FINAL REPORT: Prevalence of Childhood Trauma in Psychiatric and Primary Care Clinics in Cities along the U.S.- Mexico Border

PIMSA

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ABSTRACT

Data shows that length of stay in the U.S. and acculturation; predict worse overall health among Latino immigrants. Childhood trauma (CT) has not been studied among Mexicans, although this possibly worsens the effects of immigration on health outcomes.

OBJECTIVES: To determine the prevalence of CT among patients in primary care (PCC) and mental health (MHC) clinics in border cities in Mexico and the U.S; to document the characteristics of parental bonding (PB) and the reactions of caregivers to the disclosure of maltreatment; and to study the relationship between immigration and acculturation and the prevalence of CT and PB.

METHOD: This is a cross sectional study involving 502 adult participants from PCC and MHC between U.S. and Mexican sites. Participants filled out self report questionnaires, which included the Childhood Trauma Questionnaire (CTQ), the brief Short Acculturation Scale for Hispanics, the Parental Bonding Instrument (PBI) accompanied by five questions regarding disclosure of trauma, and demographic data.

RESULTS: Multiple regression analysis involving 11 predictor variables (sex, nation, clinic type, age, income, education, PBI: father and mother PBI care and protect subscales (SC) and acculturation) were performed for each of the five CTQ SC and for the abuse and neglect

composite CTQ scales. Significant predictors for abuse were family income; father and mother PBI care SC and a quadratic effect of acculturation. Significant predictors for neglect were education and the father, mother PBI care SC. Sex was a significant predictor for the sexual abuse SC. Income was a significant predictor for the abuse composite SC only. Acculturation was a significant predictor when treated as a quadratic predictor for the abuse composite SC only.

BACKGROUND AND SIGNIFICANCE:

A staggering body of data shows that adult survivors of several types of childhood trauma are at risk for a number of mental disorders[1-8], as well as sexual risk-taking and other impulsive or antisocial behavior[9-13], and physical health problems [14-22]. Among the sequelae of childhood trauma, and increased sensitivity to stress and vulnerability to stress-related conditions, such as posttraumatic stress disorder (PTSD), and been documented [23, 24.] Immigration can be a highly stressful event [25], and there is a need to identify factors that render individuals vulnerable to immigration stress.

The outcome of childhood trauma depends on the reaction of caregivers and adults to the disclosure or discovery of the child's abuse or neglect. Parental support is consistently associated with the adjustments of sexually abused children [26]. Other studies have found that negative social reactions are related to greater PTSD symptom severity [27]. These results are consistent with other studies and highlight the fact that although disclosure may be helpful, if it leads to negative reactions, it may harm survivors' psychological status [28].

The literature has paid surprisingly little attention to the role that cultural beliefs and values may have on the reactions of non perpetrating parents and other adult caregivers to disclosure or discovery of childhood maltreatment [29]. A study in the U.S. showed that timing and

extent of disclosure of sexual abuse did not vary by ethnicity. However, negative social reactions to disclosure were more common among ethic minority groups [28]. Given that a victim's disclosure of his/her abuse, or its discovery by others represent a formidable challenge to traditional cultural values of Mexican culture, such as familismo, marianismo and machismo, the time between maltreatment and disclosure may be longer and parental responses less supportive among Mexican nationals and recent Mexican immigrants, as compared to highly acculturated Mexican Americans. The process of acculturation entails the acquisition of new cultural values that may conflict and soften the effect of traditional values.

To our knowledge there are no published studies of childhood trauma among Mexican immigrants, including data on reactions of the non perpetrating parent or other adult in the child's environment to the disclosure/discovery of maltreatment. We identified one study of Hispanic female adult survivors of childhood trauma in a primary care setting [31]. Also, we identified two studies of Hispanics in outpatient psychiatric settings [32, 33]. Both studies aimed at studying the relationship between childhood trauma, dissociation, and *ataque de nervios* in ethnic groups (i.e., Puerto Ricans and Dominicans) where this culture-bound syndrome is more prevalent.

Despite this paucity of clinical data, epidemiological studies conducted in Mexico reveal a high lifetime prevalence of violence and abuse in both men and women. One study with a probability sample of 2,509 adults from 4 cities in Mexico found a lifetime prevalence of violence of 34%. Of those exposed, 11.5% were diagnosed with PTSD [34]. Another study of 914 pregnant women treated in health clinics in Mexico showed that approximately one quarter of the women experienced violence during pregnancy. Parental violence witnessed by women in childhood and violence in the abusive partner's childhood were among the strongest predictors of

abuse [35]. In a survey of 1780 adult female outpatients visiting a tertiary care internal medicine teaching hospital in Mexico City, Diaz-Olavarrieta and colleagues found a 41% lifetime prevalence of physical and/or sexual abuse. Current abuse correlated strongly with a childhood history of physical and/or sexual abuse [36]. Importantly, women of higher socioeconomic status and education are also affected. An anonymous survey of 1,150 registered nurses and nurses' aides at 11 urban hospitals in Mexico City revealed that the prevalence of childhood physical/sexual abuse was 13% for nurses' aides and 14% for nurses. They also found similar rates of adult physical/sexual abuse (13% for nurses' aides and 18% for nurses). In subsequent analyses, a history of childhood physical or sexual abuse was associated with adult emotional, physical, and sexual abuse [37].

