	2	3	4
No siento cómodo con la cultura latina	1	2	3	4

<u>Sección 3:</u> Para los siguientes síntomas, por favor indique con un círculo las respuestas apropiadas para usted en términos de frecuencia y severidad. El número 1 representa "nada, nunca" y el número 4 "mucho, muchas veces." La *Frecuencia* representa la cantidad de veces que tuvo este síntoma y la *Severidad* es cuán molesto es el síntoma.

Síntoma 1 – Siento que no puedo funcionar en sociedad ni completar mis actividades diarias.									
Frecuencia:	1	2	3	4	**Severidad:**	1	2	3	4

¿Qué hace para tratar este síntoma?
□ Busco tratamiento médico □ Hablo con familiares, amigos, o padres □ Espero hasta que el síntoma se va
□ Otro método: _____

Síntoma 2 – Me siento enfatizado, frustrado y/o irritado constantemente.									
Frecuencia:	1	2	3	4	**Severidad:**	1	2	3	4

¿Qué haces para tratar este síntoma?
□ Busco tratamiento médico □ Hablo con familiares, amigos, o padres □ Espero hasta que el síntoma se va
□ Otro método: _____

Síntoma 3 – Me siento triste frecuentemente y no tengo motivación para hacer mis actividades diarias.									
Frecuencia:	1	2	3	4	**Severidad:**	1	2	3	4

¿Qué haces para tratar este síntoma?
□ Busco tratamiento médico □ Hablo con familiares, amigos, o padres □ Espero hasta que el síntoma se va
□ Otro método: _____

Síntoma 4 – Tengo ansiedad frecuentemente y también tengo palpitaciones del corazón y sudo mucho.									
Frecuencia:	1	2	3	4	**Severidad:**	1	2	3	4

¿Qué haces para tratar este síntoma?
□ Busco tratamiento médico □ Hablo con familiares, amigos, o padres □ Espero hasta que el síntoma se va
□ Otro método: _____

Síntoma 5 – Mis emociones cambian rápidamente. Tengo cambios de humor.									
Frecuencia:	1	2	3	4	**Severidad:**	1	2	3	4

¿Qué haces para tratar este síntoma?
□ Busco tratamiento médico □ Hablo con familiares, amigos, o padres □ Espero hasta que el síntoma se va
□ Otro método: _____

¿Ha usado drogas para tratar sus síntomas? □ Sí □ No

¿Ha usado drogas antes de sentir estos síntomas? □ Sí □ No

¿Hay familiares que presentan síntomas similares? □ Sí □ No

Si usted respondió Sí, ¿cuántos familiares tenían esto(s) síntoma(s)?

Ningún familiar La mayoría de mi familia

1 2 3 4

¿Qué piensa usted y su familia sobre estos síntomas y cual es el motivo de tenerlos?

_____

<u>Sección 4:</u> Por favor conteste las preguntas abajo que mejor te describe.

¿He probado drogas? □ Sí □ No Si respondió **No**, por favor vaya a **ección-5**

	He probado una vez	Anualmente	Mensual	Semanal	Diariamente
Marihuana	1	2	3	4	5
Cocaína	1	2	3	4	5
Heroína	1	2	3	4	5
Alcohol	1	2	3	4	5
Otros: _____	1	2	3	4	5

Escoja la opción que mejor complete esta frase. Escoja más de una si es necesario.

Yo use esta(s) substancia(s) porque...
□ Problemas con la familia
□ Tenía curiosidad
□ Mis amigos la estaban probando/usando
□ Mi hermano/primo/familiar estaba usándola
□ Me sentía triste
□ Estaba enfadado
□ Me sentía solo
□ Otro: _____

¿He intentado parar el uso de esta(s) substancia(s)? □ Sí □ No

¿Cuál te describe mejor?
□ Nunca intenté parar el uso □ Intenté parar lo pero no pude □ Yo pude parar el uso

¿Usted buscó ayuda cuando intentaba parar el uso de la(s) substancia(s)?

□ No □ Sí, ¿dónde buscaste ayuda? _____

<u>Sección 5</u>: Por favor, conteste las siguientes preguntas personales.

Sexo: □ Femenino □ Masculino

Edad: □15-20 □21-25 □26-35 □36-45 □46-55 □56-65 □66+

¿Usted nació en los Estados Unidos? □ Sí □ No, ¿en que país?_____

¿Tú eres la primera generación americana? □ Sí □ No, ¿cual generación? □2nd □3rd □4th □5th

¿Donde consideras los orígenes de su familia? □ America del Sur □ America Central □ Caribe □ Otro: _____

¿Cuál es el nivel de educación más alto que tiene?

□ Ningún de educación formal
□ Escuela Primaria
□ Escuela Intermedia
□ Escuela Secundaria pero no he terminado el curso
□ Colegio, he terminado (diploma o GED)
□ Algunos cursos universitarios
□ Diploma o estudio técnico/profesional
□ Diploma universitario de 2 años
□ Diploma universitario de 4 años
□ Alguna educación post-universitaria
□ Masters o Doctorado

¿Cuál es tu estado de empleo? □ Empleado permanentemente □ Empleado temporero □ Desempleado

Por favor indique su competencia en estas lenguas:

	Sé pocas palabras			Me siento cómodo hablando
Inglés	1	2	3	4
Español	1	2	3	4
Portugués	1	2	3	4

¿Cuál lengua hablas más en su casa? (Señale los que son relevantes para usted)

□ Inglés □ Español □ Portugués

¿Cuántas personas (familia, amigos, etc.) viven con usted en casa?_____ □ No tengo casa.

Gracias por completar este estudio. Si a usted le gustaría compartir sus opiniones sobre estos temas, por favor escriba su número telefónico para participar en una entrevista anónima por teléfono.

Número telefónico: _____

Spanish - II Correction

Corrected by Prof. Matos-Nin

Código: _____

Gracias por participar en este estudio. Toda la información presentada es confidencial y anónima. Las respuestas serán usadas para completar el proyecto final de Worcester Polytechnic Institute (WPI). Cuando el proyecto termine, sólo una copia existirá para los dos profesores en WPI. Su anonimato y confidencialidad son muy importantes y por eso serán protegidos siempre durante este estudio. Tiene el derecho de no contestar preguntas o también terminar este estudio. Este proyecto intenta aumentar los servicios para la comunidad ~~Latino~~ latina.

Sección 1: Por favor complete las siguientes preguntas.

¿Siente se seguro en su comunidad (aquí en Worcester)? □Sí □No

Le gusta ¿~~Goza~~ vivir en su comunidad? □Sí □No

¿Participa en eventos o celebraciones ~~de~~ en la comunidad? □Sí □No

¿En su opinión, hay un ~~siento~~ sentido de unidad en la comunidad? □Sí □No

Sección 2: Por favor circule el número que mejor describe su opinión.

