Acculturative Stress, Depression, and Suicidal Ideation Among Central American Immigrants

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No previous studies have examined suicide risk among Central American immigrants. The present study explored the relationship between acculturative stress, depression, and suicidal ideation among Central American immigrants. Also examined were variables that predict depression and suicidal ideation. Elevated levels of acculturative stress were significantly correlated with high levels of depression and suicidal ideation. Family dysfunction, ineffective social support, nonpositive expectations concerning the future, low levels of religiosity, low levels of education and income, and lack of agreement with the decision to immigrate were significantly associated with high levels of depression and suicidal ideation. The overall findings suggest that Central American immigrants who experience elevated levels of acculturative stress may be at risk for experiencing heightened levels of depression and suicidal ideation. The findings highlight the importance of using culturally relevant clinical methods when assessing and treating depressed and potentially suicidal acculturating individuals.

Some authors (e.g., Hovey & King, 1997; Kushner, 1984; Sorenson & Shen, 1996; Stack, 1981a,b; Trovato, 1986) have suggested a positive connection between immigration and suicide. Several factors have been used to explain this relationship. Acculturat-

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ing individuals may experience the severing of ties to family and friends in the country of origin. This may result in feelings of loss and a reduction in effective coping resources. Acculturating individuals may also experience factors associated with the new environment. These include discrimination, language inadequacy, a lack of social and financial resources, stress and frustration associated with unemployment, feelings of not belonging in the host society, and a sense of anxious disorientation in response to the unfamiliar environment. Finally, individuals in the new environment may feel pulled between traditional values, norms, and customs and those of the new society (e.g., parent–child conflict resulting from the child's encountering of the new culture through school, role conflict because of a working mother).

Scant attention has been given to the study of suicidality within immigrant populations. A few studies (e.g., Lester, 1989; Stack, 1981a,b; Trovato, 1986) have found a positive relationship between immigration and

completed suicide. However, these studies focused on immigrants in a general sense. Very limited attention has been given to the study of suicide risk among immigrants of specific ethnic groups. For example, only a handful of studies have looked at suicidal ideation (e.g., Hovey & King, 1996; Hovey, 2000), suicide attempts (e.g., Sorenson & Golding, 1988a,b), and completed suicides (e.g., Smith, Mercy, & Warren, 1985) among Mexican American immigrants. As of this date, there are no published studies of suicidal thoughts or behavior among Central American immigrants.

Premigration Experiences of Acculturating Subgroups

At this point, it is important to draw a distinction between "immigrant" status and "refugee" status. As noted by Berry (1990), the distinction is based on the voluntariness of contact with the new country. Generally, immigrants are voluntarily involved in the acculturation process, whereas refugees may feel pushed from their country of origin and thus have less choice in the decision to migrate. The premigration experiences of refugees may be devastating and may account for a greater number of mental health problems among refugees than among immigrants. Using this distinction in defining migrating groups, Central Americans can be considered refugees. The recent sociopolitical climate (e.g., civil war, government repression, and resulting trauma) in Central American countries such as El Salvador, Guatemala, and Nicaragua may result in elevated levels of distress among individuals in these countries. Greater premigration trauma among Central Americans may therefore account for greater distress after migration, in comparison with immigrants from a country such as Mexico.

Depression and Psychiatric Symptomatology Among Central American Migrants

Because of the complete lack of published information on suicidal thoughts and behavior among Central American immi-

grants, it is difficult to estimate the degree of suicide risk within this group. To begin to capture a sense of the psychiatric picture of Central American immigrants, this review will discuss the handful of studies that have explored the mental health status of Central American immigrants.

Padilla, Cervantes, Maldonado, and Garcia (1988) examined psychosocial stressors and levels of depression and anxiety (as measured by the Symptoms Checklist 90-Revised) (Derogatis, 1978) experienced by recent Central American and Mexican American immigrants. Their research design consisted of a combination of qualitative (interviews) and quantitative methods. The major identified stressors experienced by the Central American immigrants included not knowing English; employment issues such as not having a job; having an undocumented status; stressors associated with leaving the country of origin, such as the loss of family and social support; not knowing anyone to help with children; and adaptation problems such as transportation, (liberal) lifestyle, and discrimination. Central American immigrants reported higher levels of depression and anxiety than Mexican American immigrants.

In a similar study, Salgado de Snyder, Cervantes, and Padilla (1990) examined levels of psychosocial stress and depression among Central American and Mexican American immigrants residing in the Los Angeles area. They found that Central American immigrants reported significantly greater stress and depression scores than Mexican American immigrants.

