

El viaje al otro lado: Relationship between Depression Onset in Latinas and Immigration Experience Coming to the United States

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Abstract

Background: Few studies investigate unique psychosocial hardships and trauma during immigration by mode of travel. This retrospective pilot study explores the trauma and hardship during different types of immigration travel among Latina women and explores its relationship to psychiatric diagnosis in Latina immigrant women with and without psychiatric diagnosis history.

Methods:

14 volunteers were assessed for trauma exposure, difficult life events, and depressive symptomology preceding migration, during migration, and after migration. 7 were recruited from a clinical setting and had established depression diagnosis and treatment, and 7 were recruited from community family centers as immigrant population controls. Structured Clinician Interview for DSM IV, Adverse Childhood Events Survey, and modified Life Events Difficulties Schedule were implemented. The Wilcoxon Rank-Sum and Fisher's Exact were used for statistical analysis.

Results: Comparing modes of travel among groups, 71% of community controls and 42% of clinically treated depression group traveled using human smuggler, aka "coyote". Trauma exposure was increased in coyote travel ($p=.031$). Sleep deprivation ($p=.011$), intrusiveness by others ($p=.008$), and perceived goal frustration ($p=.048$) were elements of trauma found to be statistically increased during migration among coyote travelers. Coyote travel trended towards an increase in short term threat ($p=.061$). When comparing between clinic treated patients and community controls, no significant differences were found in trauma incidence ($p=.26$), childhood adversity ($p=.5$) or depressive symptoms in the year following arrival to the US ($p=1$).

Conclusion: In this small pilot study, "coyote" travel significantly correlated with trauma exposure. There was a numerical suggestion that coyote travel is more often associated with depression than non-coyote travel. With only 14 individuals this pilot study had limited power to detect effects. The lack of difference in depressive symptomatology one year after arrival between the group of people previously diagnosed and community volunteers suggest a multifactorial high-risk adjustment period warranting a high-degree of clinical suspicion and screening in all newly immigrated patients.

Key Words:

Latina, Immigration, Trauma, Coyote, Depression, Anxiety

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Background

Mental health research in Latino immigrants is a complicated area of study, with several opposing findings in the literature regarding prevalence of psychiatric disorders and unique risk factors for psychopathology. ^{i,ii}

Investigations of psychiatric disorders in Hispanic immigrants frequently report less psychiatric pathology among immigrant Latinos compared to non-immigrant, native born US Latinos. ⁱⁱⁱ Many epidemiological studies record lower than average recorded prevalence of anxiety and depression disorders among Latino immigrants. ^{iv} This epidemiological phenomenon is commonly referred to as “the immigrant paradox.” This paradox, first coined in 1986 by American sociologist Karl Markides, describes superior health outcomes in Latino immigrants, despite the unique social, cultural and economic stressors of immigration. ^v Supporting findings for this paradox are mixed and not universally replicated in the existing literature.

Investigator such as Burnham and Vega found subjects born in Mexico had lower lifetime prevalence of major depressive disorders than US native born Mexicans. ^{vi, vii} Controlling for education, age, and income, Ortega similarly found decreased risk for depressive psychiatric disorders and PTSD among foreign born Latinos. ^{viii} The National Epidemiologic Survey on Alcohol and Related Conditions found subjects born in Mexico faced significantly lower risk of substance use, mood, and anxiety disorders compared with their US-born Mexican Americans.

^{ix}

Opposing conflicting findings have questioned the validity of this paradox, and cautioned against portraying immigrants as protected from mental health pathology. In addition, studies have begun to examine immigration travel to the United States as a risk factor for subsequent development of psychiatric symptoms. It has been noted that migration travel to the US produced significant anxiety and depressive symptoms, as Hovey and colleagues reported that acculturative stressors and poor social support correlated with increased depression and anxiety among immigrant Latino farmers. ^x Sullivan qualified unique reported risk factors

correlating with increased depression in Latino immigrants, such as hostile environments upon arrival to the US and constant fear of deportation, leading to hypervigilance. ^{xi} Ornelas found that immigrants without formal documentation were more likely to report depressive symptoms, reporting higher fears for their safety and trauma during their immigration travels. Ornelas also found that family separation was more prevalent among the Mexican immigrants with depression than without depression. ^{xii} The context preceding migration, family stress, role changes, coping styles, and acculturation have also been reported to influence social adaptation and vulnerability to mental health problems. ^{xiii}

To date, studies have not accounted for different methods of immigration from Mexico to the United States as a variable that influences psychopathology. Furthermore, there is scant quantitative assessment of the spectrum and severity of challenges according to different modes of travel. Considering the predictive value of trauma history and stress in many psychiatric disorders, further study in this area is warranted.