Despite the behavioral and mental health sequelae documented by these studies, epidemiological studies have shown that while psychiatric disorders are common in the Mexican population, there is extreme under-utilization of mental health services [38]. Mexican immigrants continue to under-utilize mental health services, which represents some of the most glaring examples of health disparities documented [39].

The mental health consequences of migration have been debated in American psychiatry since the end of the nineteenth century [40.] Studies during the first half of the twentieth century emphasized the social, economic, political, and health-related disadvantages of recent immigrants compared to the well-assimilated groups. Such assimilation into American society, also known as acculturation or “Americanization,” was touted as the key influence that would eventually dispel most of the immigrants’ disadvantages [41, 42, 43].

Contradicting these claims, empirical research into the effects of immigration on mental health and health-related quality of life has provided evidence of a negative effect of

acculturation on the mental health of persons of Mexican descent in the United States [44]. Others have extended the findings of a protective effect of low acculturation among foreign-born non-Hispanic white immigrants. The mechanism behind this "healthy immigrant effect" and worse health outcomes associated with immigration and acculturation remains obscure.

The goal of this pilot study was to identify the point prevalence of 5 categories of childhood trauma (sexual abuse, physical abuse, emotional abuse, physical neglect and emotional neglect) in adult patients seeking services at mental health clinics (MHC) and primary care clinics (PCC) located on both sides of the U.S./Mexican border, to explore the relationship between reports of childhood trauma (CT) and migration status, to compare the family functioning of individuals with and without histories of CT and its correlation with migration status, to determine the frequency of reporting abuse during childhood to caregivers and its correlation with migration status, and to characterize the parental and family responses to individuals' disclosure of their traumatic experiences and its correlation to migration status.

METHODS:

Sample

A multivariate cross-sectional study was conducted. The sample compromised of 502 adult subjects who sought services at MHC and PCC in Tijuana, Baja California, Mexico, Imperial Valley County, CA and San Diego County, CA from July 2007 to September 2008.

During the period of time of data collection, all Mexican or Mexican American patients showing up for scheduled appointments were approached by reception staff or their primary care physician or psychiatrist, and asked to participate in this survey study. Their participation was voluntary and no compensation was offered. After a written informed consent was obtained,

patients were asked to complete the study measures and provide basic demographic information in a private setting.

The participating U.S. MHC were as follows: In San Diego County: Maria Sardinas Center, North Coastal Mental Health Clinic, and South Bay Guidance Center. Two of the three clinics are located in cities bordering Tijuana, Baja California, Mexico. North Coastal Mental Health Clinic is located in San Diego's north county. Sun Valley Behavioral Medical Center is the only clinic located in Imperial Valley county that participated.

The participating Mexican MHC was the Universidad Autónoma of Baja California (UABC), medical school's University Center for Psychological Assistance and Research (Centro Universitario de atención Psicológica e Investigación (CUAPI)). This student run clinic is located in Tijuana, Baja California, Mexico.

The participating US PCC were the following: La Maestra Primary Care Clinic and Imperial Beach Health Center, both located in cities bordering Tijuana, Baja California, Mexico.

The participating Mexican PCC was the UABC, medical school's University Center for Medical Assistance and Research (Centro Universitario Medico Asistencial y de Investigación (CUMAI)). This student run clinic is located in Tijuana, Baja California, Mexico.

All participating MHC and PCC located in the US and Mexico serve mostly Mexican and Mexican American patients who are either indigent or have government funded health insurance.

Instruments

Five categories of childhood trauma (physical abuse, sexual abuse, emotional abuse, physical neglect and emotional neglect) were assessed with the Childhood Trauma Questionnaire (CTQ).[45] The CTQ is a 28-item self-report inventory that provides valid screening for histories

of abuse and neglect. One of the Co-PIs (A.S.) developed a Spanish translation of the CTQ, which has been approved by Harcourt Assessment, Inc., the questionnaire's publisher.

Acculturation was assessed using the brief Short Acculturation Scale for Hispanics (SASH) by Marin et al. The brief SASH is a self-report, four-item scale validated in English and in Spanish taken from the 14 item Short Acculturated Scale for Hispanics [46], The scale can be reduced to four items (questions number 1, 3, 4 and 5) without sacrificing predictive value, validity, or reliability [47, 48].