Aron (1988) and Aron, Corne, Fursland, and Zelwer (1991) highlighted gender-specific traumatic stressors (e.g., sexual assault) and their relationship to posttraumatic stress disorder (PTSD) among women from El Salvador and Guatemala. They noted that the trauma experienced by Central American women is not a single, isolated event. It is a *pervasive terror*, with no beginning, middle, or end. According to these authors, this condition is so extreme, it produces PTSD in individuals who live through it, either directly

or indirectly. Aron found the same level of PTSD symptoms whether or not an individual had encountered physical or psychological trauma. Women were severely affected by having to witness the assault or massacre of other women, or by the anticipatory fear of being the next captive to be tortured.

Cervantes, Salgado de Snyder, and Padilla (1989) examined self-reported symptoms of PTSD in a community sample of Central American and Mexican American migrants. Similar to Aron (1988), they found almost identical levels of PTSD among Central Americans who were directly or indirectly affected by war. Fifty-two percent of Central Americans who migrated as a result of war or political unrest met the DSM-III (American Psychiatric Association, 1980) criteria for PTSD. Forty-nine percent of Central Americans who migrated for other reasons met the criteria for PTSD. As expected, given the probable difference in premigration trauma, Mexican American migrants were found to have significantly lower levels of PTSD (25% met PTSD criteria).

Acculturative Stress

Hovey and King (1997) presented a conceptual framework for studying acculturative stress (stress which directly results from, and has its source in the acculturative process) and its relationship to depression and suicidal ideation. They extended Berry's (Berry, 1990; Berry & Kim, 1988; Williams & Berry, 1991) acculturative stress model to include possible consequences of elevated levels of acculturative stress. The revised framework has two components. First, it suggests that during the acculturative process, elevated levels of acculturative stress may result in significant levels of depression and suicidal ideation. In other words, the framework suggests that individuals who experience heightened levels of acculturative stress may be at risk for the development of depression and suicidal ideation. Second, the model identifies those cultural and psychological factors that may account for high versus low levels of depression and suicidal ide-

ation. These include social support found within the new community; immediate and extended family support networks; socioeconomic status (SES), including work-status changes and specific characteristics of SES such as education and income; premigration variables such as adaptive functioning (self-esteem, coping ability, psychiatric status), knowledge of the new language and culture, and motives for the move (voluntary versus involuntary); cognitive attributes such as attitudes toward acculturation (positive or nonpositive) and expectations toward the future; age at migration; generation in the new community; religiosity; and the nature of the larger society—that is, the degree of tolerance for and acceptance of cultural diversity (multicultural versus assimilationist) within the mainstream society. These variables may serve as predictors of depression and suicidal ideation. Acculturating individuals with relatively high levels of social support may, for example, experience less depression than individuals without the same support.

Hovey and King (1996) explored the relationship among acculturative stress, depressive symptoms, and suicidal ideation in a sample of immigrant and second-generation Latino/a American (87% Mexican American) adolescents. Their research design was guided by the above framework. They found that acculturative stress was positively associated with depression and suicidal ideation, and that acculturative stress, perceived family dysfunction, and nonpositive "expectations for the future" were significant predictors of depression and suicidal ideation. Their overall findings suggest that those acculturating adolescents experiencing high levels of acculturative stress are at risk for experiencing critical levels of depression and suicidal ideation, and that family support and hopefulness toward the future may buffer against levels of distress.

Purposes of Present Study

Hovey and King (1996) stated that further research should concentrate on increasing the generalizability of their findings. For

example, the connection between accultura-
tive stress, depression, and suicidal ideation
should be explored with different age groups,
ethnic groups, and acculturating groups (e.g.,
refugees, native peoples, sojourners). In addi-
tion, other factors known or hypothesized to
increase the risk for depression and suicidal
ideation should be explored. The present
study is a step in the direction to generalize.

The first purpose of the present study
is to determine the relationship among accul-
turative stress, depression, and suicidal ide-
ation in a sample of Central American immi-
grants. It is expected that high levels of
acculturative stress will be positively associ-
ated with elevated levels of depression and
suicidal ideation. The second purpose is to
determine the best predictors of depression
and suicidal ideation. The variables explored
are family functioning, family intactness, ex-
pectations toward the future, social support,
religiosity, education and income (specific in-
dicators of SES), and control and choice in the
decision to migrate (motives for the move).

METHODS

Participants

Participants were 78 immigrants (64
females and 14 males) of Central American
descent from an English Second Language
(ESL) community adult school in Los
Angeles, California. The five ESL classes
that participated in the study were level one
English courses. English proficiency among
the participants was thus extremely limited.
All of the participants were native speakers of
Spanish. The selected school is located in a
predominantly Latino/a community, consist-
ing mostly of individuals of Mexican descent.
The age of the sample ranged from 17 to 75
($M = 38.58$; $SD = 16.44$). Forty-eight percent
(48.1%) of the sample were aged 17–35;
33.8% were aged 36–55; and 18.2% were
aged 56–77.