This study aims to better understand the heterogeneity and potential psychosocial hardships of Mexico-US immigration by stratifying these experiences according to mode of travel. There are diverse modes of immigration travel to the US from Mexico, each with distinct stressors. With documentation, methods include approved work, travel, student visas, as well as green cards. Without any documentation, one of the more common ways into the US by foot is with a “coyote”, a clandestine guide who leads paying individuals through rugged desert terrain to cross the border. Traveling with a coyote is often dangerous, with frequent immigration trip testimonies meeting DSM trauma criteria of “profound physical exertion, starvation, robbery, assault, injury, and threatened death.”^{xiv} Structural barriers in U.S. immigration policy make immigrating to the United States without legal documentation a mentally and physically exhaustive process. These include: vigorous border patrol enforcement, randomized identity checks at the border, workplace, and public transportation. They also include criminal detention for apprehended undocumented individuals. Legally, states have seen an increased deference to police force and Immigration Customs Enforcement agencies to question potential individuals they suspect as undocumented, and ultimately deport individuals and separate

family members with or without criminal records. All of these barriers, both before and after arrival to the United States, can be sources of daily stress for immigrants without legal documentation. Healthcare policies limiting undocumented citizen's access to mental healthcare, such as required social security numbers, exclusion from state low income healthcare programs, etc., may additionally may influence the rate at which undocumented immigrants seek mental health services, which affects reported incidence and prevalence rates of mental health disorders among this population. ^{xv}

Additionally, adult and minor age women are a uniquely heterogeneous subgroup of immigrant travelers with added risks, motivations, and stressors. This includes pregnancy during travel, sexual assault at the hands of coyotes, and additional caretaker responsibilities of young children and elderly during the trip. Given the unique role of women in this journey and their lack of prominent representation in the immigration paradox literature, this study will focus on only women subjects. This will allow better assessment of the validity and/or limitations of the immigrant paradox within this female population.

The main study hypothesis is that women who undergo a coyote immigration journey face higher rates of trauma during immigration travel than those using non-coyote travel. A second hypothesis is that women who experience trauma during their immigration journey are at greater risk to have a depression or anxiety clinical diagnosis in the first year following their arrival to the United States than those who travel without exposure to similar traumas.

Methods

This study will explore all of these areas using a novel combination psychiatric tools including the Life Events and Difficulties Schedule (LEDS), the Structured Clinician Interview for DSM IV, (SCID), and the Adverse Childhood Experiences Rating Scale, (ACE), through the course of a semi-structured interview.^{xvi,xvii,xviii}

This investigation was designed as a retrospective matched cohort study to examine incidence of depression and anxiety in Latina immigrants according to:

- 1) Their mode of arrival to the United States, dichotomized by coyote versus non-coyote travel.
- 2) Their exposure to trauma and stress along their immigration journey.

Sample group: A total of 14 volunteer subjects were assessed. Subjects self-reported a history of coyote or non-coyote travel, as well as history of any clinical psychiatric diagnosis or none. The sample resulted in 6 individuals who did not utilize coyote travel and 8 who did utilize coyote travel. The sample also resulted in two equally sized sample groups (N=7 each), a clinic derived sample of women with history of diagnosed depression, and one without. Subjects were matched for gender, Latino country of origin, mean age at immigration (20-25 years), and marital status at time of immigration.

Recruitment: To recruit subjects for the study, a background of the study was presented to staff at clinics and community centers in Phoenix, Arizona serving the Latino population. Staff recruited subjects by displaying IRB approved informational brochures on site, and directing interested, eligible individuals to call PI to discuss goals of study and schedule interviews. One healthcare FQHC clinic with behavioral health services, and one community center participated. All subjects received \$25 gift cards for their participation to help with transportation and childcare costs associated with

participating in the interview, and offered up to 2 complimentary counseling sessions with an LCSW or clinical psychologist on site to debrief from the interview experience.

