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Retention Rates of Puerto Rican Women in Treatment for Substance Abuse and Mental Health Issues

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Abstract

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Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

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Individual factors may impact the retention rate of Puerto Rican women in treatment for mental health and substance abuse-related issues. The purpose of this research was to examine the demographic factors that may contribute to the low retention rate of Puerto Rican women in treatment for mental health and substance abuse. The theory of reasoned action was implicit in the intervention. Data were collected from 120 Puerto Rican women enrolled in an addiction center. The following demographic factors were chosen from prior treatment records: age at first chemical abuse, whether the participant was a child of an alcoholic, level of education, and the first language of the participant. The data were analyzed using logistic regression equations. The results of the analysis did not show a significant relationship between the demographic factors chosen for this study and retention rate in this population. However, the current literature regarding the effective use of these services is still limited with this population. This current study can lead to positive social change by helping to promote awareness of how cultural factors can impact substance abuse treatment for minority women. Therefore, one recommendation for a future study would be to use a more sophisticated research design that would allow for more exploration of relevant cultural factors. Significant results from a future study could result in better services, which could lead to positive social change by helping to reduce recidivism and lower substance abuse in this vulnerable population.

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Dedication

In loving memory of my father. This dissertation is dedicated to my father who since childhood believed I was going to be a doctor. To my brother, Esteban Millan, who was and has been my inspiration. Regardless of his disability, he always smiled and became an international artist. I still mourn his death. To my daughter, granddaughters, and the women in my family who always need to believe that dreams can be obtained. To my son and grandson, who need to believe that minority men have a chance to reach their dreams. To all Latino women who have migrated, seeking dreams to trust themselves: They can be reached.

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Chapter 1: Introduction to the Study

Humans have used many types of drugs for thousands of years. Ancient cultures used narcotics as early as 4000 BC, and the medicinal use of marijuana has been dated to 2737 BC in China (Rossi, 2002). The abuse of opium began in the United States after U.S. veterans returned home from World War I in the early part of the 1900s. At the time there were an estimated 250,000 addicted people in the United States (Rossi, 2002). However, addiction was not recognized until 1900 when opium dens were outlawed in San Francisco because addiction to opium became a problem (Rossi, 2002).

The abuse of substances affects the welfare of children (Pagliaro & Pagliaro, 1999). Women who abuse substances can harm their children or fetuses through emotional neglect, physical neglect, and physical abuse (Centers for Disease Control and Prevention [CDC], 2003). In addition, children who grow up with mothers who abuse substances are at higher risk for emotional and physical abuse (Jaudes, Ekwo, & Van Voorhis, 1995). National surveys frequently address how women who abuse substances cause serious problems to the well-being of children (Clark, 2001). For example, alcohol use in pregnancy can be problematic for the mother and her developing fetus (National Institute on Drug Abuse Study, 1994). The National Institute on Drug Abuse (1994) revealed that 5.5% of women used some type of drugs while pregnant and estimated that between 1,300 and 8,000 children are born each year with fetal alcohol syndrome (FAS).

Despite the need for interventions tailored towards the concerns of women who abuse substances, researchers have primarily constructed evaluating tools for men (Goodman & Wolf, 2013). Substance abuse among women has several distinctive

consequences, particularly affecting children. One of these consequences is parental separation, which has an impact on children even when the child is placed with family members or foster care (Wakeel, 2010). In families where alcohol or other drugs are present, there is often physical and sexual abuse as well as confusing communication for both men and women (Schultz, 2008). Life in this type of environment is often chaotic with little structure or rules for behavior. Children as well as adults in this environment often present with insecure behavior, which affects school performance along with feelings of pain, worry, and anger towards their parents. However, despite their suffering, these children often blame themselves for the substance abuse of their parents. These children often feel responsible when their parents drink or use drugs. Other effects of parental addiction on children are an inability to make friends and possible avoidance issues (Schultz, 2001).

As mentioned previously, most of the tools for evaluating addiction have been developed for men, and very little research has been done for women who are mothers (Clark, 2001). Researchers have stated that women who abuse substances develop different behaviors and become affected physically and emotionally in different ways than men; these differences include the types of drugs and amounts. Therefore, the social and physical consequences of men's addiction differ from that of women, which requires a different set of skills during treatment (Clark, 2001; Nelson-Zlupko, Kauffman, & Dore, 1995; Pape, 1993).The National Household Survey on Drug Abuse (NHSDA, 2003) found that female adolescents between the ages of 12 to 17 were at higher risk to have access to cocaine, crack, LSD, and heroin than their male peers. In addition, women

are more likely to describe the onset of their drug use as sudden and heavy (Nelson-Zlupko et al., 1995). Studies conducted on women indicated that women who use substances in general have more medical consequences, as well as more psychosocial problems, than men (Holscher et al., 2009). The physical consequences of dually diagnosed women include effects on child bearing ability, menstrual cycles, and an increased likelihood of birth defects. Other consequences for women who abuse substances can include sexually contacted diseases, such as HIV AIDS, and other types of risky behavior (Nyamathi et al., 1993). Psychologically, women who abuse substances often feel guilt, shame, depression, and anxiety at a higher level than men as a result of their drug and alcohol usage (Nyamathi et al., 1993). In addition, women often are exposed to fewer choices of treatment than men (Pape, 1993). In some settings, women with substance-abuse issues are unable access treatment as a result of their role as nurturers and as a result of the unavailability of information and social support. As a consequence, women who have problems with the abuse of substances experience poverty, which results in other problems. These physiological complications can include enlarged livers, early pregnancy termination, and other medical complications (Clark, 2001). Some of the instruments used to evaluate substance abuse problems for women include Addiction Survey Index (ASI), Drug Abuse Screening Test (DAST), Drug Use Screening Inventory (DUSI), and the Minnesota Multi-phasic Personality Inventory (MMPI; Ashworth, 2006).

Research conducted on instruments to assess substance abuse problems has shown that because of the lack of uniformity in methodology, the results were inconclusive to

determine that one instrument has better performance than others for women (Ashworth, 2006). In addition, results did not differentiate the contribution of distinct subgroups within substance-abusing women. For example, the trustworthiness of the ASI with women is unclear (Ashworth, 2006).

Substance dependence refers to a maladaptive pattern of substance use, which can lead to clinically significant impairment or distress as manifested by one or more episodes of the following conditions within 12 months: an inability to fulfill major roles or obligations, the use of substances where hazardous outcomes are possible, frequent substance related problems, and the continued use of substances despite problems (Peter, 2011). Providing data from a national Latino and Asian American study, Clark (2001) demonstrated that rates of substance abuse services use among Latinos have increased over the past decade with the greatest usage stemming from the Puerto Rican community. Harden et al. (2007) demonstrated that substance dependence has caused major financial concerns in the United States, and Latinos are one of the ethnic groups severely affected by this disorder. Doweco (2000) added that substances abuse can induce changes in people's neurological functioning. These neurological changes can result in behavioral changes, which can potentially contribute to a secondary psychiatric diagnosis, such as depressive and anxiety disorders or psychosis. The *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.; *DSM-IV*; American Psychiatric Association, 1994) divides addiction into two categories: abuse and dependency. Researchers (Daren et al., 2001) discovered a large percentage of needle sharing and heroin use at younger ages than other populations in New York. There are fewer published studies on the Puerto Rican

populations and these differences might be due to a lack of available resources. Therefore, researchers need to focus on skills that can increase the retention rate for this population. Services for treatment of mental health and substance abuse among foreign born, monolingual Spanish-speaking Latinos remains low compared with U.S. born bilingual Latinos (Alegria et al., 2007). I discuss various aspects of treating dually-diagnosed Puerto Rican women in Chapter 2. Dually diagnosed is defined as a condition of two diagnoses: mental illness and a comorbid substance abuse problem. The concept of mental illness can be used with different psychiatric diagnoses, for example, depression and alcoholism or cannabis use and schizophrenia (APA, 2013).

Chapter 2 presents how cognitive therapy (Logan et al., 2002) and the disease model of addiction using feminist theory approaches (Hievert-Muphy & Woytkiw, 2000) can be applied to substance abusing Puerto Rican women.

Statement of the Problem

The retention of dually diagnosed Puerto Rican women in substance abuse treatment is a problem that has been under addressed. Thus, identifying the factors that can influence this low retention was the focus of this study. Researchers have studied the availability of substance abuse treatment information, which is typically geared towards Anglo-Saxon men (Asworth, 2006). The lack of available treatment information is a barrier for Puerto Rican women seeking treatment, and along with other barriers, it can affect the retention rate of Puerto Rican women in treatment for mental illness and substance abuse. This treatment is also a clinical challenge for many professionals who may lack the cultural skills necessary to effectively treat this population. One of these

cultural skills is the ability to recognize that different Spanish speaking countries use different words to describe the same element. This word confusion can lead to the wrong interpretation when obtaining information.

Society may also suffer due to the high cost of the consequences when this population does not remain in treatment for long periods of time. Therefore, longer stays in treatment are needed to internalize the skills that are required for learning proper abstinence techniques and to help stabilize psychiatric symptoms. Longer stay in treatment is often connected with the relationship with practitioner engagement skills practiced by professionals (Harden et al., 2007).

Research Hypotheses

Research Question 1

RQ1*:* Do personal history factors—including age at first chemical abuse, child of alcoholic (COA) or child of substance abuser (COSA) status, and history of physical and sexual abuse as measured by patient records—predict retention?

$H1_0$: Personal history factors—including age at first chemical abuse, COA and COSA status, and history of physical and sexual abuse as measured by patient records—do not predict retention.

$H1_e$: Personal history factors—including age at first chemical abuse, COA and COSA status, and history of physical and sexual abuse as measured by patient records—do predict retention.

To examine Research Question 1, I conducted a binary logistic regression to assess if age at first chemical abuse, COA status or COSA status, and history of sexual or

physical abuse of Puerto Rican women aged 18–60 years old predicts their retention rate in dual diagnosis treatment. The predictor variables in the analysis were age at first chemical abuse, COA status, COSA status, and history of sexual or physical abuse. Age at first chemical abuse came from the past history of chemical abuse portion of the South Bronx Mental Health Council archival data set; data were treated as continuous variables. COA status and COSA status were measured from the substance abuse information portion of the South Bronx Mental Health Council archival data set; data was reported as *yes* or *no* and treated as dichotomous variables. A patient history of sexual or physical abuse came from the Substance Abuse Information portion of the South Bronx Mental Health Council archival data set; data were reported as *yes* or *no* and evaluated as a separate variable. The dependent variable in the study was client completion of a dual diagnosis treatment (*yes* or *no*). Whether the client was retained or not was also dichotomous and came from the South Bronx Mental Health Council archival data set.