Twenty-two percent (22.1%) of the
participants were currently married; 42.9%
were never married; 20.8% were separated or
divorced; 6.5% were widowed; and 7.8%
were in a common law marriage or living to-

gether. Eighty percent of the participants
were Catholic; 2.7% were Protestant; 1.3%
were Jewish; 9.3% reported "other" religious
affiliations; and 6.7% reported no religious
affiliation.

Seventy-one percent (71.1%) of the
participants originated from El Salvador,
17.1% from Guatemala, 9.2% from Hondu-
ras, and 2.6% from Nicaragua. The number
of years living in the United States ranged
from 1 to 32 years ($M = 8.43$; $SD = 8.69$).
Forty-eight percent (47.5%) of the sample
have lived in the United States for 1 to 4
years; 24.6% have lived in the United States
for 5 to 10 years; and 27.9% have lived in the
United States for 11 years or longer. Accul-
turation level, measured according to Marín,
Sabogal, VanOss Marín, Otero-Sabogal, and
Perez-Stable (1987), ranged from 5 to 12 ($M
= 7.12$; $SD = 2.0$). The possible range, indi-
cating low to high acculturation, was 5–25.
The overall sample thus revealed relatively
low levels of acculturation.

Measures

A self-administered battery of ques-
tionnaires was used. A background informa-
tion form assessed age, gender, ethnicity,
marital status, religiosity, age at migration,
control and choice in the decision to migrate,
family intactness (country in which most of
family lives), occupation, education, and fam-
ily income.

Religion Variables. To assess percep-
tion of religiosity, influence of religion, and
church attendance, the background informa-
tion form asked the following three ques-
tions, which were designed specifically for
this study. "How religious are you?" (Possi-
ble responses consisted of the following: 1 =
not at all religious; 2 = slightly religious; 3 =
somewhat religious; 4 = very religious.)
"How much influence does religion have
upon your life?" (Possible responses con-
sisted of the following: 1 = not at all influen-
tial; 2 = slightly influential; 3 = somewhat in-
fluential; 4 = very influential.) "How often do
you attend church?" (Possible responses con-
sisted of the following: 1 = never; 2 = once or
twice a year; 3 = once every 2 or 3 months; 4

= once a month; 5 = two or three times a month; 6 = once a week or more.)

Control and Choice in the Decision to Migrate. To assess perception of control and choice in the decision to migrate, the background information form asked the following two questions, which were developed specifically for this study. "If you were born in another country, did you contribute to the decision to move to the United States?" (Possible responses consisted of the following: 1 = not at all; 2 = some [a little bit]; 3 = moderate [pretty much]; 4 = very much [a great deal]). "If you were born in another country, did you agree with the decision to move to the United States?" (Possible responses consisted of the following: 1 = strongly disagreed; 2 = disagreed; 3 = agreed; 4 = strongly agreed.)

Short Acculturation Scale for Hispanics. Level of acculturation was measured with the Short Acculturation Scale for Hispanics (Marín et al., 1987). This scale measures acculturation by asking about language use. The scale has been found to have adequate internal consistency reliability and construct validity for Central Americans (Marín et al., 1987).

Family Assessment Device. The General Functioning subscale of the Family Assessment Device (FAD) (Epstein, Baldwin, & Bishop, 1983) was used to measure family functioning. The FAD is a self-report scale consisting of statements that participants endorse in terms of how well each statement describes their family. Items are scored on a 4-point Likert scale (from "strongly agree" to "strongly disagree"), with scaled scores ranging from 1.00 (healthy) to 4.00 (unhealthy). The FAD has been found (Epstein et al., 1983; Halvorsen, 1991) to have adequate internal consistency reliability (.72–.92), test–retest reliability (.66–.76), and construct validity. The Cronbach alpha coefficient (for the General Functioning subscale) for the present study was .71.

The Personal Resource Questionnaire. The Personal Resource Questionnaire—Part 2 (PRQ85) (Weinert, 1987) was used to measure social support. Part 2 of the PRQ85 measures the perceived effectiveness of social support and consists of 25 items rated on a 7-point Likert scale (from "strongly disagree" to "strongly agree"). Possible scores range from 25 to 175. Higher scores indicate higher levels of perceived social support. Examples of items include the following: "I belong to a group in which I feel important"; "I have people to share social events and fun activities with"; "I can't count on my friends to help me with problems"; and "Among my group of friends, we do favors for each other." The PRQ85–Part 2 has been found (Weinert, 1987; Weinert & Brandt, 1987; Weinert & Tilden, 1990) to have adequate internal consistency reliability (.87–.93), test–retest reliability (.72), and construct validity. The Cronbach alpha coefficient for the present study was .85.