Methodology: A semi-structured interview was conducted with all 14 subjects by the principle investigator. Subjects requested not to be audio or video recorded. Thorough notes were taken during the interview for data collection. All interviews and written tools were conducted in Spanish.

Measures:

Assessing Trauma Incidence and Severity of Psychosocial Challenges during Immigration: Subjects were assessed on trauma and associated difficult experiences during immigration travel utilizing the modified Life Events Difficulties Schedule (LEDS). Subjects were assessed on these same parameters for one year preceding immigration journey (consideration of migration context) and one year following arrival to the United States. The LEDS is a well validated psychological mixed qualitative and quantitative measurement of the stressfulness of life events over a defined time period. The LEDS is performed as a semi-structured interview in which much detail and contextual information surrounding a challenging event is collected. Events are then scored by a blind, independent panel of trained psychologist scorers who through a consensus discussion, quantify the presence or absence of trauma in an event. The recruited members of the panel were three PhD community practice psychologists who work with Spanish speaking patients and were familiar with the LEDS, SCID, and ACE assessments. The same panel also qualifies the severity of the difficulty or challenge of individual events using a scale of 1-4, with 1 being least stressful and 4 being the most stressful. There was a modification of the LEDS scoring system to consider the immigration travel experience as a larger encompassing, cumulative singular event over many days instead of separating individual distinct traumas along the immigration journey as unrelated events. The examiner and consulting psychiatrist decided this was

necessary to capture the full context of the immigration trip as many of the events were interrelated.

Assessing Depressive and Anxiety Disorders in Cohort: Assessment for psychopathology preceding and following immigration was performed utilizing the Structured Clinician Interview for DSM IV, (SCID). The SCID is a well validated diagnostic exam used to verify current and historical presence of psychiatric diagnosis in subjects. Subjects were screened for all major mental health disorders, and evaluated more comprehensively for depressive and anxious symptomatology, the target diagnoses determined prior. The SCID is a semi-structured verbal interview conducted by a mental health professional or research investigator who has completed SCID certification. It is broken down into major sections representing distinct categories of psychiatric pathology, such as anxiety, depression, substance use disorder, bipolar disorder etc. Sections begin with a structured screening question of a common symptom representing each psychiatric disorder. If answered positively by the examinee, the examiner probes further with a combination of open and closed ended questions regarding symptomatology to arrive at a diagnosis. For all diagnoses, symptoms are graded as present, subthreshold, or absent. ^{xix}

Assessing Trauma and adversity prior to Immigration Travel: The Adverse Childhood Experiences Survey, (ACE) was also conducted on all subjects. ACE events are defined as intense sources of stress and trauma that children may suffer early in life. The ACE survey is a self-reported, ten point “yes or no” questionnaire that asks ten questions in areas such physical, sexual and emotional abuse and neglect. Each adverse events counts as one point. Scores are then added cumulatively according to how many adverse childhood events subject reports, with 0 as no adverse events and 10 as maximum adverse events. The purpose of using the ACE in this study was to assess prior exposure of childhood traumas in those coming to the United States to assess for possible confounding variables that, apart from trauma during the immigration journey itself, could also increase risk of adult depression and anxiety later in life.

Data Analysis:

Demographic and clinical characteristics were assessed using medians, IQR for continuous variables and frequencies, proportions for categorical variables. The Wilcoxon Rank-Sum was implemented to compare continuous and ordinal variables between the coyote vs non-coyote mode of travel. Furthermore, the Wilcoxon Rank-Sum was assessed to compare continuous and ordinal variables between participants who were given a psychological diagnosis versus those who did not. The Fisher's Exact was used to compare categorical variables. The analysis was done using STATA software.

Results

The average time elapsed between subject's original immigration journey and current interview was roughly twenty years. The majority of subjects were married at the time of immigration travel. Some form of childhood adversity was present in all subjects, with no significant distinctions between coyote versus non-coyote immigrants. There was no significant association between ACE scores, travel with a coyote, or increased clinical diagnosis of depression or anxiety.