Logistic regression is an appropriate statistical technique when the dependent variable is dichotomous and the probability of an event's occurrence can be directly estimated (Stevens, 2009). A logistic regression can be conducted when the predictor variables are continuous, discrete, or a combination of continuous and discrete. The results for the logistic regression analysis were evaluated by the information regarding age at first chemical abuse, level of education, and cultural constructs on retention. This model was represented by a χ^2 coefficient. The Nagelkerke R^2 was examined to assess the percent of variance in retention that is accounted for by the predictors. The results of

probabilities of an event occurring were determined by Exp (β), as recommended by Tabachnick and Fidell (2006).

The major assumption of the logistic regression is that the outcome variable (retention) must be distinct. Additionally, the data set should not contain outliers, and there should be a linear relationship between the odds ratio and the independent variables (Tabachnick & Fidell, 2006). Linearity between a predictor variable and the odds ratio can be assessed by creating a new variable that divides the existing predictor variable into categories of equal intervals and running the same regression on these newly categorized versions as categorical variables. Linearity is demonstrated if the B coefficients should increase or decrease in linear steps (Garson, 2009). Finally, a large sample size is recommended fitting with the maximum likelihood method. Using discrete variables requires that there are enough responses in each category.

Research Question 2

RQ_2: Does the level of education of Puerto Rican women - as measured by patient records - predict the retention rate of dual diagnosis treatment?

$H2_0$: The level of education of Puerto Rican women – as measured by patient records - does not predict the retention rate of dual diagnosis treatment.

H2e: The level of education of Puerto Rican women – as measured by patient records – does predict the retention rate of dual diagnosis treatment.

To examine Research Question 2, I conducted a binary logistic regression to assess if the level of education of Puerto Rican women predicts the retention rate of dual diagnosis treatment. For this analysis, the independent variable was the level of

education; data was treated as continuous and came from the South Bronx Mental Health Council archival data set. The dependent variable in the analysis was patient retention rate of dual diagnosis treatment (*yes* or *no*). Retention rate was *retained* or *not retained*; data was dichotomous and came from the South Bronx Mental Health Council archival data set.

Research Question 3

RQ3: Does the first language of Puerto Rican women – as measured by patient records - predict the retention rate of dual diagnosis treatment?

$H3_0$: The first language of Puerto Rican women – as measured by patient records- does not predict the retention rate of dual diagnosis treatment.

$H3_e$: The first language of Puerto Rican women- as measured by patient records- does predict the retention rate of dual diagnosis treatment.

To examine Research Question 3, a binary logistic regression was conducted to assess if the first language of Puerto Rican women predicts the retention rate of dual diagnosis treatment. For this analysis, the independent variable was (Spanish versus English). Data were nominal and dummy coded, where 1 = *inclusion* in the category and 0 = non-inclusion in the category, and came from the South Bronx Mental Health Council archival data set. The dependent variable in the analysis was retention rate of Puerto Rican women who have a dual diagnosis treatment (*yes* or *no*). Retention rate was *retained* or *not retained*; data was dichotomous and came from the South Bronx Mental Health Council archival data set.

Significance of the Study

The results from the study could assist in the identification of factors that must be addressed to aid in the retention rate of Puerto Rican women in treatment of mental health and substance abuse. Therefore, factors could identify factors that affect women differently than men. These factors can include whether these women are first or second generation American and whether they are English speakers or monolingual Spanish speakers (Vygotsky, 2010). Gender-related factors need to be considered when attempting to address the retention rate of this population. These same factors can contribute to the low retention rate.

The study was designed to explore how the demographics of Puerto Rican women might be useful in the retention of these women in mental health and substance abuse treatment programs. There continues to be a gap regarding treatment retention for this population.

Theoretical Base

The health belief model, the theory of reasoned action, and the transtheoretical model were used to help understand why dually diagnosed Puerto Rican women might or might not remain in treatment. Both the health belief model and the theory of reasoned action are based on observed behaviors of people who seek and comply with medical treatment (Bellamy, 2004; Gullatte, 2006; Ramos & Perkins, 2006). The health belief model stresses that a person's motivation for treatment is based on the individual's perception of the severity of the problem (Gullatte, Ramos, & Perkins, 2006).

On the other hand, the theory of reasoned action stresses that a person's decision to change is based on logical patterns of thought (Triffimow & Miller, 1996). Puerto Rican women who are dually diagnosed make decisions based on their personal experiences, and professionals can integrate this information to motivate this group to engage in treatment (Coleman, 2003). Furthermore, the theory of reasoned action can be used to predict several behaviors. For example, the theory of reasoned action was used to explain how pharmacists could assist consumers to understand the importance of antibiotics (Traffimow & Miller, 1996). The research literature mentions how experts have used the theory of reasoned action to prevent domestic violence by attempting to assist the abused victims to understand why the abuser reacts when that abuser is out of control (Nabi, Southwell, & Hornick, 2002). Researchers used the effectiveness of the theory of reasoned action to help explain assistance for depression in college students (Migneault, Adams, & Read, 2005).

There are several variables that represent important constructs that influence the likelihood that a woman would remain in treatment (Wizemann & Pardue, 2001). These constructs are based on one or two categories: external variables or internal variables. External variables are those factors that operate outside the person. The availability of social support systems, having a clinician, possessing health insurance, transportation options, and social service agency mandates are examples of external variables. The progress of a woman in treatment who is making positive changes in her life could be sabotaged by a partner who might feel threatened by these changes. Although the theory of reasoned action, the transtheoretical model, and the health belief model discussed

some of the constructs that might influence the probability of a person engaging or complying with treatment, none of these theories specifically discuss the problem of retaining Puerto Rican women who are dually diagnosed.

Definitions of Terms

Addiction: Any voluntary behavior in which a person engages and cannot stop at will. Addiction consumes a significant amount of time in planning life around the consumption of a substance and interferes with the ability to carry out important activities in a person's daily life (Martin, Chung, Kirinsi, & Langerbucher, 2006).

Co-occurring disorder: Refers to an individual having one or more substance abuse disorders and one or more psychiatric disorders at the same time (McKay, 2005).

Dually diagnosed: An older term used for the coexistence of psychiatric disorder (e.g., depression, bipolar, and posttraumatic stress disorder) and substance abuse diagnosis (e.g., alcohol dependence or cocaine dependence; APA, 2013).

Group therapy: A time-limited meeting of people under the supervision of a professional. The participants gather to work on cognitive behavioral changes that focus on improving their life's skills (Corey, 1995).

Intervention: Any technique used to facilitate healing from emotional trauma (Trafimau & Miller, 1996).

Outpatient programs: Any licensed program that requires the participant to attend treatment while living independently away from the treating facility. The requirements for treatment completion tend to be stabilization of the psychiatric symptoms, abstinence from mood- altering chemicals, and regular attendance in group sessions (Corey, 1995).

Psychiatric disorder: Any mental health problem that can be categorized as psychosis, personality disorder, and so on. The term *psychiatric disorder* is used interchangeably with the term *mental illness* (Lanyon, 2006).

Retention in treatment: The ability to hold back or holding in position clients in treatment (McKay, 2006). Early intervention is defined as an intervention done within the first 90 days of admission.

Treatment: A course of action specially geared to help clients recover from emotional trauma while incorporating therapeutic techniques such as language (Griner & Smith, 2006).

Assumptions

In this study, I sought to identify what factors affect Puerto Rican women's treatment success for addiction. An assumption of this study was that Puerto Rican women who are being treated for dual diagnosis accurately respond to questions related to family problems or traumatic events in their lives with strangers. Another assumption of this study was that the person who asked the question spoke the client's language. Among the assumptions made about Latinos whose language is Spanish was that essentially anyone who speaks Spanish can understand someone else who speaks the same language disregarding the fact that people from Latino heritage may have different dialects.

Limitations of the Study

A major limitation to this study was that the data do not allow testing various theoretical models, such as the transtheoretical model or the theory of reasoned action,

which, if I had been able to use them, could have affected the results. A second limitation of the study was the use of regression analysis to examine results, which sometimes can imply false relationships between variables (King, 2014). A third limitation was that the data were collected from Puerto Rican woman who entered one treatment facility in the South Bronx, New York, and were archived by other professionals. The possibility remains of data entry errors when this information was archived. A fourth limitation was the possibility that some of the participants in the study sample would have severe psychiatric diagnoses. Women with difficult to treat disorders, such as paranoid schizophrenia or borderline personality disorder, could negatively impact the findings of this study. Often, clients who suffer from these disorders have severe limitations such as severe lack of trust or emotional distress, which makes them poor historians (Schout, 2010).

Scope of the Study and Delimitations

The study was restricted to a population of dually diagnosed Puerto Rican women who had been admitted to a treatment program in the South Bronx, New York. Therefore, this study's sample does not reflect the entire population of Puerto Rican women.

Significance of the Study

The study identified factors that could help the retention rate of Puerto Rican women in treatment for mental health and substance abuse. The long term social implication of this study was to understand more about how demographic factors impact treatment retention. Therefore, the results of this study may help to educate clinicians

about the cultural barriers and practices that might contribute to longer stays in treatment and lead to positive social change.

Chapter Summary

A large number of women with histories of substance abuse and mental illness enter treatment settings. However, the difficulty in retaining dually diagnosed Puerto Rican women in treatment is a serious problem. In the literature, some researchers have indicated that people who become addicted often lack the coping skills necessary to manage their lives and are more prone to maladaptive behaviors and victimization as well as having an increased risk of their children suffering from developmental difficulties.

The lack of appropriate services, including having inadequate and often untrained staff, has been one of the causes blamed for the lack of retention of this population. However, treatment services that are comprehensive and integrate several therapeutic interventions, including cultural awareness of this population, appear to be the most appropriate approach when working with Puerto Rican women who are dually diagnosed.

Internal and external factors represented the theoretical constructs that appeared to contribute to the decision to remain or leave treatment. These factors included social supports, personal finances, community resources, involvement with social services, self-motivation, treatment expectations, and psychiatric or personality disorders. The research question that emerged was as follows: How do the characteristics of this group contribute or not to the increased retention rate of urban, dually diagnosed Puerto Rican women in substance abuse treatment? In the study, I addressed this question with a regression analysis by analyzing information that was obtained from a treatment facility that has

treated Latino women who are diagnosed with substance abuse in Bronx, New York City over the last 5 years. The literature provided important information about Puerto Rican women who are diagnosed with substance abuse and about the specific needs of this population. Although there is substantial information about the treatment of mental health and substance abuse with the general population, little consideration has been given to the treatment of Latino women who are diagnosed with mental health and substance abuse. Chapter 2 examines past research and current interventions that have addressed the treatment of Latino women who have been diagnosed with mental health and substance abuse. Furthermore, Chapter 2 addresses the gap that remains in the literature regarding the retention rate of Latino women who have been diagnosed with mental health and substance abuse.