SAFE Scale. Acculturative stress was measured with the SAFE scale (Mena, Padilla, & Maldonado, 1987). This scale consists of 24 items that measure acculturative stress in social, attitudinal, familial, and environmental contexts, in addition to perceived discrimination (majority group stereotypes) toward migrant populations. Participants rate each item that applies to them on a 5-point Likert scale (from "not stressful" to "extremely stressful"). The possible scores range from 0 to 120. Examples of items include the following: "People think I am unsociable when in fact I have trouble communicating in English"; "It bothers me that family members I am close to do not understand my new values"; and "Because of my ethnic background, I feel that others exclude me from participating in their activities." The SAFE scale has been found to have adequate internal consistency reliability (.89) (Mena et al., 1987) and construct validity (Padilla, Alvarez, & Lindholm, 1986). The Cronbach alpha coefficient for the present study was .90.

Center for Epidemiologic Studies Depression Scale. The Center for Epidemiologic Studies Depression Scale (CES-D) (Radloff, 1977) was used to measure depressive symptomatology. The CES-D assesses level of depressive symptoms within the past week and consists of 20 items rated on a 4-point scale (from "rarely or none of the time" to "most or all of the time"). Possible scores range

from 0 to 60. The accepted caseness is a score of 16 or over, which represents the upper 20% of scores. This threshold was established through validity studies of patient and community populations. Some researchers (e.g., Vega, Kolody, Valle, & Hough, 1986), however, have more conservatively estimated caseness as a score of 24 or greater. The CES-D has been used extensively with different ethnic groups, including Central Americans (Cervantes et al., 1989). Several studies (Golding & Aneshensel, 1989; Golding, Aneshensel, & Hough, 1991) have found that the scale has adequate internal consistency reliability (.87–.90) and construct validity. The Cronbach alpha coefficient for the present study was .81.

Adult Suicidal Ideation Questionnaire. The Adult Suicidal Ideation Questionnaire (ASIQ) (Reynolds, 1991a) was used to measure suicidal ideation. The ASIQ is a 25-item self-report measure that assesses the nature and frequency of suicidal ideation within the past month. Participants rate each item on a 7-point scale, which assesses the frequency of occurrence of a specific suicidal behavior or thought within the past month. The scale ranges from 0 ("I never had this thought") to 6 ("almost every day"). Possible overall scores range from 0 to 150. A critical level is reached with a score of 31 or greater, thus indicating potentially significant psychopathology and suicide risk. The ASIQ has been found (Reynolds, 1991a; 1991b) to have adequate internal consistency reliability (.96–.97), test-retest reliability (.86–.95), and construct validity. The Cronbach alpha coefficient for the present study was .97.

Expectations Toward the Future. To measure individual attitudes and expectancies concerning the future, an open-ended question was asked: "What do you think the future will be like for you and your family?" Each response was coded as positive (hopeful) or nonpositive (nonhopeful) by three research assistants blind to the study's hypotheses and other questionnaire responses. The interrater reliability, calculated as a percentage agreement, was 96.45%. Disagreements were resolved by consensus.

Translation. The background information form and open-ended questions were developed in English and, along with the other measures, were translated into Spanish through the double-translation procedure (Brislin, Lonner, & Thorndike, 1973) with the help of two translators.

Procedure

Participants were administered the self-report questionnaires in a classroom setting. The questionnaires were in Spanish and required approximately 45 minutes to complete. Individuals who completed the questionnaire were given $5.00 for their participation.

Data Analyses

The data analyses are presented in three steps. Descriptive statistics are first presented. Then, bivariate associations among predictor and dependent variables are presented. Specifically, correlation coefficients were used to assess the relationships among the continuous predictor variables (acculturative stress, perception of religiosity, influence of religion, church attendance, contribution to the decision to migrate, agreement with the decision to migrate, education, income, family functioning, social support) and depression and suicidal ideation. Analyses of variance (ANOVAs) were used to assess the effects of the categorical predictor variables (expectations for the future, family intactness) on depression and suicidal ideation. Finally, a stepwise multiple regression analysis is presented. It was conducted to determine the best predictors of suicidal ideation.

RESULTS

Descriptive Statistics

Church Attendance, Perception of Religiosity, and Influence of Religion. Table 1 shows the frequency distributions for church attendance, perception of religiosity, and influence