	Desacuerdo Fuertemente	Desacuerdo	Acuerdo	Fuertemente Acuerdo
Necesito ser más Americano para ~~culturarme~~ sentirme parte de la cultura	1	2	3	4
Hay un estereotipo de Latinos	1	2	3	4
Ya he vivido ~~preconcepto~~ el prejuicio por ser ~~un~~ Latino	1	2	3	4
Evito hablar español en público en sitios donde la mayoría habla ingles (ex. Tiendas o supermercados)	1	2	3	4
No me siento ~~confortable~~ cómodo con la cultura Latina	1	2	3	4

Sección 3: Para los siguientes síntomas, por favor indique con un círculo las respuestas apropiadas para usted en términos de frecuencia y severidad. El número 1 representa "nada, nunca" y el número 4 "mucho, muchas veces."
La *Frecuencia* representa la cantidad de veces que ~~tenia~~ tuvo este síntoma y la *Severidad* es ~~cuanto~~ cuán molesto es el síntoma ~~te molesta~~.

Síntoma 1 – ~~Me~~ Siento que no puedo funcionar en sociedad ni completar mis actividades diarias.									
Frecuencia	1	2	3	4	Severidad	1	2	3	4

¿Qué hace para tratar este síntoma?

□ Busco tratamiento médico □ Hablo con familiares, amigos, o padres □ Espero hasta que el síntoma se va

□Otro método: _____

Código: _____

Síntoma 2 – Me siento enfadado, frustrado y/o irritado constantemente.									
Frecuencia	1	2	3	4	Severidad	1	2	3	4

¿Qué haces para tratar este síntoma?

□ Busco tratamiento médico □ Hablo con familiares, amigos, o padres □ Espero hasta que el síntoma se va

□Otro método: _____

Síntoma 3 – Me siento triste y no tengo motivación para hacer mis actividades diarias.									
Frecuencia	1	2	3	4	Severidad	1	2	3	4

¿Qué haces para tratar este síntoma?

□ Busco tratamiento médico □ Hablo con familiares, amigos, o padres □ Espero hasta que el síntoma se va

□Otro método: _____

Síntoma 4 – Tengo ansiedad y también tengo palpitaciones del corazón y sudo mucho.									
Frecuencia	1	2	3	4	Severidad	1	2	3	4

¿Qué haces para tratar este síntoma?

□ Busco tratamiento médico □ Hablo con familiares, amigos, o padres □ Espero hasta que el síntoma se va

□Otro método: _____

Síntoma 5 – Mis emociones cambian rápidamente. Tengo ~~columpios~~ cambios de humor.									
Frecuencia	1	2	3	4	Severidad	1	2	3	4

¿Qué haces para tratar este síntoma?

□ Busco tratamiento médico □ Hablo con familiares, amigos, o padres □ Espero hasta que el síntoma se va

□Otro método: _____

¿~~Usted~~ ha usado drogas para tratar sus síntomas? □ Sí □No

¿~~Usted~~ ha usado drogas antes de sentir estos síntomas? □ Sí □No

¿Hay familiares que presentan síntomas similares? □ Sí □No

Código: _____

Si usted respondió Sí, ¿cuántos familiares tenían este(s) síntoma(s)?

Ningún familiar — La mayoría de mi familia

1 2 3 4

¿Qué piensa usted y su familia sobre estos síntomas y cual es el motivo de tenerlos?

_____

_____

Sección 4: Por favor conteste las preguntas abajo que mejor te describe.

¿He probado drogas? □ Sí □No

	He probado una vez	Anualmente	Mensual	Semanal	Diariamente
Mariguana	1	2	3	4	5
Cocaína	1	2	3	4	5
Heroína	1	2	3	4	5
Alcohol	1	2	3	4	5
Otro: _____	1	2	3	4	5

~~Asígnale todas las escojas que completan la sentencia abajo.~~ Escoja más de una si es necesario

He usado ~~Yo use~~ esta(s) substancia(s) porque...

□ Problemas con la familia
□ Tenía curiosidad
□ Mis amigos/estaban probando/usando
□ Mi hermano/primo/familiar estaba usándola
□ Me sentía triste
□ Estaba ~~sintiendo~~ enfadado
□Me sentía solo
□ Otro: _____

¿He intentado parar el uso de esta(s) substancia(s)? □ Sí □ No

Cuál

¿~~Cual escoja~~ te describe mejor? □ Nunca intenté parar el uso □Intente parar pero no pude □ Yo pude parar el uso

¿Usted buscó ayuda cuando intentaba parar el uso de la(s) substancia(s)?

□No □Sí Se, respondió sí, ¿donde ~~procuraste~~ buscaste ayuda? _____

Código: _____

Sección 5: Por favor, contesta las siguientes preguntas ~~sobre Usted.~~

Edad: □15-20 □21-25 □26-35 □36-45 □46-55 □56-65 □66+

Sexo: □ Femenino □ Masculino

¿Usted nació en los Estados Unidos? □ Sí □ No ¿En cual país?

Si contesta negativamente, ¿dónde nació _____

¿Tú eres la primera generación americana? □ Sí □ No ~~Se no, cual generación?~~ □2nd □3rd □4th □5th

Si contesta negativamente, ¿qué número de generación es?

¿Donde consideras los orígenes de tu familia? □ America del Sur □ America Central □ Caribe
□ Otro: _____

¿Cuál es el nivel de educación más alto que tenía?
- □ ~~Colegio~~, pero no he terminado el curso
- □ ~~Colegio~~, he terminado (diploma o GED)
- □ Algunos cursos universitarios
- □ Diploma o estudio técnico/profesional
- □ Diploma universitario de 2 años
- □ Diploma universitario de 4 años
- □ Alguna educación pos-universitaria
- □ Masters o Doctorado
- □ ~~E~~ Escuela Intermedia
- □ Escuela Primaria

¿Cuál es tu estado de empleo? □ Empleado permanentemente □ Empleado temporario □ Desempleado

Por favor indique su competencia en estas lenguas:

	Se ~~Supo~~ pocas palabras			Me siento ~~confortable~~ cómodo hablando
Inglés	1	2	3	4
Español	1	2	3	4
Portugués	1	2	3	4

¿Cuál lengua hablas más en su casa? (~~Asígnale~~ Señale los que son relevantes a usted)

□ Inglés □ Español □ Portugués

¿Cuántas personas (familia, amigos, etc.) viven con usted en casa?_____ □No tengo casa.