Chapter 3 presents a quantitative research study designed to analyze information regarding treatment retention for Puerto Rican women who are diagnosed with a substance abuse disorder in treatment settings. Chapter 3 presents the methods, variables, and plan used in the study. Chapter 4 presents the results of the study. Chapter 5 concludes this study and presents how it contributes to social change.

Chapter 2: Literature Review

Introduction

This literature review provides an overview of theoretical definitions and models that are related to the retention rate of urban, dually diagnosed Puerto Rican women in substance abuse treatment and explores the rationale for studying this population. The review of the literature focuses on treatment interventions with women who have a diagnosis of mental illness and substance abuse. The majority of the intervention research addressing this population focused on the use of psychotherapy, including cognitive behavioral therapy, individual group therapy, and writing therapy (Harden et al., 2007). I also examine other issues related to the treatment of Puerto Rican women who are dually diagnosed. Furthermore, I explore research and traditional treatment interventions focused on women, cultural factors, and cultural values that could influence retention rate. In addition, the review of literature presents various theoretical concepts and models that focus on the retention of Latino women in treatment. Social learning theory and the theory of reasoned action, which were the theoretical foundation for this study, are provided. To search the literature, I used two databases: PSYC-INFO and Academic Research Premier Research. There were several terms used interchangeably, and these terms included *mental health*, *substance abuse*, *emotional abuse*, *sexual abuse*, *physical abuse*, *clinical implications*, *the generational effect*, *dual diagnosis*, and *Puerto Rican women*. The larger portion of the research focuses on treatment approaches for this population, including cognitive behavioral process therapy, individual, group, and issues related to women's cultural issues. In addition, the literature explores issues specifically

related to Puerto Rican women who are diagnosed with mental and substance abuse problems. Finally, the review of literature presents theoretical models regarding the improved retention rates of dually diagnosed Puerto Rican women.

Review of Latino Culture

Puerto Rican culture is similar in many ways to other Latino cultures. Latino culture in general stresses a strong gender difference from birth on that is reflected in every aspect of sexual expression and male-female interaction. The predominant values of this culture are an expressed superiority for men over women, known as *machismo* or being "macho" (Burgos & Diaz-Perez, 1985). This term is used outside Latino cultures, but in Spanish the term macho is defined as male pride. Machismo is defined as a set of attitudes and beliefs that views men as physically, intellectually, culturally, and sexually superior to women (Pico, 1989). Some Latino men can also express their machismo by having sex with as many women as possible (Medina, 1987). On the other hand, another predominant value is *caballerismo* which is the tendency to open doors, give one's seat to a woman, or bring flowers to the woman in the family (Arciniega et al., 2008).

However, the feminine equivalent to machismo is a complex system that requires Latina women to be feminine, pure, and, at the same time, sensual and seductive (Medina, 1987). This feminine equivalent of machismo is known as *marianism* (Medina). This view also teaches that girls are valued for and taught to enhance their sexual appearance, such as the wearing of earrings, bracelets, and special spiritual amulets. Some Latino women often wear provocative clothes. On the other hand, the same culture places great importance on a woman's virginity. Thus, families are protective of the

virginity of their daughters and this protectiveness can have a great impact on the self-esteem of Latino women.

Puerto Rican women comprise a heterogeneous group. However, the concept of marianism can influence the low retention rate in treatment of mental health and substance abuse of women by influencing the decision to seek treatment (Diaz, 2007). In addition, women are expected to sacrifice their own needs for the sake of their children and husband (Comas-Diaz, 2006). Women within this culture are expected to be passive in general.

Treatment for Puerto Rican Women Who Are Diagnosed With Mental Illness and Substance Abuse

The literature suggests that victimization during adulthood is associated with poor mental health outcome (Moffitt & Caspi, 1999, 2005). Furthermore, experts reported a high number of women who abused alcohol had long histories of sexual and physical abuse (Makoff, 2005). In addition, studies have shown that abused woman often stay in abusive relationships longer because of financial needs and limited social support networks (Whigham, 2008). Some Latino women also have additional needs, often caused by the lack of legal status, limited language skills, working skills, and lack of effective social support systems. Research has demonstrated that among those needs are unemployment assistance, medical insurance, improved English fluency, and better trust and access in the healthcare system. Other experts added that heavy alcohol use increased the likelihood of marital, physical, and verbal aggression (Walton-Moss, Manangello, &

Frye, 2005). Therefore, it is important to find the appropriate skills and techniques to engage this population longer in treatment.

Different Approaches to Therapy

Cognitive processing therapy. Chad (2005) stated that cognitive processing therapy (CPT) is highly effective when treating anxiety disorders, depression, as well as substance abuse disorders and dependency. CPT gives information about a new way to handle distressing thoughts about a trauma and gaining understanding about these events (Chad, 2005). Therefore, CPT explores how the person feels about the trauma and about the knowledge from the person's perspective stored from prolonged exposure (Chad, 2005). These memory stores consist of memories of traumatic stimuli and response along with meaning (Chad, 2011). The purpose of the technique is to confront the trauma victim and to avoid future threats to survival. Trauma often causes people to struggle with past negative memories. Furthermore, people who suffer from traumatic stress disorders have a hard time making sense of what happened, often feel stuck in their thoughts about the trauma, and are confused about how trauma might affect their lives (Chad, 2001). An inability to make sense of the trauma makes the person avoid thinking about it or dealing with the memories. By using the skills learned in this type of therapy, the person in recovery can learn why recovery from traumatic events can be difficult. In addition, CPT helps the person learn how going through a trauma changes the way the person looks at the world, self, and others. The way individuals look at things affects how they feel and act. Learning about posttraumatic stress disorder (PTSD) begins by education about specific PTSD symptoms and how treatment can help. The next step focuses on helping

the person become aware of his or her thoughts and feelings. In CPT the person learns to pay attention to the thoughts about the trauma and how these thoughts are related to their feelings. Then, the person is asked to step back and think about the trauma in a different way, which could be done by writing about the trauma, or talking about beliefs, safety, trust, control, self-esteem, and relationships associated with the trauma event. In addition, this type of therapy works in both individual and group therapy settings when culturally adapted. Therefore, CPT has potential as a suitable intervention for dually diagnosed Puerto Rican women.

Individual and group therapy. A study done with three other ethnicities using cognitive therapy in group and individual therapy showed a mean difference in response with Hispanics. Therefore, group and individual therapy appear to be one of the effective models in the treatment of substance abuse with Puerto Rican women (Velez et al., 2010). However, group therapy is more effective for Puerto Rican women when the therapist uses the blackboard, which gives the effect of a classroom and can decrease the fear of sharing (Velez et al., 2010). According to Clark (2000), individual therapy is more effective when the therapist allows for trivial talk prior to exploring clinical issues as it appears less threatening. Both individual and group therapy appear to be effective when working with Puerto Rican women who are treated in substance abuse and general mental health. In addition, experts state that using both approaches can have even more effective results than using one in isolation (Clarke, 2000). Research has shown that using both treatments together greatly improves recovery rates from substance abuse (Conner, Sorensen, & Leonard, 2005). A study demonstrates that using cognitive behavioral therapy in group settings has shown to have positive outcomes when treating depression with Latino adults as it provides peer support. In addition, group therapy can provide a setting where clients can observe, learn, and practice new skills in a safe environment (Comas Diaz, 2006). Furthermore, Bernard and Enchautegui (1994) stated that Latino values such as personalism (preference for personal contact in social situations) and familism (placing the family over the individual) can be heightened in a group format.

Therapeutic relationships. According to the experts, therapeutic relationships are essential in any type of treatment (Zayas, 1998). Therefore, in treating Puerto Rican

women who are dually diagnosed the therapist needs to be able to develop trusting relationships. Zayas (1998) added that Latinos can view aspects of therapy differently than other cultures. For example, typical approaches to therapy are often viewed by Latinos as a lack of faithfulness. Talking about secrets and issues often not discussed with nonfamily members can be viewed as a form of family betrayal. Therefore, when clinicians lack acculturation skills in therapy would be to have a clinician who is a responsible, caring addresses the lack of faithfulness and family secrets, and attempts to understand the client (Miller, 2007). Furthermore, this clinician should treat clients with respect, express genuine interest in clients as individuals, keep an open mind, ask questions of clients and other providers, and be willing to teach (Clarke, 2001). Furthermore, in the Latino culture, familism has implications for an entire family (Zayas, 1998). Familism is characterized by a kinship system composed of relatives in the immediate nuclear unit and extended family members, including *compadres* and *comadres* (godparents and nonrelated foster children). In this kinship system, extended family members provide a major source of support in times of crisis (Comaz-Diaz, 2010). This ethnic feature could be an asset to increased retention rate in treatment of mental health and substance abuse treatment. In addition, Comaz-Diaz (2010) stated that if interventions delivered in Spanish are playful and joking in tone, this approach could help Spanish speaking clients mobilize internal resources to deal with problems and could be effective in establishing trust (Sprowls et al., 2002). A study conducted with Hispanics found that a significant contributor to multicultural competence is the experience of working with other racial and ethnic minority groups. Therefore, when treating Puerto

Rican women, one way to interact with them would be to take walks and allow for information about cultural practices and stories about their lives, which can be helpful in engaging Puerto Rican women in treatment (Sodowsky, Kuo-Jackson, Richardson, & Corey, 1998; Roysircar, Gard, Hubbell, & Ortega, 2003).

A study was conducted with 39 Puerto Rican women of low-income households between the ages of 21 to 67 to evaluate their knowledge regarding HIV transmission (Falicov, 1998). Falicov conducted the study using four focus groups. Results from these groups found that Puerto Rican women often bring their worldview into current situations, which is key to these women remaining their sense of identity. The worldview of these women can be maintained by upholding traditions that make them feel close to their family and culture of origin (Falicov, 1998). For Puerto Rican women relational orientation shapes their sense of self, grounding their identity in family, ancestors, community, ethnicity, spirituality, environment, and other collective context (Falicov, 1998). However, Latino traditions can often conflict with mainstream society. When Puerto Rican women seek psychological assistance, they often encounter Eurocentric-based services that are insensitive to their cultural and spiritual experiences (Atkinson, Bui, & Mori, 2001; Hall, 2001; Sue, Bingham, Porche-Burke, & Vazquez, 1999). Because many clinicians lack cultural sensitivity, Puerto Rican women often view the techniques and goals of mainstream psychology to be acculturation instruments used by mainstream culture (Sue & Sue, 1999; Ramirez, 1991). In addition, when the clinician only speaks English this can prevent the clinician from truly appreciating bilingualism (Gonzalez, 2000). Furthermore, the inability of the clinician to communicate in Spanish

can compromise the quality of services delivered to Puerto Rican women by creating a barrier to cultural understanding and can increase the odds of communication misinterpretations. Research has demonstrated that translation can change the content of the issues when translated by others. In addition, the issue of trust is compromised in this process (Santiago-Rivera & Alta-Arriba, 2002).