Table 1

Covariates	No Coyote	Coyote
P= value ⁻¹	N=6	N=8
Current Age (mean)	39.2 years	43.8 years
0.60		
Age At Immigration (mean)	20.6 years	24.8 years
0.18		
Ace Score Scale 1-10 (mean)	2.0	3.12
0.54		

Table 1- Demographic Traits in Subjects from coyote vs non-coyote group

Covariates	No Coyote N=6	Coyote N=8	<i>P-Value¹</i>	No Psych history N=7	Past Psych history N=7	<i>P-Value¹</i>
% Subjects Meeting Depressive Disorder Criteria on SCID (such as MDD, PDD, MAD)	50.0%	75.0%	0.58	42.9%	85.7%	0.26
% Subjects Meeting Anxiety Disorder Criteria on SCID (such as GAD, PTSD, Panic disorder, MAD)	50.0%	25.0%	0.58	28.6%	42.9%	1.0
% Subjects Reporting Trauma During Journey	0.0 %	62.5%	0.031	57.1%	14.3%	0.26

Table 2

Table 2- Trauma Incidence, Depression, and Anxiety reported in subjects from coyote versus non-coyote travel group

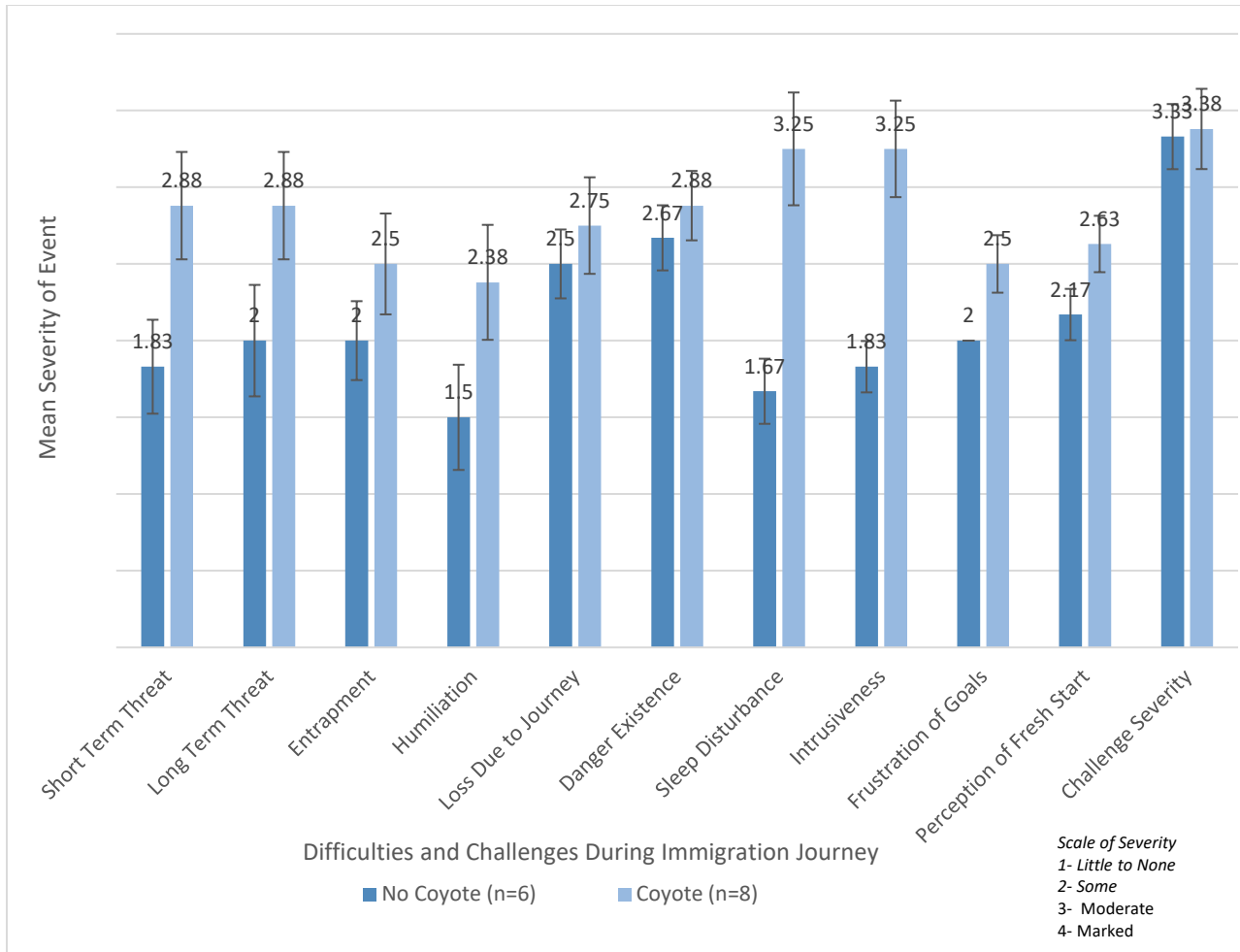


Figure 1. Comparison of Life Difficulties and Challenges during Immigration Journey between Coyote and Non Coyote Travel