TABLE 1

Sample Distributions for Sociodemographic Variables

Variable	Percentage	Cumulative Percentage
Church Attendance		
Never	6.7	6.7
Once or twice a year	9.3	16.0
Once every 2 or 3 months	12.0	28.0
Once a month	5.3	33.3
2 or 3 times a month	17.3	50.7
Once a week or more	49.3	100.0
Self-Perceived Religiosity		
Not at all religious	2.7	2.7
Slightly religious	64.4	67.1
Somewhat religious	26.0	93.2
Very religious	6.8	100.0
Perceived Influence of Religion		
Not at all influential	13.0	13.0
Slightly influential	30.4	43.5
Somewhat influential	26.1	69.6
Very influential	30.4	100.0
Did you contribute to the decision to move?		
Not at all	8.0	8.0
Some (a little bit)	10.7	18.7
Moderate (pretty much)	25.3	44.0
Very much (a great deal)	56.0	100.0
Did you agree with the decision to move?		
Strongly disagreed	5.4	5.4
Disagreed	2.7	8.1
Agreed	35.1	43.2
Strongly agreed	56.8	100.0
Education		
0 to 2 years of school	14.7	14.7
3 to 5 years of school	17.3	32.0
6 to 8 years of school	33.3	65.3
9 to 11 years of school	16.0	81.3
High school graduate	10.7	92.0
Some college	6.7	98.7
Bachelor's degree	1.3	100.0
Graduate Degree	0.0	100.0
Income		
$0. to $4,999.	35.7	35.7
$5,000. to $14,999.	33.9	69.6
$15,000. to $24,999.	21.4	91.1
$25,000. to $34,999.	3.6	94.6
$35,000. to $44,999.	1.8	96.4
$45,000. to $59,999.	1.8	98.2
$60,000 to $80,000.	1.8	100.0
Over $80,000.	0.0	100.0

ence of religion. The mean score for perception of religiosity was 2.37 (SD = 0.66). The mean score for perceived influence of religion was 2.74 (SD = 1.04).

Contribution to the Decision to Migrate, and Agreement With the Decision to Migrate. Table 1 lists the distributions for contribution to the decision to migrate and agreement with the decision to migrate. The mean score for contribution to the decision to migrate was 3.29 (SD = 0.96). The mean score for agreement with the decision to migrate was 3.43 (SD = 0.80).

Education and Income. Table 1 shows the distributions for education and income. Most individuals reported relatively low levels of formal education and income.

Expectations for the Future. Ninety-three percent (93.2%) of the participants were coded as having positive expectations for the future; 6.8% were coded as having nonpositive expectations for the future.

Family Intactness, Family Functioning, and Social Support. Seventy-one percent (71.4%) of the participants reported that most family members live in the country of origin; 28.6% reported that most family members live in the United States. The mean score for the General Functioning subscale of the FAD (family functioning) was 2.31 (SD = 0.35). The mean score for the PRQ85 (social support) was 120.76 (SD = 24.32).

Acculturative Stress, Depression, and Suicidal Ideation. Table 2 lists the means and standard deviations for the SAFE scale (acculturative stress), the CES-D (depression), and the ASIQ (suicidal ideation). Gender had

no significant main effects on acculturative stress, depression, and suicidal ideation.

On the CES-D, 77.8% of the participants reached caseness with a score of 16 or greater (for females, 79.3%; for males, 71.4%). Fifty-three percent (52.8%) of the participants reached the more conservative caseness threshold with a score of 24 or greater (for females, 53.4%; for males, 50.0%). On the ASIQ, 5.8% of the participants scored at the critical level with a score of 31 or greater (for females, 5.5%; for males, 7.7%).

Relationships Between Predictor Variables and Depression

High levels of acculturative stress ($r = .42$, $p < .001$), low levels of education ($r = -.39$, $p < .001$), low levels of income ($r = -.28$, $p < .02$), family dysfunction ($r = .31$, $p < .005$), and ineffective social support ($r = -.31$, $p < .001$) were significantly correlated with high levels of depression.

Church attendance, perceptions of religiosity, perceived influence of religion, contribution to the decision to migrate, and agreement with the decision to migrate were not significantly correlated with depression.

An ANOVA was used to study the effects of expectations for the future on depression. The analysis revealed a significant main effect for expectations for the future ($F(1,67) = 7.41$, $p < .01$). Those participants who revealed nonpositive expectations reported higher depression scores. A second ANOVA revealed no significant main effects for family intactness on depression.

TABLE 2
Participants' Mean Scores and Standard Deviations on Measures of Acculturative Stress, Depression, and Suicidal Ideation

	Acculturative Stress		Depression		Suicidal Ideation	
	Mean	SD	Mean	SD	Mean	SD
All participants (N = 78)	53.23	15.53	24.08	9.32	7.65	19.00
Females (n = 64)	54.39	14.94	24.90	9.36	8.11	20.26
Males (n = 14)	48.57	17.50	20.71	8.70	5.69	12.75

Relationships Between Predictor Variables and Suicidal Ideation

Table 3 shows the Pearson correlations among family functioning, social support, acculturative stress, depression, and suicidal ideation. As shown, high levels of acculturative stress, high levels of depression, and ineffective social support were significantly correlated with high levels of suicidal ideation. Statistical trends indicated that infrequent church attendance ($r = -.17, p < .08$) and low levels of perceived influence of religion ($r = -.17, p < .10$) were related to high levels of suicidal ideation.