Issues Associated With Treatment

Some cultural practices influence the response or lack of connection in treatments of mental health and substance abuse (Weisman, 2005). For example, aspects of cognitive behavioral assessment, which can use repeated questioning, are considered to be disrespectful in some cultures, especially among many Native people and members of Puerto Rican culture. These questions are often painful experiences, which the participant does not feel comfortable discussing. Therefore, Hays (2006) stated that this type of therapy can be applied by allowing for silences between questions, which allows more control for the individual and flow for the content of the information obtained. Furthermore, Hays stated that other techniques when working with other cultures are to avoid questions that reflect negatively on the person's family or culture. In addition, experts state that minority clients have difficulty sharing information with clinicians of a dominant cultural identity, which adds to fears about reinforcing cultural prejudices of the therapist. Furthermore, the inability of the clinician to communicate in Spanish can compromise the quality of services delivered to Puerto Rican women by creating a barrier to cultural understanding and can increase the odds of communication misinterpretations. Research has demonstrated that translation can change the content of the issues when

translated by others. In addition, the issue of trust is compromised in this process (Santiago-Rivera & Alta-Arriba, 2002). In addition, several experts have attempted to address the different and several issues Latino women bring into treatment of mental health and substance abuse. Therefore, the need to explore other techniques, such as interpersonal psychotherapy, can be used when working with Puerto Rican women in treatment for substance abuse (Talbot, 2005).

Standard Treatment for Mental Health

Clients who are diagnosed with mental illness are often treated with therapeutic interventions, such as hospitalization, psychotropic medication, case management, and supervision of life skills (Kreidler, 2005). The first step for crisis interventions is to stabilize the client, which in most cases is done with inpatient treatment or outpatient detoxification. One of the goals during hospitalization and after stabilization is to make an appropriate referral for aftercare where therapy and medication supervision can continue (Manhe et al., 2012). Because of a high co-occurrence (co-morbidity) of bipolar spectrum disorders, substance use disorders (SUDs), and the presence of other Axis I disorders, treatment for this population is more difficult (Conway, Compton, Stinson, & Grant, 2006; Regier et al., 1990; Wilerns et al., 2004). According to experts, the high co-occurrence between SUDs and bipolar disorder may be due in part to the person's excessive pursuit of rewarding stimuli such as drug-induced highs (Alloy, 2000). On the other hand, depressive symptoms, such as sadness, low energy, anhedonia, psychomotor retardation, hopelessness, and low self-confidence, are often relieved by the use of illegal substances. In addition, Puerto Rican women who are in treatment for mental health and

substance abuse treatment often begin to use substances to relieve pain of childhood or to relieve psychological symptoms (Corr, 2008). According to Hwang (2009), the use of these illegal substances can add more barriers to the treatment of Puerto Rican women by increasing feelings of shame to seek help. Therefore, the need to possibly address shame in treatment is essential when treating this population (Depue et al., 1987; Fowles, 1993).

The best approaches to substance abuse treatment are personalized to the needs of the individual. Hwang (2009) stated that the one-size-fits-all approach to substance abuse treatment has proven to be ineffective. Additionally, adaptations of techniques are necessary when treating individuals or groups of different cultures. Therefore, a cultural adaptation technique is needed for effective interventions for ethnic minorities and is defined as a systematic modification of evidence-based treatment, which considers language, culture, and context delivered in a manner compatible with the client's cultural patterns and values (Barrera et al., 2012).

The use of cultural psychotherapy techniques has proven to be effective with the Latino community (Alloy, 2000). Cultural psychotherapy explores the role that tradition and culture plays in the defining the individual's beliefs and assumptions that the client identifies as familiar. The therapist's task is to try to understand the client by understanding the dialectical relationship between the client and their culture. Among those factors that may interfere with treatment are historical context; religious, cultural, political, and moral beliefs; and biases. Other factors that need to be included in therapy with Puerto Rican women are cultural beliefs in spirituality, which can influence change (Swan, 2004). Psychotherapy typically is based on the meanings, feelings, thoughts, and

behaviors that are part of how the client shapes reality (Swan, 2001). Furthermore, psychotherapists help to interpret and transform these assumptions that the client brings to session into skills that help the client to manage life more effectively.

Culturally responsive CBT focuses on external and internal factors that facilitate consideration for cultural influences (Swan, 2004). Internal factors are those values learned within the family setting which can influence Puerto Rican women to remain in treatment (Perez & Stable, 2002). On the other hand, external factors are those placed by cultural traditions, such conceptualism and interconnectedness, as a central belief in Latino healing (Ruiz, 1997). Connectedness is highly valued in Latino culture. A Latino's world tends to maintain permeable boundaries and can allow non-biologically related individuals to become family members. Therefore, Latinos can perceive health providers as extended family members (a part of collectivism), which can be a positive strength (Comaz-Diaz, 1989). As a result Latinos may attempt to befriend a therapist by asking personal questions (e.g., Where are you from? Are you married? Do you have children?). These questions are often asked by Latino clients as a way to check out the therapist (Falicov, 1998). Furthermore, some clients may kiss their therapist on the cheek at the beginning and conclusion of the therapeutic session. For instance, Latino women usually initiate the kiss salutation and may engage in *platica*, or social conversation, before personal contact. In addition, Puerto Rican women often invite their therapist to important celebrations such as weddings, baptisms, funerals, and sweet 15 (Quincianeras). Platica is not necessarily a resistance to dealing with emotional issues with Latino women. In the Latino culture platica is a way of introducing the conversation

into more intimate discussion (Comas-Diaz, 2001). Therefore a culturally competent therapist needs to be able to discern the difference between avoidance issues and cultural ones. Recommendations regarding working with ethnic minorities include the suggestion that treatment needs to match the cultural lifestyle or experiences of Latino clients (Miller & Rollinck, 2002).

Other studies have demonstrated that interventions given in Spanish include the use of more small talk, more personal use of self in therapy, considering the therapist as an extended family member, and having fewer boundaries. These limitations can also include a more flexible approach to time and giving gifts to the therapists (Sprowls, 2002). On the other hand, a lack of awareness by the therapist could see these approaches as resistance. In addition the lack of awareness about cultural intervention could lead to avoidance of changes (Comaz-Diaz, 1989). Therefore, when working with Puerto Rican women, awareness of cultural issues prior to getting into clinical matters can help them better engage in treatment.

Length of Stay in Treatment

Length of stay in treatment is strongly associated with successful treatment outcome (Klerman & Weissman, 1980). Cognitive- behavioral techniques and pharmacological treatment for depression or anxiety have demonstrated long-range treatment potential (Kushner et al., 2005; Nunez & Levin, 2004; Tuner & Wehl, 1984). The use of both types of therapy (cognitive and pharmacology) can be even more effective than using one of these types in isolation (Romesser-Schnet, Cameron, & Cardenas, 2006). Pharmacological approaches can be effective with treating the

psychiatric symptoms of depression. Cognitive therapy can then be used to help clients identify and practice the skills necessary to maintain sobriety.

In addition cultural beliefs and traditions, such as perceived personal weakness, religion, language difficulties, help-seeking patterns, and shame, often contribute to the inability to retain this population in treatment (Zayas, 2001). The low retention of women in substance abuse treatment is a serious issue. In an attempt to add to finding solution the need to explore effective tools to retain this population in treatment longer is a challenge that needs to be addressed.

Theoretical Models on Treatment Retention

There are several theories and models that have attempted to address the way some people follow treatment, but most of these theories are been based on medical and medical compliance models (Bellamy, 2004). One of these models is the health belief model, which states that the person who seeks treatment is motivated by internal needs defined by the seriousness of the problem (Ramos & Perkins, 2006). These problems are often manifested in illness such as diabetes, liver enlargement, and breathing problems. The benefits of this model are limited, because often at this point there are several co-morbidities. The benefit could be seen when the person is able to become sober and better manage these medical issues.

The theory of reasoned action is defined by the individual's experience and available information. In this model experience and available information can add to the individual’s internal drive (Mineral, 2005; Rooney, 2005). The advantages of this theory are three important changes to behavior. The first change involves reasoning as an

element to the process of persuasion. The second change involves behavioral intention, a measure of a person's relative strength of intention to perform a behavior. The third change is a change in attitude. Attitudes consist of beliefs about the consequences of performing a behavior. A simpler way to define this theory overall is to say that a person's voluntary behavior is predicted by his or her attitude towards that behavior and how he/she thinks other people would view them (Miller, 2005).

In conclusion, the theory of reasoned action speaks about how the person decides to take action on making behavioral changes. This action is based on personal experience and internal drive. Therefore, a lack of experience with mainstream culture for many Puerto Ricans women raised in dysfunctional families could become the motivating factor for change (Bellamy, 2004). Experts state that in some cases the lack of internal drive is based on traumatic childhood experiences. In addition, the trans- theoretical model in health speaks about the individual readiness to act on healthier behavior and provides strategies to help guide the individual through the stages of change (Bellamy, 2004). The transtheoretical model can assess an individual's readiness to act on a new healthier behavior, and provides strategies, or processes, of change to guide the individual through the various stages of change (Rooney et al., 2005). Therefore, the trans-theoretical theory is conceptualized in several dimensions. The core constructs revolve around the stages of change, a continuum of motivational readiness of change. Motivation is then affected by a set of independent variables known as the process of change. The trans-theoretical model incorporates a series of intervening variables, including self-efficacy, confidence in the ability to change, situational temptations to

engage in the problem behavior, and behaviors which are specific to the problem area. These behaviors can include environmental, cultural, socioeconomic, physiological, biochemical, or even genetic variables or behaviors specific to the problem being studied (Pocheska, 1992). This theory incorporates several stages in behavioral change: The pre-contemplative stage, which takes place when the person becomes aware of the need to change. The contemplation stage addresses the intention to change; this stage can take place within six months or more, depending on internal drive and social constructs. The preparation stage is where people attempt to take action on immediate future. The action stage is the stage where people make overt modifications in their lifestyles. The maintenance stage is where people are working on preventing relapse. Action takes place when the person continues to engage in behaviors to maintain a different lifestyle. The trans-theoretical model is often used to explain why women who have been sexual abused often leave substance abuse treatment prematurely (Migneult, 2005). Using the trans-theoretical theory in treatment with Puerto Rican women could help them become aware of the need to change when the client is motivated by environmental, cultural, and/or socioeconomic factors (Ashworth, 2006). Furthermore, receiving social support from people who are not drug users has been found to be associated with more active coping, lower levels of anxiety and depression, and less likelihood of drug and alcohol use (Nyamathi, Leake, Keenan, & Gelberg, 2000).

