

Psychosocial Predictors of Acculturative Stress in Mexican Immigrants

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ABSTRACT. Psychosocial predictors of acculturative stress were examined in a sample of adult Mexican immigrants in Los Angeles. Bivariate and multivariate analyses revealed that family dysfunction, geographical separation from family, nonpositive expectations for the future, and low income levels were significantly related to elevated levels of acculturative stress. The findings suggest that family closeness, hopefulness for the future, and financial resources may provide a buffer against acculturative stressors experienced by migrating individuals. The findings highlight the importance of using culturally relevant clinical methods when assessing and treating immigrants and acculturating individuals.

IMMIGRANTS may experience many stressors during the process of adapting to a new society. For example, individuals new to a country may experience the severing of ties to family and friends in the country of origin. This may result in feelings of loss and lead to a reduction in effective coping resources. Immigrants may also experience stressors that are particular to the new environment. These include discrimination, language inadequacy, the lack of social and financial resources, stress and frustration associated with *unemployment and/or* low income, feelings of not belonging in the host society, and a sense of anxious disorientation in response to the unfamiliar environment. Acculturating individuals may also feel pulled between traditional values, norms, and customs and those in the new society (e.g., parent-child conflict related to the child's encountering the new culture through school; role conflict related to a mother's having to work).

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Model of Acculturative Stress

Acculturation refers to the changes that groups and individuals undergo when they come into contact with another culture (Williams & Berry, 1991). *Acculturative stress* is a more specific term than acculturation. It refers to the stress that directly results from and has its source in the acculturation process (Berry, 1990). Acculturative stress encapsulates stressors such as those previously outlined. According to Berry, Kim, Minde, and Mok (1987, p. 493), the level of acculturative stress that is experienced by an acculturating individual may vary from a small amount to the point where it "virtually destroys one's ability to carry on." The level of acculturative stress that is experienced depends on several variables, as presented by Berry and Kim (1988) and Williams and Berry (1991) in their conceptual framework. Their model identifies psychological and social variables that may act or serve as buffers in the reduction of acculturative stress. These include family support found within the new community, including immediate and extended family networks; social support (outside the family) within the new community; socioeconomic status (SES), including specific characteristics of SES such as education and income; pre-migration variables such as adaptive functioning (self-esteem, coping ability) and knowledge of the new language and culture; cognitive attributes such as expectations for the future (positive versus negative); and the degree of tolerance for and acceptance of cultural diversity (multicultural versus assimilationist) within the mainstream society.

Because these factors may serve as buffers against acculturative stress, they may be used to predict levels of acculturative stress. Acculturating individuals with positive expectations for the future and relatively high levels of family support may, for example, experience less acculturative stress than individuals without the same expectations and support. In the same manner, acculturating individuals with relatively high levels of SES, social support, and self-esteem may report less acculturative stress than those individuals with low levels of SES, social support, and self-esteem.

Studies of Predictors of Acculturative Stress

Padilla, Alvarez, and Lindholm (1986) examined generational status and personality characteristics (self-esteem, internal/external locus of control, introversion/extroversion) as predictors of acculturative stress in a sample of immigrant and later-generation college students. Padilla et al. developed the Social, Attitudinal, Familial, Environmental (SAFE) Acculturative Stress Scale specifically for that study. The authors noted that the scale was constructed to be sensitive to the particular stressors encountered by acculturating individuals. Of the personality characteristics, low self-esteem was the only significant predictor of high acculturative stress. The findings further revealed that immigrants who

migrated after the age of 14 experienced greater acculturative stress than individuals who migrated before age 14. Each succeeding generation experienced less acculturative stress.

In a similar study, Mena, Padilla, and Maldonado (1987) examined generational status, self-esteem, and locus of control as predictors of acculturative stress among acculturating college students. Mena et al. also explored the relationship of generational status to specific coping strategies used in response to acculturative stress. They found that immigrant individuals experienced greater acculturative stress and lower self-esteem than other generations. Succeeding generations experienced increasingly less acculturative stress and greater self-esteem. Furthermore, immigrants who migrated after the age of 12 ("late immigrants") coped with acculturative stress by more frequently taking a direct, planned action (*individualistic*) approach. On the other hand, second- and third-generation individuals more often coped by talking to others about their problems. Mena et al. suggested that, compared with second- and third-generation individuals, late immigrants may have a smaller support network with whom to talk about problems of adapting to a new environment. Therefore, they may have little choice but to take direct action in response to a stressor.

The work of Padilla et al. (1986) and Mena et al. (1987) is important in that they examined acculturative stress with an instrument that is sensitive to acculturative stressors, rather than a general stress measure, *per se*, as other researchers have done in measuring acculturative stress (e.g., Berry & Annis, 1974; Doná & Berry, 1994). However, Padilla et al. and Mena et al. focused on acculturative stress among college students. Their samples included individuals of various ethnic backgrounds and different generations. Research that explores predictors of acculturative stress within specific ethnic groups and different age groups appears necessary.