Family functioning was assessed with the Parental Bonding Instrument (PBI).[49] The PBI is a well-established, well-researched self-report that measures fundamental parental styles as perceived by the respondent, and is available in multiple languages, including Spanish. It consists of 25 item questions, including 12 'care' items and 13 'protection' items. The scored items yield two scales termed 'care' and 'overprotection' or 'control'. The measure is 'retrospective', meaning that adults (over 16 years) complete the measure for how they remember their parents during their first 16 years. The measure can be completed for both mothers and fathers separately, or for both parents combined. We utilized the validated Spanish translation of Gomez-Beneyto and colleagues.[50]

For the purpose of this study, we added five questions to the PBI looking at disclosure of childhood trauma (addendum 1) as well as basic demographic data as independent variables.

RESULTS:

A total of 532 questionnaires were collected from all clinics. 30 questionnaires were incomplete and not included in the data analysis. Out of the 502 that were included, 155 subjects

were from MHC located in the US and 19 from the MHC in Mexico. 214 subjects were from PCC in the US and 114 subjects from the PCC in Mexico.

DEMOGRAPHIC INFORMATION:

Out of the 155 subjects from US MHC, 84% were female with the mean age of 32.6 years and a mean educational level of 9.4 years in school. Out of the 19 subjects from MHC in Mexico, 79% were female, mean age of 36 years, and an educational level of 11.1. In the US PCC, 66% of the subjects were female with a mean age of 46.9 and a 9.4 level of education. In the PCC in Mexico, 84% were female, mean age of 32.6 and a level of education of 9.7. The average family income for subject from all clinics in Mexico was $4,000-$6,000 pesos per month. The average income for subjects in all US clinics was $2,000-$4,000 dollars per month. The average acculturation score for subjects from all clinics in Mexico was 1.30, low acculturation. The average acculturation score for subject from all clinics in the US was slightly higher at 2, but also reflecting a low acculturation level.

DATA ANALYSIS:

These data were analyzed using multiple regression analyses with CTQ scores as the dependent variable and the following predictor variables: sex, country of residence, clinic type (primary or psychiatric), age, family income, years of education, paternal care, paternal protection, maternal care, maternal protection, the linear effect of acculturation, and the quadratic effect of acculturation. A quadratic predictor for acculturation was included because 1) preliminary analyses indicated a non-linear effect of acculturation (whereas there were no indications of a quadratic effect for the other predictors), and 2) it is a plausible hypothesis that incomplete acculturation may yield the poorest outcome.

Separate multiple regression analyses were done for the CTQ abuse and the CTQ neglect sub-scales. Predictors reported as significant below are those that explain a unique portion of the CTQ variance. The significance level for each predictor was set to .05, uncorrected for multiple comparisons. Predictors with p-values less than .05 are thus listed below as significant. The corresponding Bonferroni corrected p-value for each predictor, given the 12 predictor variables, is .0041. In most cases, predictors listed as significant below survive this stricter Bonferroni corrected p-value.

ABUSE RESULTS

Emotional Abuse:

When analyzing emotional abuse (EA) as an independent variable we obtained the following statistically significant results: EA was more common in MHC vs. PCC (P value of <0.0005) and more common in the US clinics. Income was also significant (P value of 0.01), meaning more income less emotional abuse. Both father and mother care subscales of the PBI were significant (p value of <0.0001) and so was the maternal protection subscale to a lesser extend (p value of <0.02).

Physical Abuse:

When analyzing physical abuse (PA) as an independent variable we obtained the following statistically significant results: PA did not differ by clinic type or country. Income was significant (P value of 0.02), meaning more income less emotional abuse. Both father and mother care subscales of the PBI were significant (father SC p value of <0.02, mother SC p value of <0.0001). The maternal and paternal protection subscales were not significant.

Sexual Abuse:

When analyzing sexual abuse (SA) as an independent variable we obtained the following statistically significant results: SA was more common in females (P value of <0.0015) and in Mexican clinics (p value of <0.03). This did not differ by clinic type. Income was significant (P value of 0.003), meaning more income less emotional abuse. Both father and mother care subscales of the PBI were significant (father SC p value of <0.03, mother SC p value of <0.0001). The maternal and paternal protection subscales were not significant.

In summary, the abuse composite results include the sexual abuse, emotional abuse and physical abuse sub-scales of the CTQ. When grouped together the variables that were not significant abuse predictors were sex (expect for sexual abuse), clinic type, age, education, paternal and maternal protection, and the linear effect of acculturation. Country of residence was a marginally significant predictor for abuse in this particular sample, with slightly more abuse indicated for Mexico. Family income, paternal and maternal care SC were all inverse predictors of abuse, meaning that the more they were present the less abuse was seen. Maternal care was the strongest inverse predictor (P value of <.0001) for abuse. Acculturation was significant when treated as a quadratic predictor. Abuse is highest for mixed language patients and lower at either language extreme.