The sociodemographic variables have been linked to drug abstinence and are thought to be moderators through the psychosocial, behavioral, and substance abuse-related factors (Nyamathy et al., 2000). However, one of the drawbacks to this theory is

the unwanted reactions to external constraints which can lead to resistance to change (Ashworth, 2006). Furthermore, Rooney (2001) added that the retention of women in treatment is influenced by treatment interventions which address the individual's stage of change. The need to be knowledgeable about what takes place in each stage is important when treating this population. During the early stages people rely on cognitive processes. Therefore, the information delivered to this population needs to be done knowing specifics about the culture, such as small talk, the use of the blackboard, and so on. The blackboard is a device that can be used to produce an item or achieve a task. In addition, the blackboard is used to describe a procedure or process with a specific purpose (Comaz-Diaz, 2010).

Humanistic psychology, a psychological perspective that rose to prominence in the mid-20th century, drew on the work of early pioneers like Carl Rogers and the philosophies of existentialism and phenomenology This theory places emphasis on a holistic approach to human existence through investigations of meaning, values, freedom, tragedy, personal responsibility, human potential, spirituality and self-actualization(Hein et al 2012) . One theory included in humanistic psychology is person-centered therapy (PCT). PCT states that one needs to consider the social environment when treating clients of different backgrounds (Hein et al., 2012). Treatment programs often lack the appropriate skills, language, and environment to help Latino women remain in treatment long enough to internalize any skills of change (Coleman, 2003; Halgin et al., 1987; Nabi et al., 2002). Coleman (2003) added that therapists using PCT create a comfortable, non-judgmental environment by demonstrating genuineness, empathy, and unconditional

positive regard toward their patients while using a non-judgmental approach. Studies conducted with a group of depressed women have shown that women who drop out of treatment tend to be narcissistic, angry, impulsive, and have problems bonding with others (Fisher, Winne, & Ley, 1993).

Therefore the findings of this study were guided by the theory of reasoned action and Rogers's humanistic theory as both theories address elements that could be used in successfully treating this population. In conclusion, humanistic theory was used, elements central to PCT which also addresses the social environment. The social environment is frequently the cause of underlined depression, which can negatively impact treatment adherence.

PCT emphasizes the self and one's experiences (Coleman, 2003). This view point stresses that a person is free to choose their own behavior instead of just reacting to environmental stimuli. In addition, this theory focuses on issues of self-esteem, self-fulfillment, and personal needs. Rogers stressed that each person operates from the reference of self-concept, or one's belief about self. The theory of reasoned action focuses on the individual's ability to make decisions based on their experiences and the capacity to think logically. This theory is a perspective that focuses on the individual and one's views as something purposely shaped by the individual within a context to which they give meaning. The use of this theory could help Puerto Rican women to give meaning to their lives when they are able to maintain a lifestyle free of addictive substances (Fisher, Winne, & Ley, 1993). Therefore, according to this theory, a women's decision to remain or leave treatment is based on her life's experiences and the ability to process the

information obtained from past experiences. Researchers and clinicians advocate for changes in the mental health and substance abuse system and suggested changes that have to do with the process of match or fit (Dawe & Loxton, 2004). Treatment should match, or fit, the cultural life-style or experiences of clients. Unless this is addressed ethnic minority clients will continue to underused services and will terminate treatment early or fail to show positive treatment outcomes (Sue, 1977).

CPT, individual and group therapy, and the use of cultural skills could help in assisting in increasing the retention rate of Puerto Rican women in treatment of mental health and substance abuse. Experts added that cognitive processing therapy used with Puerto Rican women who were treated for depressive symptoms has been successful (Peterson et al., 2008). They stated that cognitive therapy approaches use a variety of methods, including assertiveness training, activity schedules, verbal contracts, and behavioral rehearsal techniques for training social skills and self-reinforcement with Puerto Rican woman (Lewinsohn, Winsteain, & Alper, 1970).

The illicit use of substances can lead to several additional problems and a cycle of destructive behavior. Therefore, the need for additional intervention, which can lead to improved retention rates, could be necessary. As defined by the research, the treatments which have been useful with the Puerto Rican population has been a group therapy and addiction treatment model with clinicians who speak Spanish or are bilingual (Comas-Diaz, 2008). Another type of treatment for Latinos would be residential treatment where the institutional culture is Latino. This institutional culture can consist of cultural celebrations with music and dance and where clinicians use Spanish language effectively.

In addition, when treating this group the use of cognitive behavioral therapy, attendance to self-help meetings where celebrations include dance could help replace a destructive behavior with something fun and familiar. These skills help Latino women develop healthy attachments and assist them in developing more effective support systems. However the downside to this approach is that often their social support system becomes limited when this group does not expand to other experiences away from self-help groups (Sue, 1977).

One way to address treatment for dually diagnosed populations is the by the use of hospitalization. The purpose of this approach is to provide safe detoxification and the stabilization of the psychotropic medication (Gregg & Moss, 2002). Furthermore, often the use of methadone and subaxan are necessary to decrease the cravings to use opiates such as heroin. Another treatment modality is the use of out-patient treatment to address mental health and substance abuse issues (Gregg & Moss, 2002). Mental Illnesses Chemical Addiction (MICA) allows the stabilization from addictive substances and education about addiction. The problem with many of these services is that they only provide part of their services in Spanish and often lack the appropriate personnel to provide individual or group therapy.

In general the number of Latino women who need treatment for mental health and substance abuse is much larger than those who seek treatment. However, a very small number of facilities provide such culturally responsive services, which might contribute to a higher retention rate for certain ethnic groups (Becker et al., 2005; Clark et al., 2004). Suggestions on how to improve the retention rate of Puerto Rican women in

treatment for mental health and substance abuse are (a) the use of bi cultural and Spanish speaking clinicians and b) training clinicians about cultural sensitivity. Cultural sensitivity in this context speaks to knowledge about the differences between Spanish cultures, and does not teach that all Spanish ethnic groups are the same. In general theories, such as the health belief model, theory of reasoned action, and the trans-theoretical model, need to be written in Spanish so that the meanings or content are not lost during translation (Quigley & Leonard, 2002).

Great importance is placed on formalizing training experiences to better serve the clients whose primary language is Spanish. Furthermore, it is critical to explore and understand experiences and trainings that could enhance competency to provide services in Spanish. In addition, therapists have reported differences in techniques depending on which language is being used (Clauss, 1998; Sprowls, 2002). Examples provided by experts were the use of playfulness, using a joking tone, and laughter. These techniques could help Spanish-speaking clients gather resources and to improve overall mental health functioning. According to the experts joking helps us to connect with others, gives us a different perspective, and, it helps replace distressing emotions with pleasurable emotions, and increases energy (Sprowls, 2002).Research has shown that when working with Latinos the use of small talk, expressions of warmth and genuineness, a more personal approach, viewing the therapist as an extended family member, flexibility with schedule appointments, and the acceptance of gifts more than with English-speaking clients can be beneficial (Sprowls, 2002). Therefore, more training needs to be done.

Substance abuse and mental health field and training should include information about how to effectively reach out to ethnic cultures and communities.

However, it is difficult to meet these needs because it is difficult to recruit clinicians who are fluent in Spanish. According to experts, effective communication is necessary in therapy, and it can only happen when the therapist understands the client's language and culture (Lozano & O'Conner, 2002). Experts also say that when confronting the mental health field the role of culture and cultural knowledge are often used in inappropriate ways by basing their assumptions on insufficient knowledge or by over generalizing what they have learned about culturally similar groups (Sue & Nolan, 2007). Research has found that the lack of bilingual therapists and the frequent stereotyping of assigning a client to a therapist because their use of similar language is not sufficient. They added that the inability of the therapist to provide culturally responsive forms of treatment could influence the decision to disconnect from treatment (Sue, 1997). Other suggestions are that unless this system is used more appropriately it would lead to underutilized services and poor outcomes, such as premature termination, missed appointments or relapse (Sue & Nolan, 2007). In suggesting positive changes in the mental health and substance abuse field, experts suggest hiring bilingual/bi cultural therapists who could work with ethnic minority clients of a Spanish background (Sprowls, 2002). Furthermore, Sprowls suggested continuous education of therapists with the use of seminars, workshops, lectures on different cultural groups, and education about ethnic issues (Sue, 1977). Other suggestions when working with ethnic groups to help decrease the stigma attached to the use of mental health and substance abuse services will

be to deliver nonparallel services for ethnic-minority, such as using multi-service techniques including legal, social services, child care, transportation and language programs in addition to mental health services (Snowden, 1982; Uba, 1982).

Summary

Mental health issues and addiction have troublesome consequences for anybody but treating Latino women who suffer from both illnesses can be a particularly difficult task. The problems caused by mental illness and substance abuse are domestic violence, re- victimization, feelings of guilt, an inability to care for children, lack of financial independence, lack of trust, and an inability to form healthy relationships (Corr, 2008). Moreover, these issues contribute to the problem of retaining Puerto-Rican women in treatment of mental health and substance abuse (Gonzalez, 2000). One of the theories to consider for understanding this population is the trans-theoretical theory. The trans-theoretical model is designed with five stages to implement changes in life. People who are chemically addicted start by the first stage of change or the pre-contemplative stage (Kolaresky & Larson, 1997). The pre-contemplative stage is marked by strong denial or a lack of awareness of the problem with substance abuse. The second stage is contemplation of the problem. This stage is evident when the person begins to think about making a change. During the third stage, the person begins to take steps to make changes in her life and the fourth stage is defined by action; the person begins to make changes desire in his or her life. Finally, the fifth stage is marked by maintaining the changes made on his or her life (Kolaresky & Larson, 1997). However, for the purpose of this study, the humanistic theory appears to be the most appropriate. Carl Rogers feels

that each person operates from a unique reference of building self-esteem (Kolaresky & Larson, 1997). The definition of self-regard or self-concept is one's own belief about self. Furthermore, these beliefs in part are the result of unconditional positive regard. The concept of unconditional positive regard takes place when individuals, such as parents or care takers, demonstrate unconditional love (Alarcon, 1999). Finding skills that will contribute to make a social change will a small step to larger change. The trans-theoretical model will assist in the understanding of the stages of change in conjunction with the other concepts of the humanistic theory; will be used to address the social environment. Both of these models may help increase the numbers of women who remain in treatment for longer periods. In Chapter 3, I describe the methods used to study this population.

