

Gender differences in depressive symptoms among Mexican adolescents

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Abstract: Existing research on gender differences in depressive symptoms among Mexican adolescents is limited to studies conducted in Mexico City. The purpose of this study was to continue the investigation of gender and depression among male and female adolescents living in Mexico. The results of the scores of two groups of adolescents that participated in the study indicated no significant gender differences on depression as measured by the Spanish version of the *Center for Epidemiological Studies Depression Scale* (CES-D). These findings contradicted all but one previous study of gender differences in adolescent depression -research which studied adolescents living in "developed" versus "developing" countries. Several alternative explanations, including how the effect of living in a rapidly developing country, such as Mexico, might be impacting gender and depression in Mexican adolescents, were explored. In addition, stress, acculturation, sex-typed personality characteristics, and suicidal ideation were discussed. Additional research into the relationship between gender and depression among adolescents living in Mexico was recommended.

Key words: Depression; adolescents; Mexico.

Título: Diferencias de género en síntomas depresivos entre adolescentes mexicanos.

Resumen: La investigación existente sobre diferencias de género en síntomas depresivos entre adolescentes mexicanos está limitada a estudios realizados en la ciudad de México. El propósito de este estudio fué continuar la investigación sobre género y depresión entre hombres y mujeres adolescentes de otras partes de México. Los resultados de las puntuaciones de los dos grupos de adolescentes que participaron en el estudio indicaron la no existencia de diferencias significativas de género en depresión tal y como fue medida por la versión española del *Center for Epidemiological Studies Depression Scale* (CES-D). Estos hallazgos contradicen algún estudio previo sobre diferencias de género en depresión en adolescentes -investigaciones que estudiaron a adolescentes que vivían en países "desarrollados" versus "en vías de desarrollo". Se exploraron diversas explicaciones alternativas, incluyendo cómo el efecto de vivir en un país que se desarrolla rápidamente, tal como México, puede impactar en las variables de género y depresión en adolescentes mexicanos. Adicionalmente, se discuten variables tales como estrés, aculturación, características de personalidad basadas en el sexo e ideación suicida. Se recomienda investigación adicional acerca de la relación entre género y depresión entre adolescentes que viven en México.

Key words: Depresión; adolescentes; México.

In the United States, considerable data exist to indicate gender differences (in favor of females) in depressive symptoms among adolescents (Brooks-Gunn & Peterson, 1991; Nolen-Hoeksema & Girgus, 1994). A large epidemiological study involving subjects from the United States, Puerto Rico and five other countries (Klerman & Weissman, 1989) indicated increased occurrence of depression in late adolescence or early adulthood. In addition, women were two to three times more likely than men to be depressed.

Past research has indicated higher levels of depression among adolescent females compared to adolescent males, and the explanations

for this difference have been explored in depth (Allgood-Merton, Lewinsohn, & Hops, 1990; Katragadda & Tidwell, 1998; Obeidallah, McHale, & Silbereisen, 1996; Swanson, Linskey, Quintero-Salinas, Pumareiga, & Holzer, III, 1992; Vannatta, 1996). For example, a study of sex-typed characteristics of white, middle-class subjects from the United States (Craighead & Green, 1989) found that sex-typed characteristics played an important role in depression among females. Other studies hypothetically link significant gender differences in depression among adolescents to different ways of coping with stress (Nolen-Hoeksema, 1994), and sexual abuse (Wirtz & Harrell, 1987).

Allgood-Merten *et al.*, (1990) found higher levels of negative body image among females. Their findings suggested that differences in

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scores based on gender seemed to disappear when controlling for psychosocial variables such as self-esteem and body image. In the United States, the majority of existing literature has focused on non-minority subjects. However, a recent study by Katragadda and Tidwell (1998) examined depression among Hispanic adolescents living in the San Joaquin Valley of California. Their findings indicated that gender was a strong predictor of depression, as well as self-esteem and high levels of stress.

Several other large-scale studies have explored depression among ethnic adolescent groups. One study compared depression among Anglo, African, Mexican, and Hispanic American adolescents living in the United States. Hispanic females had the highest percentage (31.2%) of moderate to severe depressive symptoms; in fact, females indicated more depressive symptoms than males in every group studied (Katragadda & Tidwell, 1998).

Related studies of adolescents in Mexico have focused on depression, stress, opposite-sex ideal, drug use, and suicidal ideation. Forteza *et al.*, (1996) presented new information on the psychosocial perspective of gender differences and depression in the southern Mexico City region. The authors found that young adolescent Mexican females in south Mexico City experienced more stress from daily conflicts than their male counterparts, and they had to deal with a greater degree of on-going depression.