Education, income, perceptions of religiosity, contribution to the decision to migrate, agreement with the decision to migrate, and family functioning were not significantly correlated with suicidal ideation.

ANOVAs revealed no significant main effects for expectations for the future and family intactness on suicidal ideation.

Multiple Regression Analysis of Suicidal Ideation

No significant interactions were found among acculturative stress and the other predictor variables in predicting suicidal ideation. Similarly, no significant interactions were found among depression and the other predictor variables in predicting suicidal ideation. Therefore, no interaction terms were included in the following regression analysis.

A stepwise multiple regression analysis was conducted to examine the relative strength of the variables in predicting suicidal ideation. Each of the predictor variables discussed above were entered. The strongest predictors of suicidal ideation included depression ($\beta = .35, t = 2.8, p < .01$), perceptions of religiosity ($\beta = -.36, t = -2.6, p < .01$), and social support ($\beta = -.25, t = -2.0, p < .05$). None of the other variables proved to be significant predictors of suicidal ideation. The overall equation accounted for 60% of the variance in suicidal ideation.

DISCUSSION

Generally stated, the major theme of the present study is that the migration experience may put an individual at risk. As mentioned, no data are available on suicide risk among Central American migrants. Thus the purpose of the present study was to explore depression and suicidal ideation within this group.

The Central American Experience

The acculturative stress model notes the importance of considering how premigration factors may relate to adaptive functioning after migration. Although premigration experiences were not directly measured in the present study, we can begin to understand the Central American experience through the use of other sources.

Although other Central American countries (such as Guatemala and Nicaragua) have experienced histories just as turbulent, the focus here is on El Salvador, given the composition of the present sample. In El Salvador, a country of just over 5.4 million people, continuous government repression has, since 1980, resulted in the disappearance of over 6,000 individuals, and over 75,000 individuals have been killed (Bowen, Carscadden, Beighle, & Fleming, 1992). Suárez-Orozco

TABLE 3
Correlations Among Family Functioning, Social Support, Acculturative Stress, Depression, and Suicidal Ideation among Central American Immigrants

	Depression	Suicidal Ideation
Family Functioning	.31**	−.08
Social Support	−.28**	−.25**
Acculturative Stress	.42***	.23**
Depression	—	.20*

Note. $N = 78$. Pearson correlation coefficients. Significance levels are based on one-tailed tests.

$*p < .05; **p < .01; ***p < .001.$

(1990) estimated that, since 1979, as many as one million Salvadorans have fled the country to escape government repression. In addition to those who have left the country, Brown (1985) estimated that another 500,000 Salvadorans are internally displaced within the borders of El Salvador.

More so than statistics, the following narrative examples provide a sense of experience within a culture of terror. Suárez-Orozco (1990, pp. 364–365) detailed a first-person account of a situation in which a Salvadoran male adolescent became a target of the recruiting campaigns of both sides of the conflict:

> The guerrillas also looked for me. I remember when they took my best friend, they beat him up. And they asked him about me, where I lived, what I was doing. He would not tell them so they tied him up and mistreated him more. When he finally told me all this, I was terrorized. I was nervous. The guerrillas wanted me to be a leader in one of their groups. I always stayed away from politics. I was also afraid of the death squads. They killed two of my cousins. They killed without any reason! I don't know why they killed them. There is no reason at all. I was 14 years old and saw all this.

In the present sample, a 64-year-old female immigrant recalled her premigration experience. She wrote a few sentences at the bottom of the Adult Suicidal Ideation Questionnaire (ASIQ). According to her statement,

> I feel happy to be alive. I came from a country in war and I survived all the ugliness that went on there. I was held hostage for 12 days . . . and they killed my husband. . . . However, I got out with my two children. Thank you U.S.A.

The findings of Bowen et al. (1992) further illustrate the scope of the violent conflict in El Salvador. Through the use of interviews, Bowen et al. examined PTSD among internally displaced women in El Salvador. They conservatively estimated that 41% of the women reported the range and severity of symptoms required to meet the DSM-III-R (American Psychiatric Association, 1987) diagnostic criteria for PTSD. More telling were the frequencies of trauma experienced by the women. One-hundred percent of the women had witnessed the assault of a friend or community; 94% had their home destroyed; 81% had lived undercover; 61% had witnessed the assault of a family member; 55% had been the victim of an assault; and 42% had experienced the death of a family member. In terms of reported symptoms, 100% of the women had experienced a traumatic event; 100% reported having intrusive thoughts of the traumatic event; and 100% reported having dreamt of the traumatic event.