Chapter 3: Research Design and Methodology

Introduction

In this chapter, I analyze the barriers that influence the dropout rate of Puerto Rican women in mental health and substance abuse treatments in the Bronx. The research question addressed was as follows: What cultural factors increase the retention rate of Puerto Rican women in dual diagnosis treatment? This study employed a questionnaire-based quantitative research approach that focused on factors that might contribute to improved retention to address this research question. I used a quantitative approach in this investigation to gather empirical data concerning the number of women who left treatment prematurely and the number of women who remained in treatment until completion. Other effective quantitative studies of this population in the Bronx compared sexual behavior and condom use among Puerto Rican women (Dixon, 2010). A non-experimental, archival quantitative approach was effective in responding to the research question in providing the number of Puerto Rican women who remained or left treatment prior to completion. Quantitative research is often an integrative process whereby evidence is evaluated (Kuhn, 1961). A non-experimental, archival, quantitative approach appears to be an effective tool for analyzing the retention rate of Puerto Rican women in treatment of substance abuse and mental health. This approach helped in the evaluation of numerical data concerning the number of women who remained in treatment until completion or left treatment prematurely (Vaca, 2011). This study focused on Puerto Rican women with a diagnosis of mental health and substance abuse who entered a treatment setting and their subsequent retention rates from 2005 to 2010. This

information was collected and analyzed to evaluate the relationships between diagnosis, language, and whether completion took place.

The theory of reasoned action argues stresses the freedom of choosing a behavior instead of reacting to the environmental stimuli. This theory could be integrated in treatment when helping Puerto Rican women in treatment of mental health and substance abuse in the South Bronx, New-York. The testing of this theory will be addressed in this chapter with an experimental research design by exploring and analyzing past questionnaire responses.

Research Design and Approach

Participants

The archival database used in this study contained data from Puerto Rican women diagnosed with mental illness and substance abuse who were seen from 2005 to 2010. The agency signed a document for the collection of this information and this information is archived as required by the law. The sample of participants consisted of females ranging in age from 18 to 60 years old. Among this sample there were also differences in education level, economic status, support systems, co-occurring disorders, and social constraints.

A non-experimental, archival quantitative research is a type of descriptive research design that utilizes data not manipulated by the researcher and a design in which the participants are not randomly assigned to treatment condition (Dixon, 2010). Furthermore, non-experimental research design describes current existing characteristics such as achievement, attitudes, and relationships, and they are descriptive, relational, and casual (Dixon, 2010). A descriptive quantitative design was used in this study to evaluate the relationship between the factors that might influence the drop-out rate of Puerto Rican women in Bronx, New York. A multivariate regression analysis using archival data to explore how personal factors, level of education, and first language can have an impact on retention rate was the most appropriate statistical analysis research for this study. The study will use 20 questions to assist in developing a format to collect data about barriers which contribute to the lack of retention in treatment for dually-diagnosed Puerto Rican women (see Appendix A). The quantitative design assisted in demonstrating the relationships between experimental variables and the association with retention rate.

Setting and Sample

The data collection began after approval by Walden University's Institutional Review Board (IRB) [IRB Approval #: 12-11-13-0099981]. The target population for this study was a treatment program that treats Latinos. Eligible participants were women of Puerto Rican origin born in New York City or from parents born in either Puerto Rico or the United States. In addition these women need to have been admitted into South Bronx Mental Health Council's Chemical Dependence Program (SBMHC, CDTP) in the South Bronx from 2005 to 2010. Furthermore, the participants need to have been dually

diagnosed with either substance abuse diagnosis or mental health. To determine the required sample size, a power of .80 and alpha of. 05 was used in combination with an estimation of medium to large effect (*O2* = 12 and *r* = .30). The estimated effect size was derived from prior research examining the low retention rate of Puerto Rican women in treatment of substance abuse and mental health in the South Bronx, New York.

Sample Size

This study involved the use of one logistic regression with five predictors to test the hypotheses. For a logistic regression, a sample size of 30 per predictor is required (LeBlanc & Fitzgerald, 2000). To conduct the logistic regression with five predictors, a minimum of 100 participants was required to achieve empirical validity.

Protection and Participants' Rights

When conducting a study, an ethical obligation of the researcher is to protect the participant's information (Koocher & Keith -Spiegel, 1998, p. 422). I had no direct contact with the participants and the participants were not identified by name. However, the agency's director helped to assure that no harm was done to the participants when the data were collected. An agreement between South Bronx Mental Health Council and Walden University was signed to ensure the safety of participants. In addition, the rights of the participants were also addressed by using numbers to protect their confidentiality.

Ethical Issues

The IRB at Walden University reviewed the study and granted permission before data collection and analysis began. In addition permission from the director of South Bronx Mental Health Council was granted prior to any collection of data. Numbers were

assigned for the participants to avoid ethical violations. Therefore, the names and identity were protected. Appendix A indicates how data was collected. In addition a mutual agreement indicates the purpose and limitations of the findings. A data collection agreement was signed by the director of the institution.

Instrumentation

Data Collection and Methodology

The data collection procedure was approved by Walden University Institutional Review Board (IRB) before data analysis was done. Data used in this study will be placed in a locked file. The questionnaire utilized in this study is made up of 20 questions. These questions focus on diagnosis, date of admission, length in treatment, referral source, and treatment attempts. The questionnaire was based on standardized answers collected from the personal history from each client admitted to the program.

Data Analysis Justification

Logistic Regression

Logistic regression is appropriate when the dependent variable is dichotomous, meaning there are two possible outcomes for the dependent variable so one can directly estimate the probability of an event's occurrence (Stevens, 2009). This type of analysis can be used when the predictor variables are continuous, discrete, or a combination of continuous and discrete. This analysis permits the evaluation of the odds of membership in one of the two groups based on the combination of predictor variable values. The overall model significance for the logistic regression, which included the percentage of correct predictions, was examined by the effect of the independent variable, presented

with a χ^2 coefficient. The Nagelkerke R^2 was examined to assess the percent of variance accounted for. Other probabilities of an event occurring were determined by Exp (β) (Tabachnick & Fidell, 2006).

A logistic regression, by design, has overcome many of the restrictive assumptions of linear regressions. The major assumption is that the outcome variable must be discrete. In a logistic regression, there should be no difference in value in the data, as well as a linear relationship between the odds ratio and the independent variable (Tabachnick & Fidell, 2006). Finally, a larger sample is recommended fitting with the maximum likelihood method. Using discrete variables requires that there are enough responses in each category (Garson, 2009).

The Statistical Package for the Social Sciences (SPSS) version 19.0 for Windows was used to analyze the data. Variables were initially analyzed using descriptive statistics. Data that consist of only small number of values, each corresponding to a specific category value or nominal data, frequencies and percentages were calculated. The interval/ratio data, means and standard deviations were also calculated (Howell, 2010). These results and whether these results support the research hypotheses will be discussed in Chapter 4.

Chapter 4: Results

The purpose of this quantitative study was to examine the relationships between demographic factors and the retention rate of Puerto Rican women who were treated for mental health and substance abuse. The final data analysis was conducted on 120 archival cases of Puerto Rican women from an outpatient program. This outpatient program provided treatment for substance abuse and mental health in the Bronx, New York. Statistical analysis of the data was conducted using a logistic regression with three predictors. A minimum of 90 participants was required to achieve sufficient statistical power. Logistic regression equations were used to explore the relationships between the independent variables, including native language, sexual or emotional abuse, child of alcoholic, age at first use, and level of education, and the dependent variable: treatment program retention. Three research questions were formulated to guide the analysis.

Research Question 1: Do personal historical factors (including age at first chemical abuse, child of alcoholic [COA] or child of substance abuser [COSA] status and history of physical and sexual abuse) of Puerto Rican women (age 18-60 years old) predict retention?

$H1_0$: Personal historical factors (including age at first chemical abuse, COA and COSA status and history of physical and sexual abuse of Puerto Rican (age 18-60 years old) do not predict retention.

$H1_a$: Personal historical factors (including age at first chemical abuse, COA and COSA status and history of physical and sexual abuse of Puerto Rican women(18-60 years old do predict retention.

Research Question 2: Does the level of education of Puerto Rican women (18-60 years old) predict the retention rate of dual diagnosis treatment?

$H2_0$: The level of education of Puerto Rican women (18-60 years old) does not predict the retention rate of dual diagnosis treatment.

$H2_a$: The level of education of Puerto Rican women (18-60 years old) does predict the retention rate of dual diagnosis treatment.

Research Question Three: Does the first language of Puerto Rican women (18-60 years old) predict the retention rate of dual diagnosis treatment?

$H3_0$: The first language of Puerto Rican women (18-60 years old) does not predict the retention rate of dual diagnosis treatment.

$H3_a$: The first language of Puerto Rican women (18-60 years old) does predict the retention rate of dual diagnosis treatment.

This chapter begins with a summary of the demographic factors for this study's sample of Puerto Rican women.

Recruitment of Sample

The questionnaires were collected from patients at an outpatient treatment facility. Data was collected from information that was archived and collected originally by other professionals who performed the admissions to the facility. The collection of the data lasted a month from participants who were women born in Puerto Rico or who were second generation Puerto Rican who had been admitted to the facility from 2005 to 2010. Participants were not identified by name but were provided with dummy numbers to protect their identity.

Demographic Information Sample

The total number of participants was 120 Puerto Rican women. All participants were admitted to the program in the last five years and demographic data is presented in Table 1.

Eighty-eight participants (73%) indicated their first language was Spanish. Ninety-six participants (80%) indicated they were not sexual or physical assault victims. Half of the sample (60 participants; 50%) reported being the child of a substance abuser or the child of an alcoholic. Fifty-six participants (53%) were retained for the duration of the treatment. Frequencies and percentages of the participants' demographic data are presented in Table 1.

Table 1

Frequencies and Percentages of the Participants Demographic Data

Variable	*n*	%
First language		
English	32	27
Spanish	88	73
Sexual or physical assault victim		
No	96	80
Yes	24	20
Child of alcoholic (COA) or substance abuser (COSA)		
No	60	50
Yes	60	50
Treatment retention		
Retained	56	47
Not retained	60	61

Means and standard deviations were conducted to present the highest grade completed and age at first use. On average, participants indicated the highest grade

completed to be less than the 10th grade (mean = 9.65). The mean age of the participants at first illicit substance use was 14.34. Means and standard deviations for age and age at first illicit substance abuse are presented in Table 2.