Gracias por completar este estudio. Si ~~a~~ le gustaría compartir sus opiniones sobre estos temas, por favor escriba su número telefónico para participar de una entrevista anónima por teléfono.

Número telefónico: _____

Spanish - I Correction

Corrected by Prof. Alvarez

Código: _____

Gracias por participar en este estudio. Toda la información presentada es confidencial y anónima. Las respuestas serán usadas para completar el proyecto final de Worcester Polytechnic Institute (WPI). Cuando el proyecto termine, solo una copia existirá para los dos profesores en WPI. Su anonimato y confidencialidad son muy importantes y por eso serán protegidos siempre durante este estudio. Tiene el derecho de no ~~contestar~~ responder preguntas o también terminar este estudio. Este proyecto intenta aumentar los servicios para la comunidad Latina en Worcester

mejorar?

Sección 1: Por favor, complete las siguientes preguntas.

¿Siente se seguro en su comunidad (aquí en Worcester)? Se siente ...	□Sí	□No
¿~~Goza vivir~~ en su comunidad? Disfruta viviendo	□Sí	□No
¿Participa en eventos o celebraciones de la comunidad?	□Sí	□No
¿En su opinión, hay un ~~siento~~ de unidad en la comunidad? sentimiento	□Sí	□No

Sección 2: Por favor circule el número que mejor describe tu opinión.

	Desacuerdo Fuertemente	Desacuerdo	Acuerdo	Fuertemente Acuerdo
Necesito ser más Americano para ~~culturarme~~ a la adaptación cultural	1	2	3	4
Hay un estereotipo de Latinos/as 1 (no sup)	1	2	3	4
Yo he ~~vivido preconcepto~~ experimentado prejuicios por ser un Latino/a	1	2	3	4
Evito hablar español en público en sitios donde la mayoría habla ingles (ex. Tiendas o supermercados)	1	2	3	4
No me siento confortable con la cultura Latina	1	2	3	4

Sección 3: Para los siguientes síntomas, por favor indique con un círculo las respuestas apropiadas para usted en términos de frecuencia y severidad. El numero 1 representa "nada, nunca" y el numero 4 "mucho, muchas veces." La *Frecuencia* representa la cantidad de veces que tenía este síntoma y la *Severidad* es lo cuanto el síntoma te molesta.

Síntoma 1 – Siento que no puedo funcionar en sociedad ni completar mis actividades diarias.									
Frecuencia	1	2	3	4	Severidad	1	2	3	4

¿Qué hace para tratar este síntoma?

□ Busco tratamiento médico □ Hablo con familiares, amigos, o padres □ Espero hasta que el síntoma se va

□Otro método: _____

Código: _____

Síntoma 2 – Me siento enfadado, frustrado, y/o irritado constantemente.									
Frecuencia	1	2	3	4	Severidad	1	2	3	4

¿Qué haces para tratar este síntoma?

□ Busco tratamiento médico □ Hablo con familiares, amigos, o padres □ Espero hasta que el síntoma se va

□Otro método: _____

Síntoma 3 – Me siento triste y no tengo motivación para hacer mis actividades diarias.									
Frecuencia	1	2	3	4	Severidad	1	2	3	4

¿Qué haces para tratar este síntoma?

□ Busco tratamiento médico □ Hablo con familiares, amigos, o padres □ Espero hasta que el síntoma se va

□Otro método: _____

Síntoma 4 – Tengo ansiedad y también tengo palpitaciones del corazón y sudo mucho.									
Frecuencia	1	2	3	4	Severidad	1	2	3	4

¿Qué haces para tratar este síntoma?

□ Busco tratamiento médico □ Hablo con familiares, amigos, o padres □ Espero hasta que el síntoma se va

□Otro método: _____

cambios

Síntoma 5 – Mis emociones cambian rápidamente. Tengo ~~columpios~~ de humor.									
Frecuencia	1	2	3	4	Severidad	1	2	3	4

¿Qué haces para tratar este síntoma?

□ Busco tratamiento médico □ Hablo con familiares, amigos, o padres □ Espero hasta que el síntoma se va

□Otro método: _____

¿Usted ha usado drogas para tratar sus síntomas? □ Sí □No

¿Usted ha usado drogas antes de sentir estos síntomas? □ Sí □No

¿Hay familiares que presentan síntomas similares? □ Sí □No

Código: _____

Si usted respondió Si, ¿cuántos familiares tenían este(s) síntoma(s)?

Ningún familiar — La mayoría de mi familia

1 2 3 4

¿Qué piensa usted y su familia sobre estos síntomas, cual es el motivo de tenerlos?

_____

_____

Sección 4: Por favor conteste las preguntas ~~abajo~~ que mejor le describen

¿He probado drogas? □ Si □No

	He probado una vez	Anualmente	Mensual	Semanal	Diariamente
Marihuana	1	2	3	4	5
Cocaína	1	2	3	4	5
Heroína	1	2	3	4	5
Alcohol	1	2	3	4	5
Otros _____	1	2	3	4	5

~~Asígnale todas las escojas que completan la sentencia abajo:~~ Escoja la opción que mejor complete esta frase:

Yo usé esta(s) substancia(s) porque...

□ Problemas con la familia
□ Tenía curiosidad
□ Mis amigos estaban probando/usando
□ Mi hermano/primo/familiar estaba usando
□ Me sentía triste
□ Estaba sintiendo enfadado
□Me sentía solo
□ Otro: _____

¿He intentado parar el uso de esta(s) substancia(s)? □ Si □ No

¿Cual ~~escoja~~ te describe mejor? □ Nunca intente parar el uso □Intente parar pero no pude □ Yo puede parar el uso

¿Usted buscó ayuda cuando intentaba parar el uso de la(s) substancia(s)?

□No □Si Si respondió si, ¿donde ~~procuraste~~ consiguiste ayuda? _____

Código: _____

Sección 5: Por favor, contesta las siguientes preguntas sobre Usted.

Edad: □15-20 □21-25 □26-35 □36-45 □46-55 □56-65 □66+

Sexo: □ Femenino □ Masculino

¿Usted nació en los Estados Unidos? □ Si □ No ¿Si no, en cual país? _____

¿Tú eres la primera generación americana? □ Si □ No Si no, cual generación? □2nd □3rd □4th □5th

¿Donde consideras los orígenes de tu familia? □ America del Sur □ America Central □ Caribe
□ Otro: _____

¿Cuál es el nivel de educación más alto que tenía?
- □ Colegio, pero no he terminado el curso
- □ Colegio, he terminado (diploma o GED)
- □ Algunos cursos universitarios
- □ Diploma o estudio técnico/profesional
- □ Diploma universitario de 2 años
- □ Diploma universitario de 4 años
- □ Alguna educación postuniversitaria
- □ Masters o Doctorado

escuela Elemental (Secundaria)

¿Cuál es tu estado de empleo? □ Empleado permanentemente □ Empleado temporario □ Desempegado

Por favor indique su competencia en estas lenguas:

	Supa pocas palabras			Me siento confortable hablando
Ingles	1	2	3	4
Español	1	2	3	4
Portugués	1	2	3	4

¿Cuál lengua hablas más en su casa? (Asígnale los que son relevantes a usted)

□ Ingles □ Español □ Portugués

¿Cuántas personas (familia, amigos, etc.) viven con usted en casa?_____ □No tengo casa.