Wilcoxon Rank-Sum and Fisher's Exact to compare between groups. Sleep deprivation ($p=.011$), intrusive behavior by others ($p=.008$), and goal frustration ($p=.048$) were statistically increased in coyote groups. Intrusiveness was defined as efforts by authority figures, such as coyotes or family members, to impose demands on the subject or attempt to control subject behavior, often causing harm toward the subject in the process. Women traveling with coyote reported a higher perception of a "fresh start" when arriving to the US than women who did not use the coyote as a mode of travel ($p=.09$). Coyote travel trended towards an increase in short term threat ($p=.061$). Experiences such as loss, humiliation, entrapment, targeted rejection, and long term threat also did not approach statistical significance in comparative models between any groups.

Demonstrated in Figure 2, 62% of immigrants with "coyote" travel method reported trauma compared to 0% of non-coyote travelers ($p=.031$). 75% of subjects traveling with coyote met criteria for current or past diagnosis of depressive disorder, compared to 50% of subjects in non-coyote group ($p=.58$). Despite differences in subject reported psychiatric history, no statistically significant differences in depression or anxiety was found between modes travel ($p=.58$).

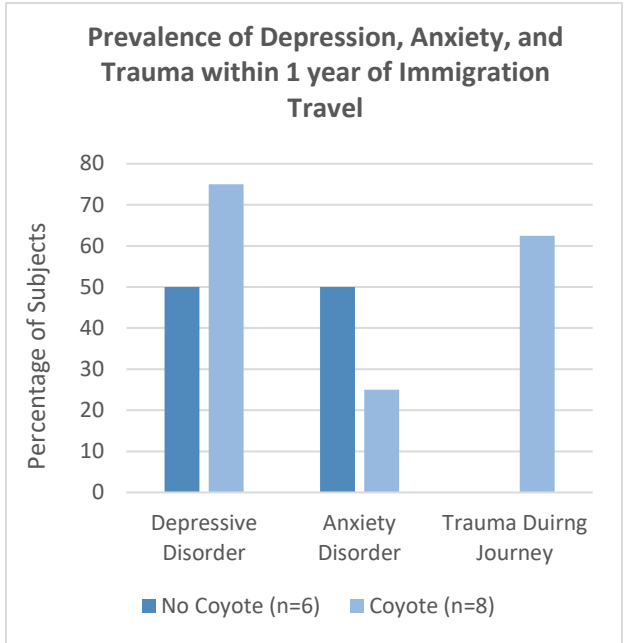


Figure 2 – Depression, Anxiety, and Trauma Graphed According to Mode of Travel

Excerpts from trauma positive vignettes are written in tables below for further context into the stressors of the journey uncovered in this study.

Vignette 1:

"I came walking through the desert with my two month old baby. I was very scared. We had to walk all night. I was carrying my baby plus the water and the food. You have to be careful not to use all the water because if you use all the water you can be in trouble later... The coyote gives you orders and you have to obey. Even if you are tired, you have to keep walking or they will leave you behind. I saw an old lady left behind by another coyote because she could not walk. The whole time, you have a lot of emotions. You are scared for what you are living, scared for what could happen to you, risking your life, and you feel hopeless because you depend on the coyotes. I kept telling myself this is not worth it."

Vignette 2: "It all happened so fast. My husband used to work as a truck driver until some people in Juarez wanted him to transport drugs to the states. When he said no, they targeted our family. We had to leave immediately, leave everything behind. As we left, several trucks followed us and started to shoot. My husband took us to my in-laws until he found a coyote. He crossed the border first and then sent for us. The hardest thing was leaving my family so suddenly. We walked in the desert and took the train. Along the way, I remember seeing a car with people inside it, set on fire by another coyote because they could not pay. There is nothing that you can do about it. You feel really bad about it and at the same time feel lucky to be with a decent coyote."