Table 2

Means and Standard Deviations for Highest Grade Completed and Age at First Use

Variable	*M*	*SD*
Highest grade completed	9.65	1.83
Age at first use	4.34	2.16

Research Question 1

RQ1: Do personal historical factors (including age at first chemical abuse, child of alcoholic (COA) or child of substance abuser (COSA) status and history of physical and sexual abuse) predict retention?

$H1_0$: Personal historical factors (including age at first chemical abuse, COA and COSA status and history of physical and sexual abuse) do not predict retention.

$H1_a$: Personal historical factors (including age at first chemical abuse, COA and COSA status and history of physical and sexual abuse) do predict retention.

To assess Research Question 1 and to determine if personal historical factors (including age at first chemical abuse, COA or child of substance abuser (COSA) status, and history of physical and sexual abuse) predict retention, a binary logistic regression was conducted. Statistical significance was determined with a significance level set at .05. Prior to analysis, the assumptions of the logistic regression were examined: adequate sample size and a dichotomous outcome variable. For a logistic regression, a sample size

of 30 per predictor was required (LeBlanc & Fitzgerald, 2000). To conduct a logistic regression with three predictors, a minimum of 90 participants are required to achieve empirical validity. The assumption of adequate sample size was met. Further, the outcome variable is a dichotomous measure: treatment outcome (retained vs. not retained).

The result of the logistic regression was not significant, χ^2 (1) = 2.45, p = .484 Nagelkerke R^2 = 3.7%, indicating the group of predictors did not statistically predict treatment outcomes. The beta weight of age at first chemical abuse was 0.00. The beta weight for COA or COSA status was -0.58. The beta weight for history of physical or sexual abuse was 0.08. Because none of the predictors offered a significant contribution to the model, they were not interpreted. Therefore the null hypothesis of the first research question cannot be rejected in favor of the alternative hypothesis. The result of the regression is presented in Table 3.

Table 3

Logistic Regression Analysis With Personal Historical Factors Predicting Retention

Source	B	SE B	Wald	P	OR	95% CI OR	
						LL	UL
Age at first chemical abuse	0.00	0.09	0.00	.990	1.00	0.85	1.19
COA or COSA status	-0.58	0.38	2.41	.121	0.56	0.27	1.17
History of physical or sexual abuse	0.08	0.48	0.03	.874	1.08	0.42	2.74

Research Question 2

RQ2: Does the level of education of Puerto Rican women predict the retention rate in dual diagnosis treatment?

$H2_0$: The level of education of Puerto Rican women does not predict the retention rate of dual diagnosis treatment.

$H2_a$: The level of education of Puerto Rican women does predict the retention rate of dual diagnosis treatment.

To assess research question two and to determine if the level of education of Puerto Rican women predicts the retention rate of dual diagnosis treatment, a binary logistic regression was conducted. Statistical significance was determined with a significance level set at .05. Prior to analysis, the assumptions of the logistic regression were examined: adequate sample size and a dichotomous outcome variable. For a logistic regression, a sample size of 30 participants for each category was required (LeBlanc & Fitzgerald, 2000). To conduct a logistic regression with one predictor, a minimum of 30 participants was required to achieve empirical validity. The assumption of adequate sample size was met. Further, the outcome variable is a dichotomous measure, treatment outcome (retained vs. not retained).

The result of the logistic regression was not significant, χ^2 (2) = 0.60, p = .440 Nagelkerke indicating the highest grade completed did not statistically predict treatment outcomes. The beta weight for highest grade completed was -0.08; however because highest grade completed was not a significant predictor, the beta weight is not interpreted. The null hypothesis that the level of education of Puerto Rican women does not predict the retention rate of dual diagnosis treatment cannot be rejected in favor of the alternative. The result of the regression is presented in Table 4.

Table 4

Logistic Regression Analysis With Highest Grade Completed Predicting Retention

Source	B	SE B	Wald	P	OR	95% CI OR	
						LL	UL
Highest grade completed	-0.08	0.11	0.57	.450	0.92	0.75	1.14

Research Question 3

RQ3: Does the first language of Puerto Rican women predict the retention rate of dual diagnosis treatment?

$H3_0$: The first language of Puerto Rican women does not predict the retention rate of dual diagnosis treatment.

$H3_a$: The first language of Puerto Rican women does predict the retention rate of dual diagnosis treatment.

To assess research question three and to determine if the first language of Puerto Rican women predicts the retention rate of dual diagnosis treatment, a binary logistic regression was conducted. Statistical significance was determined with a significance level set at .05. Prior to analysis, the assumptions of the logistic regression were examined: adequate sample size and a dichotomous outcome variable. For a logistic regression, a sample size of 30 per predictor was required (LeBlanc & Fitzgerald, 2000). To conduct a logistic regression with one predictor, a minimum of 30 participants are

required to achieve empirical validity. The assumption of adequate sample size was met. Further, the outcome variable is a dichotomous measure, treatment outcome (retained vs. not retained).

The result of the logistic regression was not significant, χ^2 (1) = 0.15, p = .699, indicating the first language did not statistically predict treatment outcomes. The beta weight of first language was -0.16, however because first language was not a significant predictor, the beta weight was not interpreted. The null hypothesis that the first language of Puerto Rican women does not predict the retention rate of dual diagnosis treatment cannot be rejected in favor of the alternative hypothesis. The result of the regression is presented in Table 5.

Table 5

Logistic Regression Analysis With First Language Predicting Retention

Source	B	SE B	Wald	P	OR	95% CI OR	
						LL	UL
First Language	-0.16	0.42	0.15	.699	.852	0.38	1.92

Based on the results on table 5 indicated that the beta weight -0.16 because first language was not significant, the beta weight was not interpreted.

Summary

The current research study was quantitative in nature. The goal of this study was to explore the relationships between the retention rate of Puerto Rican women who are diagnosed with mental illness and substance abuse and various independent variables, including first language, being the child of alcoholics and substance users, educational level, and history of sexual abuse. The results of several logistic regression analysis fail

to reject the null hypothesis for research questions one and two. The results of these analyses showed that none of the independent variables in this study were significant predictors of retention. In the next chapter, the rationale for the study is presented. In addition, this chapter describes the findings, conclusions, implications of the results, as well as recommendations for future action and investigation.

Chapter 5: Summary, Conclusions, and Recommendations

The purpose of this study was to examine the low retention rate of Puerto Rican women in treatment for substance and mental health in the Bronx, New York. The overall intent was to explore some of the factors that might contribute to the high attrition rates of this population in this type of treatment facility. Archival demographic information, including age, language, age of first use of substances, and history of sexual or physical abuse, was collected from a treatment facility located in the Bronx. A logistic regression was used to examine the relationship between the demographic variables. In addition, logistic regression analyses were performed to examine the relationships between the research questions and their influence on the retention rate of Puerto Rican women who enrolled at the facility from 2005 to 2010.

Recent research has demonstrated that certain interventions, when implemented under appropriate conditions, are effective in increasing the retention rates for dually diagnosed people. This study examined how personal and demographic factors could provide information that could help clinicians provide more effective services for dually diagnosed Puerto Rican women. The objective of this research was to investigate the demographic factors that impact how women remain in treatment for mental health and substance in the South Bronx, New York City. The retention of dually-diagnosed Puerto Rican women in substance abuse treatment is a problem that has been under addressed. Thus, identifying the factors that can influence the low retention rate of dually diagnosed Puerto Rican women in treatment was the focus of this study.

Interpretation of Findings

Interpretation of Research Question 1

Final data analyses were conducted on 120 archival cases. Regarding Research Question 1, the experimental hypothesis was not supported, meaning the retention rate of dually diagnosed Puerto Rican women was not related to personal historical factors (including age at first chemical abuse, COA or COSA status, and history of physical and sexual abuse) did not predict retention. The results of this question were non-significant although the results might have been influenced by the person who collected the information. Because the data were archived there was no way of knowing if the person who collected the information spoke the client's language. Other factors could have influenced these results as well. Clarck (2001) indicated that Latinos have difficulty sharing their secrets with outsiders because they see this practice as lack of faithfulness to the family. Therefore, improving the cultural competency of clinicians could prove to be important when working with Puerto Rican women suffering from substance abuse. Therefore, being aware of these cultural practices could assist clinicians to understand how people from this culture view talking about family secrets, when trying to engage them in therapy. However, the findings could also be different if there were a larger sample. Although the sample statistics used proper level of power, this study might have needed a higher level of statistical power.

Interpretation of Research Question 2

The findings for Research Question 2 did not support the experimental hypothesis by indicating that the education level does not predict retention in this sample. In

addition, the results indicated that the mean level of education for these participants was the ninth grade level. Future research about the level of education in this population should use other methods, such as mixed methods or focus groups. Using archived data is not recommended due to how it limits the insights into these negative behaviors. Level of education did not predict the retention rate in treatment of dually diagnosed Puerto Rican women. A variable factor for consideration is that research shows that in general Hispanic women have lower education levels than African American and European American women (Lesser & Rodriguez, 2002). Furthermore, the literature shows that higher scholastic education influences the person's economic state, which influences the person's attitude about health perceptions and a positive attitude to seek healthy behaviors, including not indulging in the use of substances (Donnellan, Conger, McAdams, & Neppl, 2009). A study conducted by Steptoe, Wright, Kunz-Ebrecht, and Liffe (2016) indicated that education influences a person's attitude about health and that a healthy lifestyle is relevant to high levels of self-esteem. Self-esteem can then affect how people manage external stressors that can lead to mental health and substance abuse problems. More research needs to be conducted to determine if there are links between one's educational level, self-esteem, and substance abuse.

Interpretation of Research Question 3

To assess Research Question 3 and to determine if the first language of Puerto Rican women predicts the retention rate of dual diagnosis treatment, a binary logistic regression was conducted. However, the results were non-significant. First language did not have a predictor relationship with retention rate in this current study.

Learning about cultural practices is an important aspect in a therapeutic relationship. Therefore, it is important to ask questions and not to assume that one knows a client's cultural practices. According to Sue (1977), one of the most difficult conflicts in the mental health field is cultural knowledge and cultural techniques that are often used inappropriately. Sue added that psychotherapists often lack knowledge and overgeneralize what they know about other cultures. Furthermore, Sue said that traditional forms of treatment in assignment of case work need to be changed and that the concept of match and fit, which is defined as a therapist being culturally similar to the client, needs to be given more consideration as potentially impacting the retention rate in treatment. In addition, the research suggests that this process is difficult, because the therapist needs to be culturally sensitive, technique oriented, and familiar with intervention strategies to be used along with having ethnic sensitivity (Atkinson, Murayama, & Matsui, 1978). Another suggestion from the experts has been that when practicing psychotherapy with Hispanics, an important point is to reframe the client's concerns as medical problems, which they suggest reduces resistance (Ponce, 1974). Although the results were not significant for this study, the literature review indicates several cultural practices which can be useful when treating this population. The literature stresses how cultural awareness does influence the relationship between clinician and client and knowing the client's first language influences thought process, which is important in understanding someone or helping to engage the client (Clarck, 2001).