Gracias por completar este estudio. Si le gustaría compartir sus opiniones sobre estos temas, por favor escriba su número telefónico para participar en una entrevista anónima por teléfono.

Numero Telefónico: _____

6.15- Portuguese Translation of Survey

(Layout of this document was altered to fit document's parameters)

Muito obrigado por participar neste estudo. A informação que você presenta neste estudo é confidencial e anônimo. A informação será somente usada para meios acadêmicos e despois será destruida durante a finalização do estudo em Maio 2009 para proteger a sua identidade. Este estudo esta sendo adiministrado pela Universidade Politécnica de Worcester, MA.

Parte 1: Por favor responda as seguintes perguntas.

Você se sente seguro(a) na sua comunidade?	□ Sim	□ Não
Você se diverte na sua comunidade?	□ Sim	□ Não
Você participa em eventos comunitários?	□ Sim	□ Não
Você sente uma união comunitária?	□ Sim	□ Não

Parte 2: Por favor circule o número que melhor describe a sua opinião.

	Desconcordo Fortementeemente	Não Concordo	Concordo	Concordo Fortemente
Preciso ser mais Americano para me adaptar	1	2	3	4
Existe esterotipos de Latinos	1	2	3	4
Fui vítima de preconceito(s) por ser Latino	1	2	3	4
Evito falar portugués em público aonde a mayoría fala Inglês (ex. Tiendas o supermercados)	1	2	3	4
Não sinto comfortavel com a cultura Latina	1	2	3	4

<u>Parte 3:</u> Por favor responda as perguntas que pertenece a você.

Para cada síntoma, por favor indique a frequencia que você sente o sintoma e o degrau de severdidade A severidad aumenta com os números. A frecuencia tambem aumenta com os números, um sendo menos frequente, e 4 sendo constante.

Sintoma 1									
Frequencia	1	2	3	4	Severidade	1	2	3	4

Como você tratou os seus sintomas?
□ Busquei tratamento médico □ Converso com familiares, amigos, ou padres
□ Esperei até que os sintomas desaparecerão □Outros métodos:_____

Sintoma 2									
Frequencia	1	2	3	4	Severidade	1	2	3	4

Como você tratou os seus sintomas?
□ Busquei tratamento médico □ Converso com familiares, amigos, ou padres
□ Esperei até que os sintomas desaparecerão □Outros métodos:_____

Sintoma 3									
Frequencia	1	2	3	4	Severidade	1	2	3	4

Como você tratou os seus sintomas?
□ Busquei tratamento médico □ Converso com familiares, amigos, ou padres
□ Esperei até que os sintomas desaparecerão □Outros métodos:_____

Sintoma 4									
Frecuencia	1	2	3	4	Severidad	1	2	3	4

Como você tratou os seus sintomas?
□ Busquei tratamento médico □ Converso com familiares, amigos, ou padres
□ Esperei até que os sintomas desaparecerão □Outros métodos:_____

Sintoma 5									
Frecuencia	1	2	3	4	Severidad	1	2	3	4

Como você tratou os seus sintomas?
□ Busquei tratamento médico □ Converso com familiares, amigos, ou padres
□ Esperei até que os sintomas desaparecerão □Outros métodos:_____

Você ja usou drogas para tratar os seus sintomas? □ Sim □Não

Você usou drogas antes de sentir estes sintomas? □ Sim □Não

Você tem familiares que presentão os mesmos sintomas? □ Sim □Não

Se você respondeu Sim, quantos familiares tem este(s) síntoma(s)?

Ninhum familiar A mayoria da minha familia

1 2 3 4

O que você e a sua familia pensa sobre estes sintomas e o motivos de ter los?

_____

<u>Sección 4:</u> Por favor responda as perfuntas abaixo que te descreve.

Você provou drogas? □ Sim □Não

	Provei uma vez	Por Ano	Mensal	Semanal	Diariamente
Maconha	1	2	3	4	5
Cocaína	1	2	3	4	5
Heroína	1	2	3	4	5
Alcól	1	2	3	4	5
Outro: _____	1	2	3	4	5

Escolha a frase que melhor complete a oração:

Eu usei esta(s) substancia(s) porque...

□ Tinha problemas com a minha familia
□ Tinha curiosidade
□ Meus amigos estavam provando/usando
□ Meu irmão/primo/familiar estava usando
□ Me sentia triste
□ Estava me sentindo frustrado
□Me sentía sozinho

Já tentou parar o uso desta(s) substancias? □ Sim □ Não

Qual escolha te descreve melhor?

□ Nunca tentei parar o uso □Tentei parar mas não pude □ Eu parei o uso

Você buscou ajuda quando tentou parar o uso desta(s) substancia(s)?

□Não □Sim

Se você respondeu Sim, então aonde procurou ajuda? _____

<u>Parte 5:</u> Por favor complete as perguntas abaixo .

Idade: □15-20 □21-25 □26-35 □36-45 □46-55 □56-65 □66+

Sexo: □ Femenino □ Masculino

Você naceu nos Estados Unidos? □ Sim □ Não, entao aonde _____

Você é a primeira geração Americano?

□ Sim □ Não, entao indique qual geração? □2 □3 □4 □5

Cual é a origen da sua familia? □ America do Sul □ America Central □ Caribe
□ Outro: _____

Qual é o seu nivel educativo mais alto que você recebeu?