In another study, adolescents in Mexico were asked to rank qualities of their opposite-sex ideal (Gibbons, Richter, Wiley, & Stiles, 1996). The subjects living in Mexico reported, as highly held values—intelligence, kindness, and honesty, and these characteristics were defined, neither collectively, nor individually. However, subjects living in the United States reported, as highly held values—being fun, being sexy, and having lots of money, and these characteristics were defined individually.

The two existing studies mentioned earlier on the subject of gender differences in depressive symptoms among Mexican adolescents utilized subjects from Mexico City. Some data

indicated gender differences in depression among adolescents 13 to 15 years old (Forteza *et al.*, 1996) and high school students (14 to 26 years old) regardless of social class (Diaz-Guerrero, 1984). Swanson *et al.*, (1992) found that suicide rates were higher when symptoms of depression existed, and that such distress was higher in adolescents living in the United States (43.07%) compared to adolescents living in Mexico (26.5%). However, the Swanson *et al.*, study supported other similar studies that indicated females were 2:1 more likely to experience depression and suicidal ideation in Mexico. Here, too, however, the total percent was lower in Mexico than for subjects living in the United States (1992). In contrast, Nolen-Hoeksema (1994) discovered a 2:1 (female to male) ratio of depression existed in developed countries, but no significant differences in rates of depression in subjects from developing countries.

Our study focused on gender differences in depressive symptoms among Mexican adolescents in two distinct geographic areas of Mexico—Saltillo, Coahuila, in (northern Mexico), and Ciudad Cuahuitlan Izcalli in el Estado de Mexico, (central Mexico). Prior to this study, research on depression had been conducted only within the boundaries of Mexico City, and was limited to two studies (Diaz-Guerrero, 1984; Forteza, Salgado de Snyder, Andrade, Palos & Tapia, 1996).

Method

Two groups of adolescents volunteered to participate in this study. Group one included 99 high school students (63 males and 36 females) from Saltillo. Their mean age was 17 years (SD = 1.0) and they ranged in age from 15 to 18 years. Scores on the Center for Epidemiological Studies-Depression Scale (CES-D) ranged from 0 to 43. The mean CES-D score for group one was 16 (SD = 8.2).

Group two was composed of 142 high school students (64 males and 78 females) from Ciudad Cuahuitlan Izcalli in el Estado de Mexico. These subjects had a mean age of 17 years

(SD = 1.0) and they ranged in age from 15 to 18 years. One hundred thirty-eight were “not married” and four were “married.” The mean CES-D score for group two was 11 (SD = 10.8.) and ranged from 0 to 48.

The CES-D is a 20 item self-report scale that proposes to measure current levels of depressive symptomatology in the general populations of both Anglo (English speaking) and Mexican/Hispanic (Spanish speaking) adolescents and adults (Reynolds, 1994; Zimmerman & Coryell, 1994). Several articles and reviews have addressed the psychometric properties of the CES-D (Masten, Caldwell-Colbert, Alcalá, & Mijares, 1986, Orme, Reis, & Herz, 1986; Radloff, 1977; Roberts, Andrews, Lewinsohn, & Hops, 1990; Tanaka & Huba, 1987).

In their review of the Spanish CES-D, Masten *et al.*, (1986) reported coefficient alphas of .86 and .80 for two groups of Mexican students. All of the Pearson correlations were significant at $p < .001$. The CES-D (Spanish) demonstrated adequate internal consistency and test-retest reliability, as well as additional research is still congruent validity.

Roberts, Andrews, Lewinsohn, and Hops (1990) found the CES-D to have good internal consistency and test-retest reliability. These authors recommended it as appropriate for use with adolescents. In their comparison of the English language and Spanish language versions of the CES-D, Roberts, Vernon, and Rhoades (1989) reported no systematic variation in test-retest reliability, internal consistency, dimensionality, or the ability to detect depression between Anglo and Mexican subjects. The CES-D had been used to investigate differences in the prevalence of depressive symptoms among adolescents from diverse ethnocultural groups with results indicating that Mexican males and females reported more symptoms of depression than Anglo Americans (Roberts & Sobhan, 1992).

Results and Discussion

Means and standard deviations were calculated for both groups on the CES-D. Males in group

one had a mean score of 17 (SD = 8.2) and females had a mean score of 16 (SD = 8.0). A t-test for independent samples indicated no significant differences ($t(96) = .96$; $p = .34$) between males and females. Males in group two had a mean score of 10 (SD = 9.4) and females had a mean score of 12 (SD = 10.5) which indicated no significant differences, $t(140) = 1.2$; $p = .28$. The lack of significant differences between gender scores on the CES-D was an unexpected outcome.