Depression and Suicidal Ideation

Depression. The present study revealed that 78% of the sample reached caseness with a score of 16 or greater, and that 53% reached the more conservative caseness threshold with a score of 24 or greater. These percentages appear to be extremely high. As noted earlier, given the possible premigration trauma experienced by Central American immigrants, greater distress may be seen among Central American immigrants when compared, for example, with Mexican American immigrants. Hovey's (2000) data on Mexican American immigrants were collected from the same site as the data in the present study. This is relevant for comparison purposes as we can place both data sets in the same community context. In comparing these two groups, Central American immigrants ($M = 24$, $SD = 9$) revealed significantly greater levels of depression than Mexican American immigrants ($M = 19$, $SD = 10$) ($t[179] = 3.01$, $p = .003$). Salgado de Snyder et al. (1990) and Padilla et al. (1988) also found that Central American immigrants reported higher levels of depression than Mexican American immigrants.

It should be noted that the present study, using a self-report methodology, measured depression as a constellation of symp-

toms and did not obtain specific clinical information about the onset, duration, and severity of the depressive symptoms. Nevertheless, although the CES-D is not a diagnostic instrument, it was found (Hough, 1983) to have a concordance of approximately 85% for current major depression using the Diagnostic Interview Schedule (DIS) (Robins, Helzer, Croughan, & Ratcliff, 1981). Thus, although depression was defined somewhat broadly in the present study, the findings do have relevance for clinical work and further research among Central American migrants.

Suicidal Ideation. Unlike depression, there are no previously reported prevalence levels of suicidal ideation among Central American immigrants. Level of suicidal ideation in the present study should therefore be interpreted cautiously. The present study revealed that 6% of the Central American migrants experienced critical levels of suicidal ideation, which has been previously linked to an increased risk for suicidal behavior (Rudd, 1989). This percentage appears to be somewhat elevated. As a comparison, 3% of the standardization sample (community adults) of the ASIQ reported a critical level of suicidal ideation (Reynolds, 1991a).

Continuum of Suicidal Thoughts and Behaviors. There is evidence (Moscicki, 1995; Reynolds, 1991a) that most suicidal behaviors occur on a continuum of severity that proceeds from less serious and more prevalent thoughts and behaviors through increasingly severe and less prevalent behaviors. For a comprehensive understanding of the phenomena of suicidal behaviors within a particular group, research relevant to the full continuum of suicide is needed. However, previous research on suicidality among immigrant groups (Smith et al., 1985; Trovato, 1986) has focused on completed suicide as the variable of interest, rather than on possible precursors to suicide such as suicidal ideation and nonlethal attempts. The present investigation contributes to the research among immigrant groups that is pertinent to the continuum of suicidal behaviors.

Acculturative Stress in Relation to Depression and Suicidal Ideation

In the present study, Central American immigrants experiencing heightened levels of acculturative stress also reported elevated levels of depression and suicidal ideation. These at risk individuals may feel caught between cultures. In other words, these individuals may feel pulled between the influence of traditional values, customs, norms, and traditions, and the values, norms, and experiences in the new society. These individuals may furthermore encounter language difficulties, economic hardship, and discrimination during the acculturative process. They may lack effective social support in the new community. At the same time, they may experience the breaking of ties with family and friends in the country of origin, thus resulting in feelings of loss and a reduction in effective coping resources.

Predictors of Depression and Suicidal Ideation

Family Support. The present findings indicated that family dysfunction was associated with greater depression. This is not surprising. The family is a core characteristic of Latino/a culture and has traditionally been important in providing emotional support for its members. Several researchers (Rueschenberg & Buriel, 1989; Sabogal, Marín, Otero-Sabogal, VanOss Marín, & Perez-Stable, 1987) have found that a high level of perceived family support is the most essential and stable dimension of Latino/a families. Thus, without the family providing stability and emotional support, a more difficult acculturative experience is expected.

Social Support. The present study measured the perceived effectiveness of social support, rather than access to social support networks. Several authors (Golding & Burnam, 1990; Holtzman & Gilbert, 1987; Sarason, Levine, Basham, & Sarason, 1983) have observed that larger social networks do not ensure that the support will be of higher quality or more effective, and therefore the

perceived quality of social support may be a more accurate predictor of psychological distress than is quantity of social support. The present findings indicated that ineffective social support was strongly associated with elevated levels of depression and suicidal ideation. These findings thus support the notion that social support of high quality may help individuals cope during the acculturative process.

The subjective data of the present study provided a sense of individual experience that is sometimes lacking in quantitative data. In response to the open-ended question, a 22-year-old female detailed the importance of the family in providing emotional and economic support during times of need:

> I feel the desire to move forward since my family helps me and supports me in realizing my dreams of future success. . . . I desire to be a good person. In terms of my family, I think I will be someone to also help them emotionally and economically, and carry them in accordance with my way of being. . . . [My family] is the most important thing in my life, as I am for them.