□ Não recebi educacao formal
□ Fui para a escola mas não terminei
□ Fui ate o segundo grau mas Não terminei
□ Fui ate o segundo grau (diploma o GED)
□ Algums cursos universitários
□ Diploma o estudo técnico/profisional
□ Diploma universitário de 2 anos
□ Diploma universitário de 4 anos
□ Alguma educação pos- universitário
□ Masters ou Doutorado

Qual é o seu estado de emprego?
□ Empregado permanentemente □ Empregado temporario □ Desempregado

Por favor indique a sua competência em estas linguas:

	Conheço poucas palavras			Sinto comfortavél conversando
Inglês	1	2	3	4
Português	1	2	3	4

Qual lingua Você mais usa em casa? □ Inglês □ Portugués □ Bilingüe (Inglês e Portugués)

Quantas pessoas (familia, amigos, etc.) vive na sua casa? _____

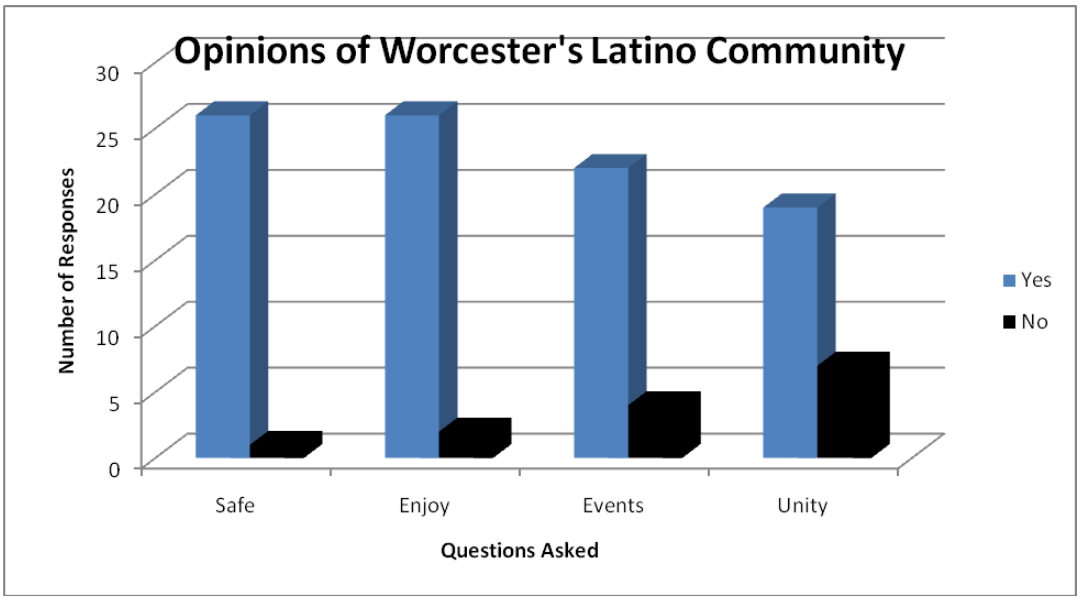
Muito obridado por completar este estudo. Se você gostaria de compartir a sua opinião em mais detalhe por favor deixe o seu número telefónico para participar em uma entrevista anónima.

Número Telefónico: _____

6.16- Survey Results: Tables and Graphs

6.16.1- Complete Sample Data Analysis

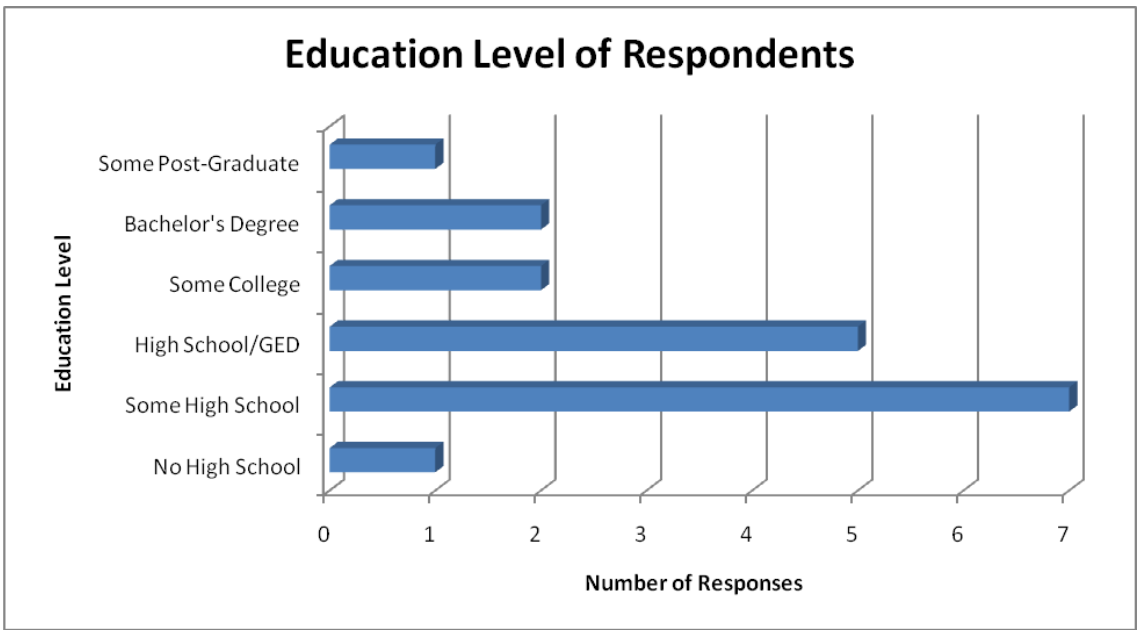
Graph -1: Response Distribution for Introductory Questions



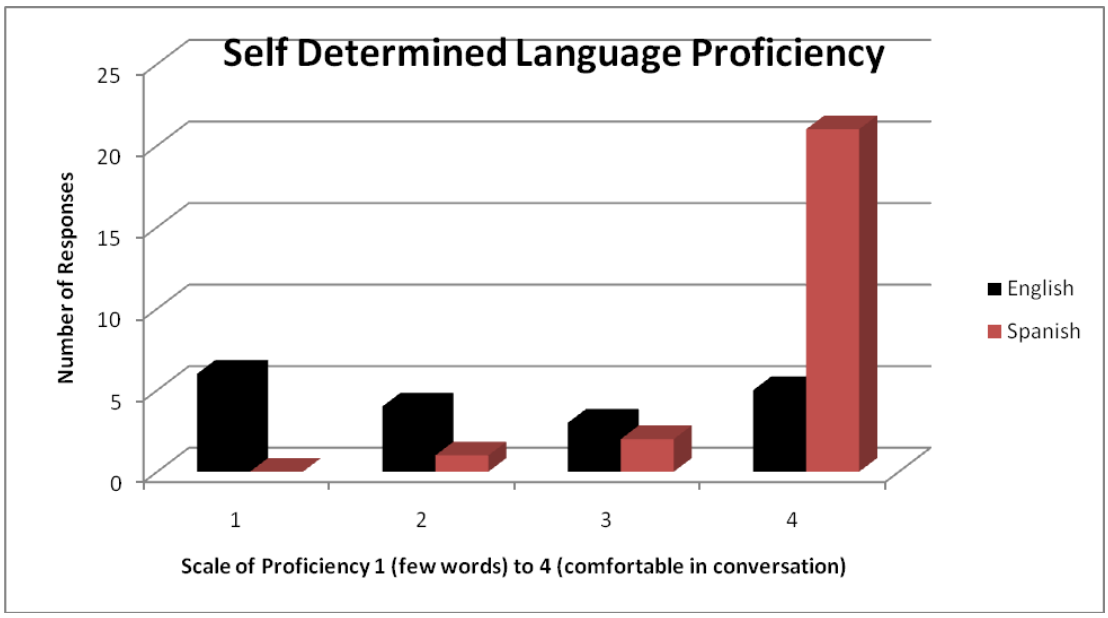
The questions from left to right were the following:

1. Do you feel safe in your community?
2. Do you enjoy your community?
3. Do you take part in community events and celebrations?
4. Do you feel a sense of unity in your community?