Limitations of the Study

Convenience Sampling

As mentioned in Chapter 1, a major limitation to this study is that the data did not allow the direct testing of various theoretical models, such as the transtheoretical model or the theory of reasoned action. In addition the Puerto Rican women in this study were or had been clients at a substance abuse clinic. Therefore the data analyzed in this study might not represent the entire population of Latinas who suffer from a dual diagnosis disorder. The results of the study might have been altered by different factors such as the use of regression analysis which was used to examine results in the retention rate in treatment of substance abuse and mental health in the South Bronx. In statistics, regression analysis is a technique that analysis the relationship between two variables a dependent and one or more independent variables (Freedman, 2005). Both independent and dependent variables measured in this study came from information collected by other professionals, which might have influenced the results. The third limitation is that the collected data were limited and inclusive as they only came from Puerto Rican woman who were connected to receiving services from the treatment facility in the South Bronx, New York. The questionnaires were archived by other professionals which did not allow for the proper verification of information. The use of archival data also did not allow for verifying if the clinician spoke the participant's language which may have influenced the understanding of questions from clinician and client. A fourth limitation was the possibility that a few of the participants in the study sample had undiagnosed severe and persistent psychiatric conditions, such as paranoid schizophrenia and borderline

personality disorder, which could have negatively impacted the conclusions of this study. In addition, the population included in the study might not have been a representation of the Puerto Rican women who are diagnosed with mental illness and substance abuse. Another limitation of this study could involve the shame of being addicted and having psychiatric diagnosis influencing the results of this study. The results showed that none of the alternative hypotheses were related to retention.

Implications for Social Change

The mission of South Bronx Mental Health Council is to serve people who suffer from mental illness and substance abuse problems. However, the results of this study show that only a small number of women were retained until completion. The current research shows that this group of women did not have a formal education. One of the ethical responsibilities of public health professionals is to advocate and serve as agents of change to promote self-help interventions for people who experience difficulty in finding their abilities and strengths. Promoting more community involvement could positively impact the retention rate of Puerto Rican women in treatment. The literature review on chapter two suggests that some of the cultural factors such as machismo, marianism and language barriers might have also impact the like hood of achieving high retention rates of Puerto Rican Women in Treatment (Diaz, 2007). In addition, as stated in the literature review talking to outsiders about problems is seen as a family betrayal (Miller, 2007). The intent of this study is to have other professionals read this document and to explore some of the barriers with other facilities who serve this population, and to assist in

making a difference in society, and future generations and hopefully avoid some of the consequences as a result these diagnosis.

Individual Social Change

The research has shown that addiction has affected society in general as well as the need for services for the Puerto Rican women who critically need services to address mental health and substance abuse issues services for the Puerto Rican. Even though the results of this study were non-significant addressing some of the cultural issues mentioned on chapter 2, knowing what does not work will add to research when exploring ways to increase this population in treatment longer which will affect this population on and individual level.

Recommendations for Action

This research was conducted with archival data. Different studies conducted in New York and other states have addressed different social issues with Hispanic women. Typically research regarding treatment for women in general has been translated from the male perspective (Alegria et al., 2007).

When assisting women, programs and interventions need to develop more effective techniques, particularly those techniques that increase cultural understanding. Therefore, it is suggested that government agencies, who are trying to work on reducing social stressors, become more sensitive and focus on the cultural aspects of this issue. Training programs for this population can focus on culture factors, such as familism, machismo and marianism. I believe that the phrase “being culturally sensitive” is too general. Clinicians should instead ask questions about cultural language. Matching a

client with a clinician who speaks the same language can affect the content of the information. There also needs to be a closer look as to why women are the fewer of recipients in agencies where substance abuse and mental health are the diagnosis. Several experts have attempted to address the different and several issues Latino women bring into treatment of mental health and substance abuse. Therefore, the need to explore other techniques, such as Interpersonal Psychotherapy, can be used when working with Puerto Rican women in treatment for substance abuse (Talbot, 2005).

Recommendations for Further Study

A positive side of this study was the use of a questionnaire to assist on data collection and address the research questions. Results may have been different if the data presented could have been collected personally, instead of taking the information collected by other professionals. Some suggestions for further studies are the examination of cultural factors suggested by literature review such as machismo, marianism, and familism, lack of the clinician's understanding of the cultural values, which could be done by the use of quantitative studies. Future studies could be set up by collecting data about the number of clinicians who were fully bilingual and then match these clinicians with clients who can speak the same language. Another suggestion for further research studies could involve the use of other research methods to test the hypothesis, such as comparison studies using control groups to further explore these variables. Using a mixed methods approach for this group might produce different results or offer new research questions to explore.

Conclusions

My decision to focus the study in this area was my personal observation watching the difference in success rates between men and women in treatment. Because of this problem the program had to be absorbed by another agency as the original owners could not maintain the agency. My hope is that this study contributes to the need to further explore how treatment interventions could be more effectively delivered to Puerto Rican women suffering from mental illness and substance abuse. After writing and reading different documents, which speak about the need for services for the Hispanic population, it has become clear there is a need for services geared toward Puerto Rican women diagnosed with substance abuse and mental health problems. Results from the study have shown that the language and level of education did not show any relationship to the retention rate. However, there is an increase of migration from different areas of the Hispanic culture, which include the migration of women, including Puerto Rican women. This migration increases the need to explore techniques that will increase retention rates of Hispanic women in general. In addition, using other research methods might provide statistically significant results.

Although the results were not significant, the literature has shown many reasons to continue exploring this important topic, as the consequences of substance abuse and mental illness have drastic consequences to society.

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Appendix A: Questionnaire

What was the patient first language?

Was the patient referred by Child Protective Services?

What was the patient level of education?

Does the patient have children?

Does the patient have a psychiatric diagnosis?

Does the patient have an addiction to one or more substances?

What level of education does the patient have?

Does the patient have a secondary medical diagnosis?

Is this patient's first attempt in treatment?

Does the patient have access to medical coverage?

Is the patient first or second generation Puerto Rican?

Does the patient have family?

Does the patient lives in a shelter?

Does the family attend Spanish support groups?

Is the patient monolingual?

Does the patient read Spanish?

Does the patient have a job?

Does the patient have any working?

Has the patient been in the country less than a year?

Did the patient have transportation?

Appendix B: Letter of Cooperation From Community Research Partner

11/22/2013

Dear Eva Millan

Based on my review of your research proposal, I give permission for you to conduct the study entitled Examining the low retention rate of Puerto Rican women in treatment of mental health and substance abuse in Bronx New-York within our facililty. As part of this study, I authorize you to examine the demographic by using numbers instead of names. We understand that our organization's responsibilities include. We reserve the right to withdraw from the study at any time if our circumstances change.

I confirm that I am authorized to approve research in this setting.

I understand that the data collected will remain entirely confidential and may not be provided to anyone outside of the research team without permission from the Walden University IRB. In addition, I understand that the numbers were only created for this study, and am not the numbers created by the South Bronx Mental Health Council, which identify the consumers in any form. The organization's responsibilities are to protect the consumer's confidentiality. Therefore, we have revised the information provided by Ms. Millan to guarantee that all the requirements have been completed. The data which the agency will provide are demographics, which will be reported as yes or no. As we understand according to the written details provided on the dissertation, data will be nominal and will be dummy coded.

Sincerely,

Curriculum Vitae

Eva Millan

Substance Abuse and Behavioral Disorder Counselor

Performance Profile:

Bio-psycho social evaluation	Crisis Intervention including Service Men active, and inactive
Zumba Groups	adolescents, and children
Outreach Specialist	Referral Specialist
MICA expert	Spanish proficient

Experience:
South Bronx Mental Health Council Inc., **(Chemical Dependency Program)** Bronx, NY
94- Present

1. Completed and maintained accurate records or reports regarding the patients' histories and progress, services provided, or other required information.
2. Counseled clients or patients, individually or in group sessions, to assist in overcoming dependencies, adjusting to life, or making changes. Participated in case conferences or staff meetings.
3. Developed client treatment plans based on research, clinical experience, and client histories.
4. Conducted chemical dependency program orientation sessions.
5. Coordinated counseling efforts with mental health professionals or other health professionals.
6. Reviewed and evaluated clients' progress in relation to measurable goals described in treatment plans.
7. Interviewed clients, review records, and confer with other professionals to evaluate individuals' mental and physical condition and to determine their suitability for participation in a specific program. Met with family members to educate and refer after care.
8. Planned or implemented follow-up programs for clients to be discharged from treatment programs.

9. Assessed individuals' degree of drug dependency by collecting and analyzing urine samples.
10. Maintained a caseload of more than twenty cases of adults with MICA diagnoses; Interacted with psychiatrists concerning diagnoses and administering of medication to patients. Also, worked with clients who were on methadone, HIV, Parole, or Probation.
11. Supervised 4 CASAC interns at different times.

Holliswood Hospital, Queens, NY **Group Specialist** 6/ 2010– Pres

12. Counseled clients or patients, individually or in group sessions, to assist in overcoming dependencies, adjusting to life, or making changes. Participated in case conferences or staff meetings.
13. Completed and maintained accurate records or reports regarding the patients' histories and progress, services provided, or other required information.
14. Coordinated counseling efforts with mental health professionals or other health professionals, such as doctors, nurses, or social workers.
15. Reviewed and evaluated clients' progress in relation to measurable goals described in treatment and care plans. Worked with children and active duty servicemen.
16. Interviewed clients, review records, and confer with other professionals to evaluate individuals' mental and physical condition and to determine their suitability for participation in a specific program. Met with family members to educate and refer after care.
17. Planned or implemented follow-up or aftercare programs for clients to be discharged from treatment programs.

Education:

Addictions and gambling specialist (CASAC)

PHD Doctor in Clinical Psychology
EMDR Certified
MHS- Master's in Human Services from Lincoln University
Associates degree/Licensed Practical Nurse

2013- Effective Communication, Customer Service, Team Building for Healthcare

2013- HCAHPS= Hospital Consumer Assessment of Healthcare Providers and Systems Training