NEGLECT RESULTS

Emotional Neglect:

When analyzing emotional neglect (EN) as an independent variable we obtained the following statistically significant results: EN did not differ by clinic type, county, gender of the subject or income, however, educational level was statistically significant meaning more years of education, less emotional abuse (p valve of <0.0001). Both father and mother care subscales of the PBI were significant (p value of <0.0001). The maternal and paternal protection subscales were not significant.

Physical Neglect:

When analyzing physical neglect (PN) as an independent variable we obtained the following statistically significant results: PN did not differ by clinic type, county, gender of the subject or income. Educational level was statistically significant meaning more years of education, less emotional abuse (p valve of <0.0001). Both father and mother care subscales of the PBI were significant (p value of <0.0001). The maternal and paternal protection subscales were not significant.

In summary, when grouped together, the neglect composite results include the emotional neglect and physical neglect sub-scales of the CTQ. Neglect had fewer predictors than abuse, thus we saw sex, country, clinic type, age, family income, paternal protection, maternal protection, acculturation linear and quadratic, being non-predictors. Interestingly enough, education, with a value of P<.0001, was a strong inverse predictor, displaying the same statistical potency as maternal and paternal care.

PREVALENCE AND THE SEVERITY CLASIFICATION FOR ABUSE AND NEGLECT:

The CTQ has guidelines for classification of the SC for abuse and neglect from low to severe [45.] We were able to analysis these subcategories and provide rough results of the severity rating along with the prevalence for abuse and/or neglect. Out of the 369 subjects from US clinics, 52% met the classification for emotional abuse, 43% for physical abuse, 34% for sexual abuse, 62% for emotional neglect and 56% for physical neglect. The most common severity level for all forms of abuse and neglect in US clinics was moderate to severe. Out of the 133 subjects from Mexican clinics, 39% met the classification for emotional abuse, 22% for physical abuse, 23% sexual abuse, 46% for emotional neglect and 40% for physical neglect. The most common severity classification for emotional abuse and emotional neglect was low, for sexual abuse and physical neglect, moderate, and for physical abuse,

severe.

DISCLOSURE OF CHILDHOOD TRAUMA QUESTIONAIRE RESULTS (addition to the PBI addendum 1):

At this time we are only able to provide rough results of the "disclosure, addition to the PBI questionnaire." 185 subjects answered this questionnaire. Even though 72.4% of the individuals that believed they had been maltreated as children have disclosed this maltreatment during their lifetime only 40.1% notified someone while the abuse/neglect was ongoing. Most subjects disclosed to their mother, secondly to their physician, thirdly to "other" individual and lastly to a friend. Surprisingly 40% of the individuals answered that the person they disclosed to "did nothing," 36% reported "expressed concern but the abuse/neglect didn't stop," and only 24% answered that the person they disclosed to "made the abuse/neglect stop."

FUTURE DIRECTION:

Hispanics tend to value closeness and interconnectedness among families and extended family members. This is part of the concept behind familism.

Hispanic families tend to spend more time together than families from other ethnic backgrounds in the USA. This is why we believe it is crucial to engage and involve Hispanic families in trauma focused treatment in order for this to be a successful intervention. The same standards might apply to trauma focused research and research interventions for Hispanic children. At the time of writing this paper, research looking into effective trauma focused treatment for Hispanics is lacking. Research with Hispanic youth and their families should be conducted in a culturally sensitive manner. Consent for participation might be obtained more

readily if the researcher speaks the language and has a clear understanding of the taboos surrounding mental illness and childhood trauma, especially childhood sexual abuse, in the Hispanic population.

There is a clear need to develop culturally sensitive, trauma-focused mental health services for the continuously growing Hispanic population in the USA. These services should be culturally and linguistically relevant to Hispanic immigrants and their families. Judgmental attitudes as to how Hispanic families react and deal with childhood abuse should not have a place in this culturally sensitive treatment. We should try instead to understand the reasons behind these reactions and work with the family as a unit.

Data collected from this study constitutes preliminary data in applications for extramural funding from U.S. and Mexican sources. Information learned from this study can be the basis of translational research aimed at developing culturally and linguistically relevant treatment interventions for Mexican immigrant and Mexican American adult survivors of childhood trauma. Subsequently, such evidence-based interventions should inform health services research and policy, to ensure maximum dissemination and accessibility to the target population.

This study represents the first step in a long-term collaboration that will benefit higher education institutions in Mexico and the U.S. The Department of Psychiatry at The University of California, San Diego (UCSD) is one of the leading research institutions of its kind. Together with faculty from both universities, we plan to develop a mentoring and training program in research skills available to medical students and residents from UABC. The latter, in turn, will strengthen UCSD efforts to develop research that targets mental health issues and addresses needs of Mexican immigrants and Mexican Americans.