Vignette 3: "In this trip something happened to me that marked my life forever. Staying at the coyote's house until they said we could cross the border... I saw many things in that house... I heard crying behind a door...and found a 15 year old boy, sitting in bed, with a red eye. I found towels with blood and stools, then I understood that the coyote raped the boy. I felt awful but could not do anything. After that, we started walking together in the desert. It was hard walking between thorns, I got hurt by the cactus and my hands swelled."

Vignette 4: In the desert the coyote raped me. I could not say anything because he threatened to leave me in the desert. During the trip, he kept taking me alone to rape me. I was young and I did not know what to do. After getting to the states, I discovered that I was pregnant from the coyote. I was so depressed that I tried to end my life, but with no success. I wanted to end the pregnancy, but then I felt very guilty and did not do it. My girl is a good girl, very cute. She does not have the coyote's last name, and she does not know who her father is.

Discussion

Findings strongly support primary hypothesis that coyote travel is positively associated with significant trauma exposure, and reject the null hypotheses that the type of immigration journey has no significant correlation with trauma exposure.

Given the extensive trauma exposure of the coyote trips, the second hypothesis of this study followed that women who undergo a traumatic immigration trip were more likely to have a diagnosis of an anxiety or depressive disorder since migration. In our sample, this hypothesis was not supported. Although trauma exposure was higher in the coyote travel group, depression and anxiety disorders had a high overall one year prevalence in the overall cohort, with no significant distinctions linked to trip trauma exposure or mode of travel. There are several potential explanations for this. The high depression and anxiety prevalence in community controls who initially reported no psychiatric history complicated the findings because the control sample was skewed towards a general higher prevalence of these mood disorders than anticipated. It is also likely there are many other migration stressors and unique traumas that occurred in a timespan outside of the study's frame of focus that contributed to the development of these disorders within one year of coming to the US. Long term varied influences such as acculturation pressure, economic stressors, expectations of a better life in the U.S. frequently unmet, separation from nuclear family left behind, threats of deportation if discovered, etc., could be alternative predictive risks for development of depression and anxiety disorders that were not accounted for. Additionally, varying levels of resilience among subjects may be important buffers against psychopathology in spite of trauma, and this variable was not accounted for in the study.

Considering the additional variables found to be significantly elevated in the coyote group, such as, sleep disturbance, goal frustration, and intrusive behavior by others, the study indicates a likely inference that women traveling with a coyote experience higher risk factors for mental health disorders.

This initial, limited sample pilot suggests that incidence of depression among Latina immigrant undocumented women may be greater than reported in the literature, and that they may be less likely to obtain care. Latino immigrants are known to access behavioral health services at low rates, especially surrounding time of migration. Studying migration in European refugees, Falgas found that women who migrated more recently had an increased likelihood to delay seeking mental healthcare.^{xx} New systemic barriers such as lack of health insurance, low English proficiency, lack of transportation or child care, and inability to leave work for appointments contributed to this lower service utilization. In addition, female immigrants reported greater barriers to mental healthcare than male counterparts, such as "...wanting to handle the problem on one's own, thinking that treatment would not work, and being unsure of where to go."^{xxi} One may imagine that similar barriers present to female Latina immigrants in the United States.

Per Chapman, there is a dose-dependent relationship between an individual's ACE score and their probability of lifetime and recent depressive disorders.^{xxii} In our study, though there was no significant statistical difference between ACE scores in comparative cohorts, overall the sample demonstrated a high prevalence of adverse childhood experiences. 80% surveyed reported at least one adverse childhood experience, 58% of them reported 3 or more adverse childhood experiences. Given that greater than 40% of subjects met criteria for a depressive disorder, the high prevalence of both ACE scores and depression disorders suggests a possible correlation that is difficult to establish statistically secondary to a limited sample size.

There are several limitations of this pilot study. First, the number of subjects is small compromising power to detect statistical difference. The Life Events Difficulties Schedule (LEDS) is designed to look at individual events, preferably occurring in singular, discrete time periods; it is not primarily designed to focus on cumulative effects of an overall journey. This is the first use in this population in published studies, many of whom are naive to behavioral health and are unfamiliar with the style of the structured questions in the LEDS assessments. As Bhugra 2004 stated, "many mental health measures have been developed for American and European groups but are frequently used for minorities without any adaptation, leading to category

fallacy".^{xxiii} Although the LEDS was developed in Britain and has been translated into Spanish in
' knowledge to utilize the LEDS on
immigrant Latino populations, the majority of whom have low literacy and needed further
explanations of many of the LEDS categories.

