Examining the Impact of Sociocultural Influences, Psychosocial Stressors, and Cognitive Vulnerabilities on Development of Depressive Symptoms in Hispanic Adolescents: Grant Final Report

Summary of Project Aims

The purpose of this study was to examine individual- and contextual- level factors associated with the development of depressive symptoms in Hispanic adolescents in order to identify salient risk factors to target in the construction of culturally relevant prevention and treatment interventions. The specific aims of this research were to:

Aim 1. Describe the types of psychosocial stressors experienced by Hispanic adolescents.

Aim 2. Examine dysfunctional attitudes, negative inferential style, and ruminative response style (i.e., cognitive vulnerabilities) in Hispanic adolescents.

Aim 3. Explore relationships between and among psychosocial stressors, cognitive vulnerabilities and depressive symptoms in Hispanic adolescents.

Aim 4. Explore relationships among ethnic identity, acculturation, familism, family functioning, and depressive symptoms in Hispanic adolescents.

Theoretical/conceptual Framework

This project was guided by two primary theoretical frameworks: 1) Cognitive vulnerability stress theories of depression development (Abramson, Metalsky, & Alloy, 1989; Beck, 1987; Nolen-Hoeksema, Wisco, & Lyubomirsky, 2008) and 2) the Ecological Model of Hispanic Female Adolescent Suicide (Zayas, Lester, Cabassa, & Fortuna, 2005). Cognitive vulnerability stress theories have guided numerous investigations of depressive symptom development with adolescent populations (Abela
& Hankin, 2011; Lakdawalla, Hankin, & Mermelstein, 2007); however, it is unknown if Hispanic adolescents reporting elevated depressive symptoms activated cognitive vulnerabilities in response to stressors or if certain sociocultural factors contributed to elevated symptom count. Cognitive vulnerability-stress theories hypothesize that stressful events lead to the development of depressive symptoms if individuals interpret those stressors through cognitive vulnerabilities. Three cognitive vulnerabilities have been implicated as contributing to the development of depressive symptoms in adolescents, 1) dysfunctional attitudes, 2) negative inferential style, and 3) ruminative response style.

Zayas and colleagues (2005) conceptual model for studying Hispanic girls’ suicide attempts guided the selection and evaluation of contextual factors that may affect the development of depressive symptoms in Hispanic adolescents for several reasons: 1) elevated depressive symptoms and suicide attempts are closely linked, with depression being a primary risk factor for suicide, 2) the model was developed specifically to guide research on the influence of Hispanic families’ sociocultural contexts on adolescent emotional vulnerability and impaired psychosocial functioning (e.g., depressive symptoms), 3) insights gained from this study may also inform culturally specific suicide prevention programs.

Despite Hispanics being the largest ethnic minority in the US, relatively little is known about how certain cultural and contextual factors influence the development of depressive symptoms during adolescence. School-based depression prevention efforts have demonstrated positive outcomes when adaptations are undertaken with a specific cultural context in mind (Alegria, Vallas, & Pumariega, 2010). When studying a
phenomenon within a cultural context, Zayas and colleagues (2005) recommend using clearly defined variables as opposed to vague concepts. The three concepts within the family sociocultural environment that guided this study were culture and cultural traditions, adolescent development, and family functioning.

Methods, Procedures, and Sampling

Research Design. Quantitative and qualitative methods were used in this descriptive, cross-sectional study. Standardized measures were used to collect quantitative data. Qualitative data was gathered through focus group discussions which allowed participants to share their thoughts regarding the validity of study findings and will provide insight into culturally relevant components to include in a depression prevention/treatment intervention.

Subjects and setting: Hispanic adolescents between the ages of 12 years – 18 years and 11 months were recruited through the Children’s Wellness Center (CWC). The CWC is a school-based health clinic created in partnership between the Del Valle Independent School District (DVISD) and The University of Texas at Austin School of Nursing. The CWC is the only provider of pediatric health care services in the Del Valle area. The children and families served by the clinic are predominately Hispanic, low-income, and medically underserved. The CWC provides excellence in the delivery of holistic health care; promotes the development and physical well-being of children; provides a clinical setting for the practice and demonstration of ideal nursing practices to enhance the body of nursing knowledge for undergraduate and graduate student nurses; and facilitates nursing research activities.
Minimum sample size (N=123) was determined based on power analysis with an effect size of 0.3, a power of .80, and an alpha level of .05. An effect size of 0.3 represents ~9% shared variability and is accepted as a minimal meaningful standard for psychosocial research.

Inclusion/Exclusion criteria: To be considered eligible for the proposed study, individuals were determined to meet the following inclusion/exclusion criteria. Participants were 1) between 12 years – 18 years and 11 months; 2) able to speak and read in English or Spanish; 3) provide signed parental informed consent; and 4) provide written assent.

Subject Recruitment: Potential participants were given a flyer explaining the study with their clinic paperwork when they arrive for a clinic visit at the Children’s Wellness Center (CWC). If the adolescent and their parent/guardian were interested in learning more about the study they provided their preferred contact method and preferred language (i.e., English or Spanish) on an information card. Trained study staff contacted each potential participant to explain the proposed study in detail. If the adolescent and their parent/guardian agreed to participate in the study, study staff scheduled a time to meet the adolescent and their parent/guardian either in their home or in a private room at the CWC to obtain parental informed consent, adolescent assent, and collect quantitative data. As a part of the informed consent and assent procedures, potential participants were asked to indicate their willingness to be contacted to participate in a focus group where they would be asked their opinion regarding the validity of quantitative results and offer suggestions of potential intervention components. Study staff contacted participants who indicated willingness to participate
in focus groups after quantitative data collection and analysis were completed. Focus group sessions were held in a private room at the CWC.