Hovey and King (1996) examined psychosocial predictors of acculturative stress in a sample of immigrant and second-generation Latino adolescents (87% Mexican American). Their research design was guided by Berry and colleagues' (Berry & Kim, 1988; Williams & Berry, 1991) acculturative stress framework (discussed earlier). Bivariate and multivariate analyses revealed that perceived family dysfunction and nonpositive expectations for the future were significant predictors of high levels of acculturative stress. Interestingly, Hovey and King found that emotional support from the participants' family members was more important than the physical proximity of family members. In other words, the quality of emotional support from family members in the United States was a better determinant of acculturative stress than was the number of family members in the United States. Overall, Hovey and King's findings suggest that family support and hopefulness for the future may buffer against levels of acculturative stress among acculturating Latino adolescents.

The present study is another step in the direction toward generalizability. The design was guided by the acculturative stress model outlined earlier. The

purpose of the study was to examine the psychosocial predictors of acculturative stress in a sample of adult Mexican immigrants. As noted, these variables may serve as buffers in the reduction of acculturative stress. The variables explored were family functioning, family intactness, social support, expectations for the future, and education and income (specific indicators of SES).

Method

Participants

The participants were 114 immigrants (76 women, 38 men) of Mexican descent from an English as Second Language (ESL) community adult school in Los Angeles, California. The selected school is located in a predominantly Mexican American community. English proficiency among the participants was extremely limited. All of the participants were native speakers of Spanish. The participants ranged in age from 17 to 77 years old ($M = 33.70$, $SD = 15.76$).

Thirty percent (30.1%) of the participants were married, 46.0% were never married, 15.1% were separated or divorced, 3.5% were widowed, and 5.3% were in a common-law marriage or living together. Eighty-three percent (83.2%) of the participants were Catholic, 4.4% were Protestant, 6.2% reported other religious affiliations, and 6.2% reported no religious affiliation.

The number of years the participants had lived in the United States ranged from 1 to 42 ($M = 9.27$, $SD = 10.76$). Fifty-two percent (51.8%) of the sample had lived in the United States for 1 to 4 years, 18.8% had lived in the United States for 5 to 10 years, and 29.4% had lived in the United States for 11 years or longer. Acculturation level, measured as recommended by Marín, Sabogal, VanOss Marín, Otero-Sabogal, and Perez-Stable (1987), ranged from 5 to 14 ($M = 7.12$, $SD = 2.2$). The possible range, indicating low to high acculturation, was 5 to 25. The overall sample thus revealed relatively low levels of acculturation.

Measures

A self-administered battery of questionnaires was used. A background information form requested age, gender, ethnicity, marital status, religious affiliation, age at migration, education, family income, and family intactness. To assess family intactness, we asked the following question: "In what country do most of your family and relatives live?" The notion of family was conceptualized in the present study as including both immediate and extended family.

Family functioning. 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 12 statements that participants endorse regarding how well each statement describes their family. Items

are scored on a 4-point Likert-type scale ranging from *strongly agree* to *strongly disagree*, with scaled scores ranging from 1.00 (healthy) to 4.00 (unhealthy). Examples of items include the following: "In times of crisis we can turn to each other for support"; "There are lots of bad feelings in the family"; and "We avoid discussing our fears and concerns." The FAD has been used extensively to measure family functioning among different ethnic groups (e.g., Keitner et al., 1991; Morris, 1990), including Central Americans (Hovey, 2000a) and Mexican Americans (Hovey & King, 1996). The FAD has been found to have adequate internal consistency reliability (.72 to .92), test-retest reliability (.66 to .76), and construct validity in general community samples (Epstein et al., 1983; Halvorsen, 1991). The Cronbach alpha coefficient (for the General Functioning subscale) for the present study was .71.

Social support. 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. It consists of 25 items rated on a 7-point Likert-type scale ranging 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 previously been used with Spanish-speaking individuals (Hovey, 2000a, 2000b) and has been found to have adequate internal consistency reliability (.87 to .93), test-retest reliability (.72), and construct validity in general community samples (Weinert, 1987; Weinert & Brandt, 1987; Weinert & Tilden, 1990). The Cronbach alpha coefficient for the present study was .85.

Acculturative stress. Acculturative stress was measured with the *SAFE scale* (Mena et al., 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-type scale ranging 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) and construct validity for Mexican Americans (Fuentes & Westbrook, 1996). The Cronbach alpha coefficient for the present study was .90.

Expectations for the future. To measure individual attitudes and expectancies concerning the future, I asked an open-ended question: "What do you think the future will be like for you and your family?" Each response was coded according to the hopefulness displayed. Those responses that revealed an overall hopeful outlook toward the future were coded as positive, and those responses that revealed an overall nonhopeful outlook toward the future were coded as nonpositive. The responses were coded by three research assistants blind to the study's hypotheses and other questionnaire responses. Their interrater reliability, calculated as a percentage of agreement, was 96.5%. Disagreements were resolved by consensus.