Although the findings contradicted the existing literature on rates of depression among adolescent females and males living in the United States and the findings from studies in Mexico (Forteza *et al.*, 1996), they appeared to support the findings from a study conducted in developing countries (Nolen-Hoeksema, 1994), in which explored the causal factors in the relationship between gender and depression in adolescents living in Mexico. This research primarily focused on critical areas of life relationships that require coping with stress – subjects’ families, friends, school, parents’ health, and depressive symptoms.

Research on adolescents in Mexico continues to deepen own understanding of the biological, psychological, and social variables that play important roles in the development of adolescents. For example, the role of the female in the culture (given the traditional value system of Mexico). The only study to support our findings was the research of Nolen-Hoeksema (1994) in “developed” and “developing” countries. It was discovered that a 2:1 (female to male) ratio of depression existed in developed countries, but no significant differences in rates of depression existed in subjects from developing countries.

The U.S.A.-Mexico border, from an international view may be a barrier between an superpower and less developed nation” (Swanson *et al.*, 1992). However, organizations such as the World Trade Organization (WTO, 2000) and policies such as the North American Free Trade Agreement (NAFTA, 2000) are rapidly changing Mexico, its people, and their daily lives.

Both of these communities' populations were comparable in size (Ciudad Cuahuitlan Izcalli had a population of 313,200 and Saltillo, Coahuila's population was 420,900; Lahmeyer, 2000). Could it be that differences in depression among adolescents living in Mexico are related, in part, to other extraneous variables, such as the degree of locality development in the subjects' communities? Existing research suggests that "acculturation stress" impacts depression among Hispanics living in the United States (Katragadda & Tidwell, 1998). The same factor may be experienced by adolescents living in Mexico. The Mexican people are experiencing many changes—political, social and economic—as their country enters the new millennium, and these sociocultural conditions influence the levels of depression in adolescents, including the stress associated with "Americanization." A long-term follow-up measured depression in different cultures (Thornicroft & Sartorius, 1993) and found that differences in depression were impacted by study site, rather than by diagnosis. This suggests that the locations where services were provided had more impact on depression than differences between endogenous and psychogenic groups themselves. More research is indicated to identify developmental aspects of the research site communities and their status of locality development. This knowledge may assist future researchers in their attempts to explain the relationship between gender and depression in Mexican adolescents.

One of the most devastating problems associated with adolescent depression is suicide. In the United States, factors associated with suicide for females include violence, home environment, unfair/strict rules, forcible sex, and over the counter drug use (Vannatta, 1995). Hijar, Rascón, Blanco, and López (1996) in their study, demonstrated women living in Mexico showed a slight increase in suicide between the years of 1973 and 1993; however the higher risk group for suicide was among women between 20 and 24 years of age.

Hijar *et al.*, (1996) also explored the relationship between geographic location and gen-

der in relation to suicide, and determined that "there are more social aspects involved rather than individual aspects that need to [be taken] into account in order to know the real problem of suicide" (p. 14). According to Hijar *et al.*, (1996), the States of Tobasco, Campeche, Baja California Sur and Quintana Roo present the higher risk to death by suicide" (p. 14).

In a related study (Swanson *et al.*, 1992), adolescents living near the border of the United States (in Texas and Mexico) were measured on suicidal ideation using the CES-D. Their findings indicated that rates were lower for adolescents in Mexico (11.57%) compared to those living in Texas (23.43%). This study determined that poor home environment, along with stressful events, precipitated depression-related suicidal ideation among adolescents, and supports the premise that the degree of locality development may be a factor in depression, specifically depression-related suicide. The importance of early intervention with adolescents who are suicidal cannot be overstated. In fact, 10-11% of clinically depressed individuals eventually commit suicide (Thornicroft & Sartorius, 1993). In Mexico, women between the ages of 20 and 24 are at higher risk for suicide (Hijar *et al.*, 1996).

According to Richards and Larson (1989), gender will continue to play a larger-than-life role in the everyday experience of sex-role socialization of youth. Gender differences may, in turn, play a stronger role in the depression felt by these adolescents who relocate from Mexico to the United States, especially females. This may also be true for Mexican adolescent immigrants who are now entering the public school system in the United States.

Many practitioners working with adolescents in Mexican school settings have been trained to notice behavioral changes often associated with major depression—poor academic performance, difficulty concentrating, and/or withdrawn behaviors. Implications for practitioners working with adolescents in Mexico include training to acquire a deeper awareness of the link between depressive symptoms and rates of suicide.

Studying indigenous persons in their changing environments is important. Adolescents living in their Mexico are now dealing with increased stress that impacts their personal development—the development of their “developing” country (via NAFTA). Further research

into the relationship between gender and depression in adolescents living in Mexico is required to explore the many intervening variables associated with living in a “developing” country, as well as to prepare practitioners to prevent and work with depressed adolescents.

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