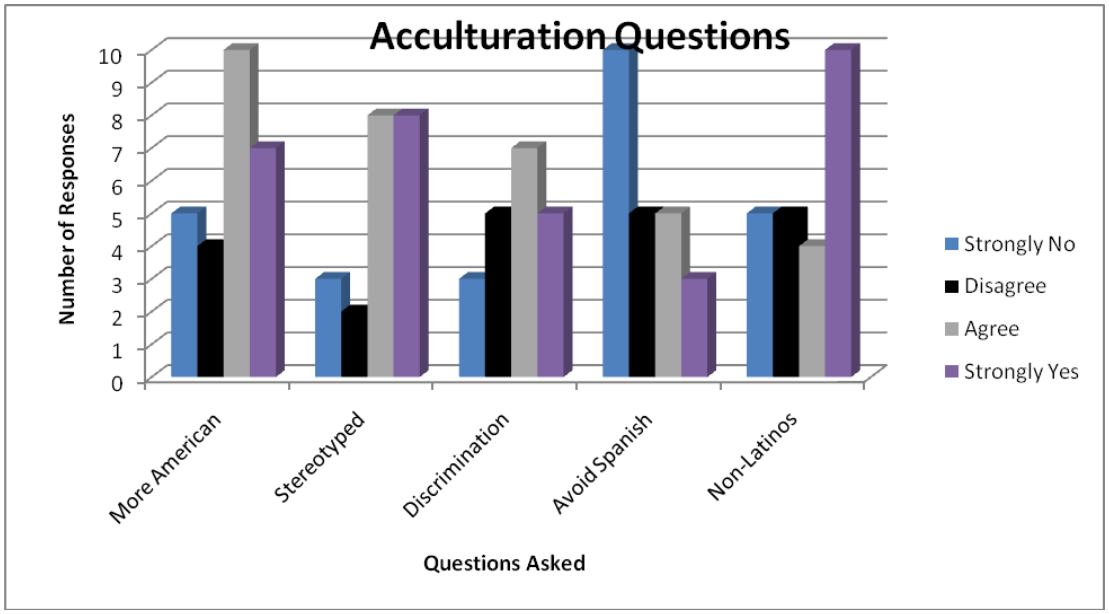
Graph -2: Response Distribution for Education Level



Graph -3: Response Distribution for Language Proficiency



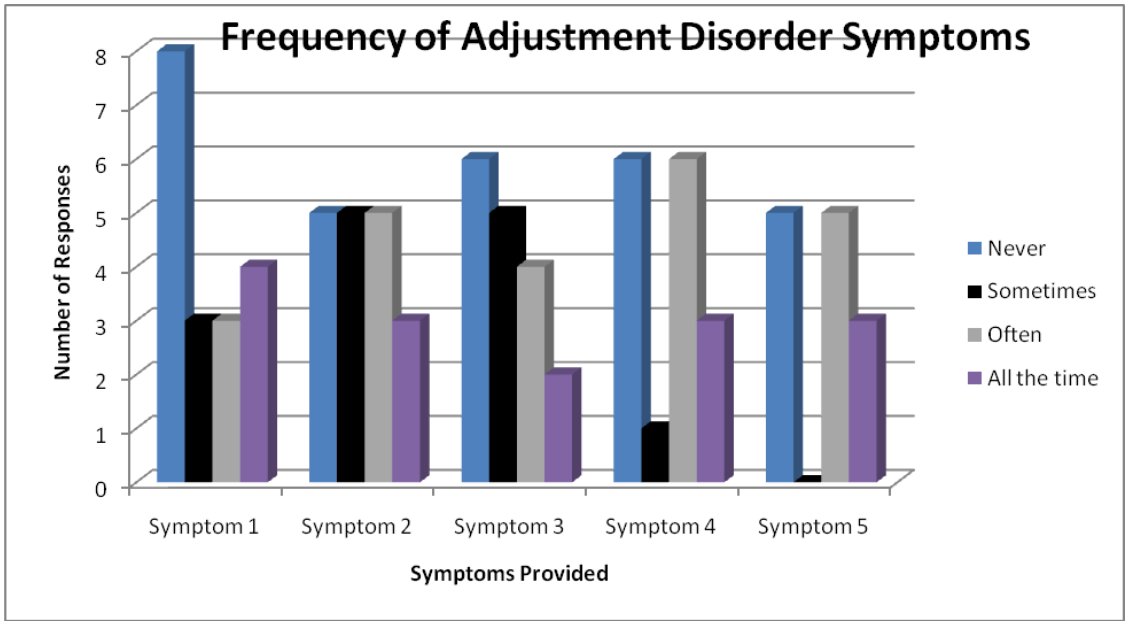
Graph -4: Response Distribution for Acculturation Questions



The survey presented the following questions that are quantified from left to right on the graph:

1) I feel I have to be more "American."
2) Latinos are very often stereotyped.
3) I have been discriminated against.
4) I avoid speaking Spanish in public areas where English is primarily spoken (e.g. stores).
5) I don't fit in with non-Latinos.

Graph -5: Response Distribution for Adjustment/Accommodation Disorder Symptoms



The survey presented the following questions that are quantified from left to right on the graph:

1) I do not feel socially functional or able to complete my daily activities.
2) I feel stressed, frustrated, and/or irritated.
3) I feel sad and unmotivated to perform certain daily activities.
4) I feel anxious, having heart palpitations and sweating.
5) I have mood swings, and my emotions change quickly.

6.16.2- Analysis of Ten Substance Abusers

Although there were many more than 10 survey respondents, this results below focus on the ten sampled subjects who admitted to using a controlled substance. The two tables contain some demographic information about the respondents as well as information concerning the respondents' substance use and mental illness symptoms.