Education and Income. According to the acculturative stress model, the specific features of socioeconomic status—education and income—may provide acculturating individuals with the resources to cope with the larger society. There are several explanations as to why education may help individuals cope in a new society. Berry, Kim, Minde, and Mok (1987) noted that those acculturating individuals with more education may simply have greater resources (intellectual, economic, social) with which to deal with changes. A related "cognitive argument" (Lazarus & Folkman, 1984) is that life changes are stressors only if they are experienced as such. Greater education permits individuals to view new experiences as challenges or opportunities, rather than stressors. In terms of income, Vega et al. (1986b) noted that economic marginality may combine with other factors (such as lessened family and social support) to compound the severity of perceived distress and narrow the range of coping alternatives. With a relatively low in-

come, for example, few available resources will be available for health maintenance or preventive care.

The present findings lend some support to the idea that education and income provide acculturating individuals with coping resources. Higher levels of education and income were significantly related to depression. These findings are consistent with Golding and Burnam (1990) and Vega et al. (1986a,b), who examined education and income among Latino/a immigrants and found negative associations between educational attainment and depression, and income levels and depression.

Expectations Concerning the Future. According to Williams and Berry (1991), attitudes and expectancies toward the acculturative experience may affect individual coping strategies and ability to adapt, thus affecting individual level of distress. Those individuals who perceive the acculturative changes as opportunities may experience less distress than those who do not. The present findings give only limited support to this notion. Positive expectations for the future were related to lower depression levels, yet were unrelated to suicidal ideation.

However, to further share the sense of depth, richness, and individual experience found within the present sample, examples of individual expectations for the future will be given. These examples also portray some of the differences between those open-ended responses coded as positive and those coded as nonpositive. The first response is positive. A 30-year-old female poignantly described her hopefulness toward the future despite her struggles in the new environment:

> I think that considering that one leaves their children and parents to come to this country, it's . . . a very . . . painful decision because you know that you're not going to see them so soon. Only God decides one's luck. And if one thinks about moving forward and if one comes to this country, it's to see what future you'll have. I am a 30-year-old woman. I live alone, struggling for myself, my three children, and my parents . . . because I come from a poor family.

But I plan to go forward, and God is going to permit me to do so.

The next example is a positive response from a 38-year-old female:

My family's future will be different with a lot of tranquility, health, understanding, and more than anything, a lot of love. And I have faith that that day so hoped for will arrive. I hope for that with much happiness.

The next set of responses are nonpositive.

For me, because I'm older, I don't think that there will be a future. For my grandchildren, it hurts me to think about their future because of the extremely difficult time that we are experiencing. (70-year-old female)

Only those who are in charge of the law (the lawmakers) know our future, since our opinions are not heard because we are Hispanics. (38-year-old female)

Limitations and Directions for Future Research

This study should be considered preliminary because of the relatively limited sample size, the use of a single-informant self-report methodology, and the cross-sectional design. Although the distinction was drawn between immigrant status and refugee status, data were not available to fully determine the voluntary and involuntary (refugee) statuses of individual migration. In addition, the homogeneity of the sample in terms of ethnicity and area sampled suggests that findings should not be generalized to acculturating individuals and regions of the country with other characteristics.

Research that further explores suicide risk factors among Central American immigrants is needed. Further research should also concentrate on increasing the present study's generalizability. For example, the connection between acculturative stress, depression, and suicidality should be explored in other geographical regions, with different ethnic groups, and with other types of acculturating groups (e.g., native peoples). Other factors hypothesized to increase the risk for

suicide during the acculturative process should also be explored. These factors include coping skills, self-esteem, other aspects of psychiatric status (e.g., PTSD symptomatology), prior knowledge of language and culture of the new society, congruity between contact expectations and actualities, and the sense of loss resulting from the separation of family and friends. The use of qualitative methodologies can help identify the particular acculturative stressors experienced by acculturating individuals, in addition to the specific coping mechanisms used in response to these acculturative stressors. Further research with a longitudinal design is needed to address more clearly the question of directionality.

Clinical Implications

The present findings have implications for the evaluation, intervention, and treatment of Central American immigrants. The findings highlight the importance of assessment and treatment within a cultural context. In other words, the initial clinical evaluation should assess the stress relating to acculturation, family and social support, past and present coping strategies (including religion), cognitive attributes such as attitudes and expectations toward the future, and level of socioeconomic status, including possible work-status changes. Furthermore, the roles of these factors, the reasons for the migration (including possible premigration trauma), the migration experience itself, and consequent change are issues that should be explored throughout the course of treatment. Aron (1992), Aresti (1988), and Bowen et al. (1992) have written in detail about clinical techniques for working with victims of sociopolitical trauma.

Finally, it is important to note that although the acculturative stress framework enhances the understanding of individuals' adaptation to the difficulties encountered during the acculturative process, each individual who seeks treatment has a unique history that modulates and defines the parameters of his or her specific problems. Seldom will an individual entering treatment state

that he or she has "acculturation problems" or "psychological problems resulting from migration."

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