Overall, these results suggest multiple high-risk exposures and challenges during immigration
travel with coyotes. Findings suggest a difficult adjustment period post immigration journey
that warrants a high degree of clinical suspicion and screening for depression and anxiety in
newly immigrated patients. Future studies should incorporate larger, longer term, broader
origin immigration studies to include many of the variables not assessed in this pilot effort, such
as traumas outside of the time scope of this study, family dynamics, economic stressors, etc.
This may add additional insight to the factors that facilitate expression, diagnosis, and
treatment of migration related psychopathology.

REFERENCES

- ⁱ Grant, B., Stinson F., Hasin, D., Dawson D., Chou S., Anderson K., (2004). Immigration and Lifetime Prevalence of DSM-IV Psychiatric Disorders among Mexican Americans and non-Hispanic Whites in the United States. *Archives of General Psychiatry*, 61, 1226-1233
- ⁱⁱ Ornelas, I. J., & Perreira, K. M. (2011). *Social Science & Medicine*, 73(8), 1169-1177.
- ⁱⁱⁱ Casillas, A., Leng, M., Liu, K., Hernandez, A., Shrager, S., & Kanaya, A. (2012). A Long Way from Home: Comparing Mental Health Measures between Foreign and U.S.-born Latinos in the Multi-Ethnic Study of Atherosclerosis (MESA). *Journal of Health Care for the Poor and Underserved*, 1719-1732.
- ^{iv} Vega WA, Kolody B, Aguilar-Gaxiola S, Alderete E, Catalano R, Caraveo-Anduaga J.(1998). Lifetime Prevalence of DSM-III-R Psychiatric Disorders among Urban and Rural Mexican Americans in California. *Archives of General Psychiatry*. 55(9):771-778.
- ^v Markides, Kyriakos & Eschbach, Karl. (2005). Aging, Migration, and Mortality: Current Status of Research on the Hispanic Paradox. *The journals of gerontology. Series B, Psychological sciences and social sciences*. 60 Spec No 2. 68-75. 10.1093/geronb/60.Special_Issue_2.S68.
- ^{vi} Burnham, M., Hough, R., Karno M., et al (1987). Acculturation and Lifetime Prevalence of Psychiatric Disorders among Mexican-Americans in Los Angeles. *Journal of Health and Social Behavior*. 28:89–102
- ^{vii} Vega WA, et al. (1998). Ibid
- ^{viii} Ortega, A. N., Rosenheck, R., Alegrea, M., & Desai, R. A. (2000). Acculturation and the Lifetime Risk of Psychiatric and Substance Use Disorders among Hispanics. *The Journal of Nervous and Mental Disease*, 188(11), 728-735.

^{ix} Grant, B, et al. Ibid

^x Hovey, J., Magana. C., (2000). Acculturative stress, anxiety, and depression among Mexican immigrant farmworkers in the Midwest United States. *Journal of Immigrant Health*, 2 (3), 119-131

^{xi} Sullivan, M. M., & Rehm, R. (2005). Mental health of undocumented Mexican immigrants. *Advances in Nursing Science*, 28, 240-251.

^{xii} Ornelas, I. J., & Perreira, K. M. (2011). The role of migration in the development of depressive symptoms among Latino immigrant parents in the USA. *Social Science & Medicine*, 73(8), 1169-1177.

^{xiii} Aguilera, A., Lopez, S. (2008). Community determinants of Latinos' use of mental health services. *Psychiatric Services*. Vol. 58 (4), pp. 385-394.

^{xiv} Diagnostic and statistical manual of mental disorders: DSM-5. (2013). Washington, DC: American Psychiatric Publishing.

^{xv} Hacker K, Anies M, Folb BL, Zallman L. Barriers to health care for undocumented immigrants: a literature review. *Risk Management and Healthcare Policy*. 2015; 8:175-183. doi:10.2147/RMHP.S70173.

^{xvi} First, M. B., Williams, J. B., Karg, R. S., & Spitzer, R. L. (2016). SCID-5-CV: structured clinical interview for DSM-5 disorders. Arlington, VA: American Psychiatric Association.