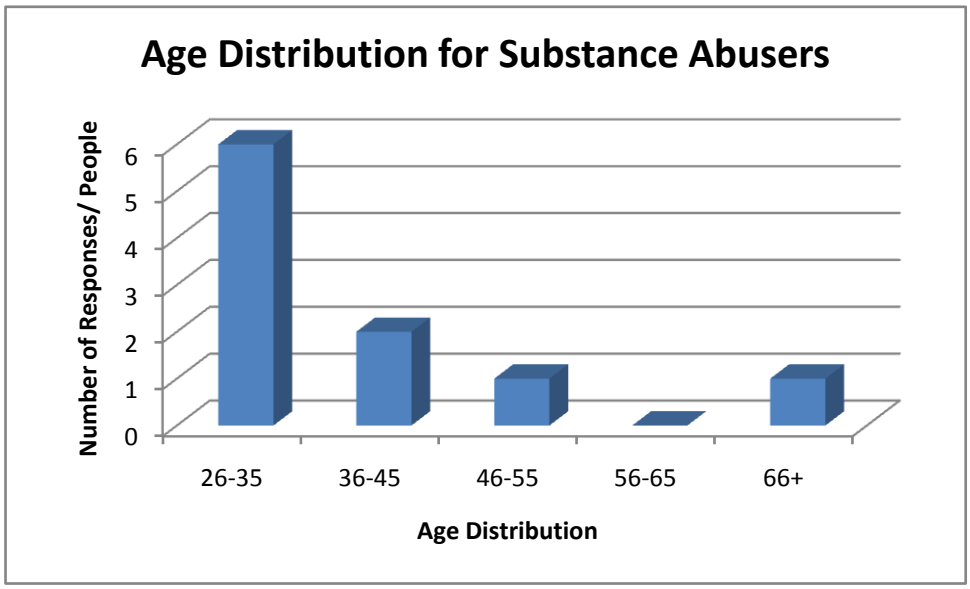
Table-1: Distribution from the Ten Male Subjects who Admitted Substance Abuse

Gender	
Male	**Female**
10	**0**
Nation of Origin	
United States	**Other**
4	**6**
Admittedly Self-Medicating	
Yes	**No**
7	**3**
Substance Use Prior to Symptom Onset	
Yes	**No**
8	**2**
Family History of Similar Symptoms	
Yes	**No**
2	**8**

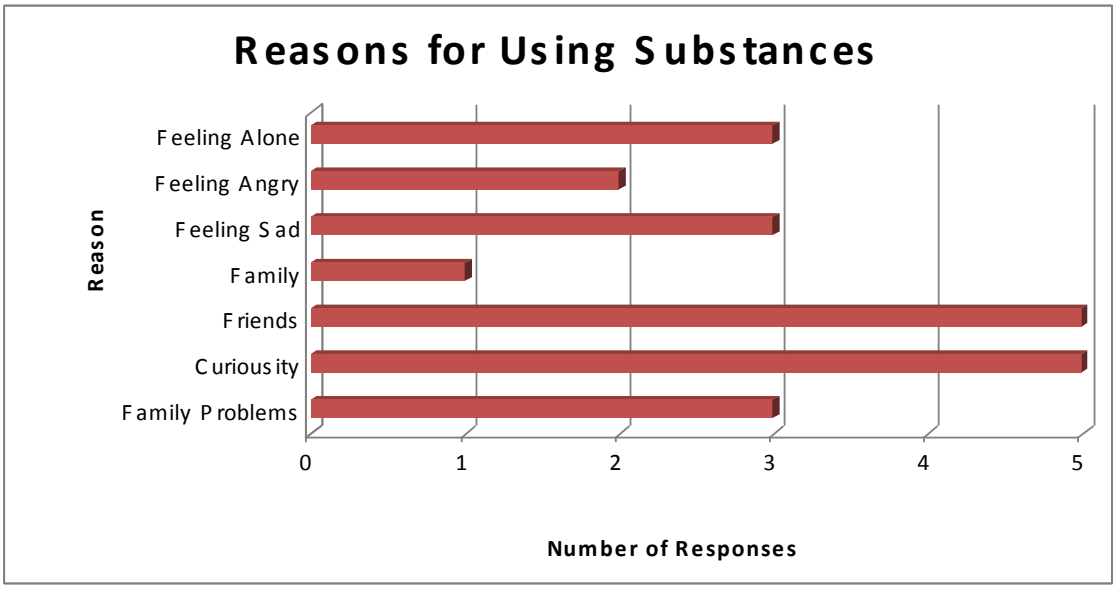
Table-2: Age Distribution for the Ten Male Subjects Who Admitted Substance Abuse

Age Range	26-35	36-45	46-55	66+
Participants	6	2	1	1

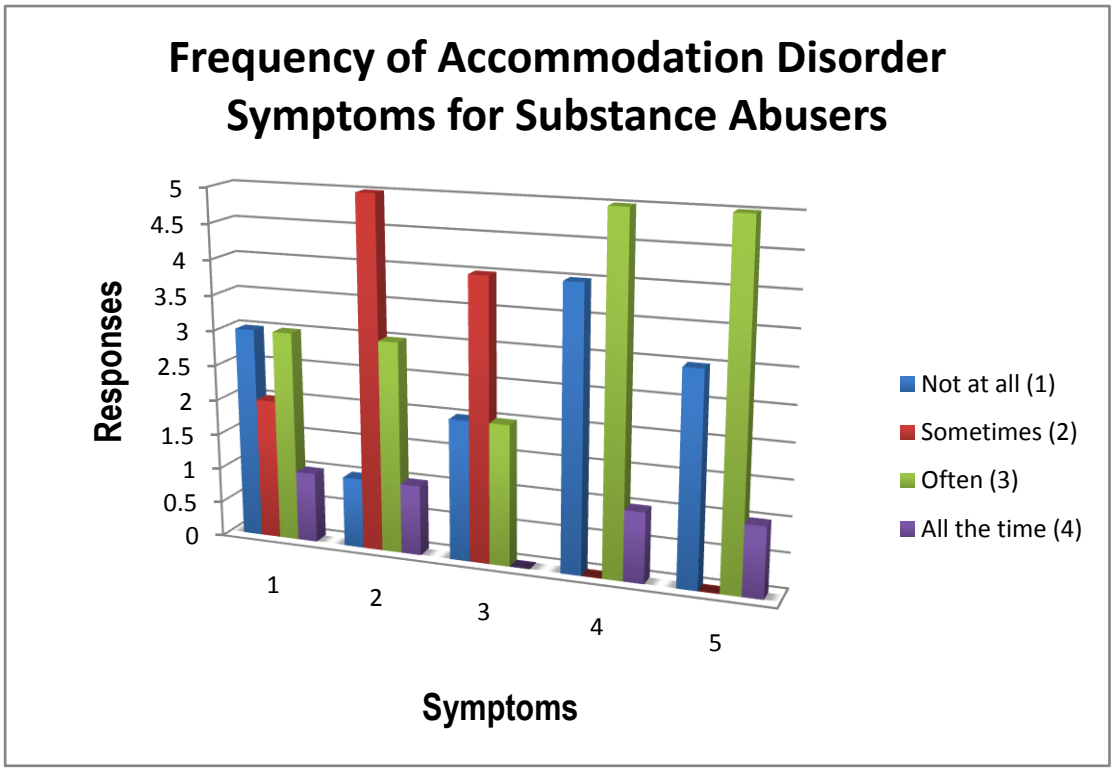
Graph -6: Age Distribution for Substance Abusers