Summary of findings:

Sample: The final sample (N=123) consisted of 40% male and 60% female with an age range of 12-18 (Median = 14, Middle 50%, 13 to 16). The majority of participant’s reported Hispanic/Latino heritage (N=101, 82%). The majority of participants’ parents were married (N=84, 68%) and number of members in the household ranged from three to nine (Median = 6, Middle 50%, 5 to 7). Almost 70% of parents/guardians designated as head of household reported an education level from high school to less than 7th grade.

Quantitative Findings. See Table 1 (attached as additional document) for descriptive statistics of key study variables. Bivariate associations were evaluated with point-biserial or Pearson correlation as appropriate. Only one gender difference was detected with females reporting higher ruminative response styles than males (p=.49). Higher depressive symptoms were statistically significantly associated with more stressful life events (r=.571, p < .001), higher levels of perceived discrimination (r=.268, p < .004), higher family conflict (r=.376, p < .001), less ethnic identity (r= -.208, p= .024), lower levels of familism (r=.277, p =.002), and lower family cohesion (r=-.273, p =.003). Higher levels of depressive symptoms were also associated with more negative inferential styles (r=.461, p < .001) and more ruminative response styles (r=.776, p < .001).

Hierarchical linear regression analysis was used to examine the unique contribution of each independent variable to depressive symptoms. At step 1 age and
gender accounted for only 0.4% of the variability in depressive symptoms and the multivariate association was not statistically significant (Multiple R = 0.062, \( p = .832 \), Adjusted \( R^2 = -.017 \)). In the second step of the analysis, stressful life events, perceived discrimination, family conflict, and family cohesion were added to the model. With the inclusion of these various stressors, there was a statistically significant increase in the ability to explain depressive symptoms that went from 0.4% to a total of 42%. The resulting multiple correlation was now statistically significant (Multiple R = .647, \( p < .001 \), Adjusted \( R^2 = .381 \)). Within this model, stressful life events (\( \beta = .47, p < .001 \)), perceived discrimination (\( \beta = .195, p < .021 \)), and family conflict (\( \beta = .288, p = .004 \)) contributed uniquely to depressive symptoms.

Finally, the last step of the hierarchical analyses included the addition of the set of sociocultural and cognitive vulnerability variables. This resulted in another statistically significant increase (~30%) in the ability to explain the variability in depressive symptoms (from the 42% shared variability to the previous step to a final shared variability of 72%). The resultant overall multiple correlation with depressive symptoms was .846 and was statistically significant (\( p < .001 \)). Given that the adjusted \( R^2 \) was .683 (or ~68% shared variance), it could be expected that this finding would not change dramatically upon replication. After controlling for all study variables, rumination (\( \beta = .667, p < .001 \)), family conflict (\( \beta = .210, p = .004 \)), familism (\( \beta = .131, p = .046 \)), and ethnic identity (\( \beta = .140, p = .028 \)) were all unique contributors to depressive symptoms.

Qualitative Findings: A total of 14 youth participated in three separate focus groups. While transcripts have not been fully coded and analyzed for recurrent themes, preliminary review suggest the adolescents generally agreed with the quantitative
results. Family and school/academic stressors were most commonly reported by focus group participants; mirroring quantitative findings. Participants also agreed with the relationships between depressive symptoms (referred to as ‘poor mood’ during the focus groups and on participant handout) and the other independent variables.

When discussing how adolescents coped with levels of increased stress, listening to music, drawing, playing video games, talking to a friend, and exercising, were all common activities participants reported. All adolescent participants reported frequent use of cell phones and the Internet for various forms of communication and entertainment including frequent use of YouTube, texting, and mobile games. Participants also verbalized interest in stress reduction interventions that were delivered via an online or mobile electronic format.

Recommendations:
Consistent with findings with non-Hispanic youth, study results provide strong support for the role of rumination in the development of depressive symptoms when Hispanic adolescents experience stressful life events. The additional contributions of cultural and contextual variables such as family conflict and ethnic identity point to additional salient factors to target in the construction of culturally relevant depression prevention and treatment interventions for Hispanic youth. Indeed, the unique contribution of the individual-level variable of rumination as well as the contextual-level variables of conflict within the family and ethnic identity suggest a comprehensive approach to depression prevention in youth with components that involve the adolescent as well as the family unit. The next phase of this research will involve
development and pilot testing of a comprehensive intervention for Latino adolescents expressing elevated levels of distress.

**Testimonial:** This research project and these very important findings would not have been possible without the support of Sigma Theta Tau International Honor Society of Nursing. I am a new assistant professor at the University of Texas at Austin School of Nursing, and this grant was the first funding I received after arriving at the University. Obtaining this funding not only forwarded my program of research and our knowledge in the area of Latino adolescent psychological distress, but also began what I expect to be a consistent record of external funding to support this important work. Thank you so very much for your confidence in the value of my research.