^{xvii} Chapman, D. P., Whitfield, C. L., Felitti, V. J., Dube, S. R., Edwards, V. J., & Anda, R. F., (2004). Adverse childhood experiences and the risk of depressive disorders in adulthood. *Journal of Affective Disorders*, 82(2), 217-225.

^{xviii} Monroe, S. M., & Yoder, A. S. (2015). Measurement of Stressful Life Events. The Encyclopedia of Clinical Psychology, 1-6. doi:10.1002/9781118625392.wbecp368

^{xix} Structured Clinical Interview for the DSM-IV Axis I Disorders (SCID PTSD Module) First, Spitzer, Gibbon, & Williams, 1996

^{xx} Mental health, migration stressors and suicidal ideation among Latino immigrants in Spain and the United States. 2016. Fortuna, et al. European Psychiatry.

^{xxi} Ibid

^{xxii} Chapman, Ibid

^{xxiii} Bhugra, D. (2004). Migration, distress and cultural identity. British Medical Bulletin, 69(1),129-141.

ADDITIONAL REFERENCES

Aguilera, A., Lopez, S. (2008). Community determinants of Latinos' use of mental health services. Psychiatric Services. Vol. 58 (4), pp. 385-394.

Burnham, M., Hough, R., Karno M., et al (1987). Acculturation and Lifetime Prevalence of Psychiatric Disorders among Mexican-Americans in Los Angeles. *Journal of Health and Social Behavior*. 28:89–102

Casillas, A., Leng, M., Liu, K., Hernandez, A., Shrager, S., & Kanaya, A. (2012). A Long Way from Home: Comparing Mental Health Measures between Foreign and U.S.-born Latinos in the Multi-Ethnic Study of Atherosclerosis (MESA). *Journal of Health Care for the Poor and Underserved*, 1719-1732.

Dinesh B., (2004). Migration, distress and cultural identity. *British Medical Bulletin*, 69 (1): 129-141.

Grant, B., Stinson F., Hasin, D., Dawson D., Chou S., Anderson K., (2004). Immigration and Lifetime Prevalence of DSM-IV Psychiatric Disorders among Mexican Americans and non-Hispanic Whites in the United States. *Archives of General Psychiatry*, 61, 1226-1233

Hovey, J., Magana. C., (2000). Acculturative stress, anxiety, and depression among Mexican immigrant farmworkers in the Midwest United States. *Journal of Immigrant Health*, 2 (3), 119-131

Kahn-Greene, E. T., Killgore, D. B., Kamimori, G. H., Balkin, T. J., & Killgore, W. D., (2007). The effects of sleep deprivation on symptoms of psychopathology in healthy adults. *Sleep Medicine*, 8(3), 215-221.

Ortega, A. N., Rosenheck, R., Alegrea, M., & Desai, R. A. (2000). Acculturation and the Lifetime Risk of Psychiatric and Substance Use Disorders among Hispanics. *The Journal of Nervous and Mental Disease*, 188(11), 728-735.

Shekunov, J. (2016). Immigration and Risk of Psychiatric Disorders: A Review of Existing Literature. *American Journal of Psychiatry Residents Journal*, 11(2), 3-5.

Vega WA, Kolody B, Aguilar-Gaxiola S, Alderete E, Catalano fR, Caraveo-Anduaga J. (1998). Lifetime Prevalence of DSM-III-R Psychiatric Disorders among Urban and Rural Mexican Americans in California. *Archives of General Psychiatry*. 55(9):771-778.

Ornelas, I. J., & Perreira, K. M. (2011). The role of migration in the development of depressive symptoms among Latino immigrant parents in the USA. *Social Science & Medicine*, 73(8), 1169-1177.

Sullivan, M. M., & Rehm, R. (2005). Mental health of undocumented Mexican immigrants. *Advances in Nursing Science, 28*, 240-251.

Yoo, S., Gujar, N., Hu, P., Jolesz, F. A., & Walker, M. P. (2007). The human emotional brain without sleep — a prefrontal amygdala disconnect. *Current Biology, 17*(20).

Zajenkowska, A., Jasielska, D., & Melonowska, J. (2017). Stress and Sensitivity to Frustration Predicting Depression among Young Adults in Poland and Korea - Psychological and Philosophical Explanations. *Current Psychology*.