Graph -7: Quantification for Reasons for Using Substances



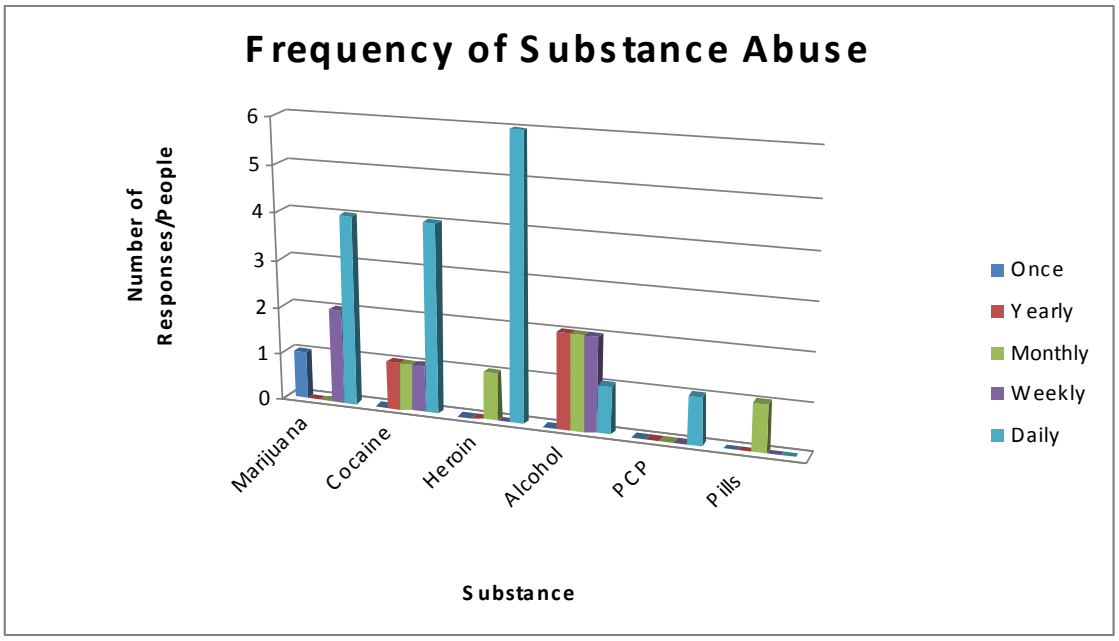
Graph-8: Frequency of Accommodation Disorder Symptoms for Substance Abusers



This bar graph represents the frequency each respondent admitted to experiencing the accommodation disorder symptoms. Although the participants were asked to indicate both frequency and severity of the symptoms on the surveys, most selected only frequency, leading the severity data to be less accurate and useful.
These are symptoms as they appear on the survey:

1. **I do not feel socially functional or able to complete my daily activities.**
2. **I feel stressed, frustrated, and/or irritated.**
3. **I feel sad and unmotivated to perform certain daily activities.**
4. **I feel anxious, having heart palpitations and sweating.**
5. **I have mood swings and my emotions change quickly.**

Graph-9: Frequency Distribution for Substances Abuse



6.17- Interview Questions for Dr. Castiel

1) **How many years have you been working with the Latino community?**
   This community about 15 years

2) **In your experience with the Latino community, what is one thing that you must keep in mind when working with them?**
   Ex. Speaking Spanish, maintaining a casual conversation, etc. Is respect, compassion, willingness to help, sincerity

3) **Why did you find the necessity of creating a specific rehabilitation program just for Latinos?**
   Because the community felt that this was a major problem which was increasing with time and the cause of poverty, violence, Hep B,C and HIV

4) **In your opinion, what makes the Hector Reyes house different from other rehabilitation programs?**
   The fact that it is bilingual and bicultural thereby making residents feel more comfortable in the program. We have in house medical and will begin shortly within house psychiatric tx. Our mode of counseling is Cognitive behavioral therapy and motivational interviewing which is evidence based. We offer GED, ESL, anger management, financial classes etc

5) **Why is there a need for the Hector Reyes house in the community and what positive impact will it have in the community?**
   With the incidence of disparities in health care, and research done that if you ethnically match a patient to the counselor the outcome will be greater. The impact will be to help the community overcome the issues of drug usage, violence, and give people another alternative to this lifestyle and then they in turn can be good parents, children, brothers or sister etc

6) **What are some reasons why Latinos become victims of substance abuse?**
   Because of poverty, racism, lack of education, low self esteem

7) **In your opinion, what are some methods and actions that could take place that would decrease the number of Latino substance abusers?**
   Education is a major problem in the community. This needs to be a in the forefront. If we would pay more attention to increasing the education of the Latinos it would be easier to find jobs, get them out of poverty, increase their self esteem and maybe we could prevent this drug usage pandemic.

8) **Being of Cuban descent, do you think that your patients have a closer relationship to you than other "American" doctors?**
   Yes because we have language, and customs in common which make patients more comfortable.

7- Acknowledgements

The researchers of this project, Alice J. Abou Nader and Kelley Murray would like to give thanks for our sponsor Dr. M. Castiel who has given great support throughout the construction of this project. Her participation in this research project has been crucial to its success. Along with Dr. Castiel we would like to thank the participation of Centro Las American, Jeremiah's Inn and the Hector Reyes House in allowing us to distribute the survey.

We would also like to thank our advisors Prof. Angel Rivera, Prof. Addison and Prof. Rulfs in assisting us in creating a Major Qualifying Project (MQP) that would satisfy the three majors involved: International Studies, Spanish Studies, and Biology & Biotechnology. Without them we could not have the motivation to have created such a unique project and first of its kind to incorporate the department of Biology & Biotechnology and Humanities & Arts at Worcester Polytechnic Institute (WPI).

Finally we would like to thank all of the subjects who were kind in donating their time to fill out the survey. Their patience and understanding is much appreciated. We hope that this project can potentially assist the Latino community that has been so welcoming and kind to us.