Translation. The background information form and open-ended question 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. Five ESL classes participated in the study. At the beginning of each of the five classes, the primary investigator notified the students about the general topic of study and noted that their participation was entirely voluntary, anonymous, and confidential. Those willing to participate were then administered the self-report questionnaires. Approximately 95% of the students in these classes chose to participate. The participants did not appear to differ from the nonparticipants in terms of age and gender. The questionnaires were in Spanish and required approximately 45 min to complete. The primary investigator and teachers read the questionnaire items to those participants who needed assistance. Individuals who completed the questionnaire were given \$5 for their participation.

Data Analyses

The data analyses were conducted in three steps. Descriptive statistics were first analyzed. Then, bivariate associations among the predictor variables and acculturative stress were examined. Specifically, correlation coefficients were used to assess the relationships among the continuous predictor variables (family functioning, social support, education, income) and acculturative stress. Analyses of variance (ANOVAs) were used to assess the effects of the categorical predictor variables (expectations for the future, family intactness) on acculturative stress. Finally, a stepwise multiple regression analysis was performed to determine the relative strength of the predictors of acculturative stress.

TABLE 1
Sample Distributions for Sociodemographic Variables

Variable	%	Cumulative %
Education		
0 to 2 years of school	16.5	16.5
3 to 5 years of school	20.2	36.7
6 to 8 years of school	17.4	54.1
9 to 11 years of school	23.9	78.0
High school graduate	8.3	86.2
Some college	11.9	98.2
Bachelor's degree	1.8	100.0
Graduate degree	0.0	100.0
Income		
\$0 to \$4,999	41.1	41.1
\$5,000 to \$14,999	31.1	72.2
\$15,000 to \$24,999	17.8	90.0
\$25,000 to \$34,999	2.2	92.2
\$35,000 to \$44,999	5.6	97.8
\$45,000 to \$59,999	1.1	98.9
\$60,000 to \$80,000	1.1	100.0
Over \$80,000	0.0	100.0
Family intactness		
Mexico	82.2	82.2
United States	15.8	100.0
Expectations for the future		
Positive	88.2	88.2
Nonpositive	11.8	100.0

Results

Descriptive Statistics

Most participants reported relatively low levels of formal education and income. In addition, most participants reported that a majority of family members lived in the country of origin, and most participants had positive expectations for the future (see Table 1).

Gender had no significant main effects on family functioning, social support, or acculturative stress. Table 2 contains the means and standard deviations for the FAD (family functioning), the PRQ85-Part 2 (social support), and the SAFE scale (acculturative stress).

TABLE 2
Participants' Mean Scores and Standard Deviations on Measures of Family Functioning, Social Support, and Acculturative Stress

Participants	Family functioning		Social support		Acculturative stress	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
All participants (<i>N</i> = 114)	2.18	0.44	120.7	26.4	49.9	18.2
Women (<i>n</i> = 76)	2.23	0.41	117.2	27.0	49.9	18.6
Men (<i>n</i> = 38)	2.09	0.49	127.4	24.1	49.8	17.8

Relationships Between Predictor Variables and Acculturative Stress

Family dysfunction ($r = .19$, $p < .03$) and low levels of income ($r = -.14$, $p < .10$) were related to elevated levels of acculturative stress. Social support ($r = -.06$) and education ($r = .03$) were not significantly related to acculturative stress.

ANOVAs were used to study the effects of expectations for the future and family intactness on acculturative stress. The first analysis revealed a significant main effect for expectations for the future, $F(1, 107) = 9.3$, $p < .004$. Participants who reported nonpositive expectations for the future reported greater acculturative stress than participants who reported positive expectations. The second analysis revealed a significant main effect for family intactness, $F(1, 108) = 2.4$, $p = .05$. Participants who reported that most family members lived in the country of origin revealed greater acculturative stress than participants who reported that most family members lived in the United States.

Multiple Regression Analyses of Acculturative Stress

A stepwise multiple regression analysis was conducted to examine the relative strength of the variables in predicting acculturative stress. Each predictor variable was entered. The strongest predictors of acculturative stress were expectations for the future ($\beta = .33$, $t = 3.1$, $p < .004$) and family functioning ($\beta = .19$, $t = 1.7$, $p < .10$). These two variables accounted for 14% of the variance in acculturative stress. None of the other variables were significant independent predictors of acculturative stress. The overall equation accounted for 15% of the variance in acculturative stress.

Discussion

The results suggest that extent of family intactness is linked with acculturative stress. Most participants reported that a majority of their family members

lived in Mexico. These Mexican immigrants revealed greater acculturative stress than those immigrants who reported that most family members lived in the United States. This is an important finding in that it suggests that not all Mexican Americans have large extended families readily available to provide support. This finding is consistent with those of Mena et al. (1987), whose findings suggested that immigrants who migrate later in life may have a limited support system and thus encounter fewer coping options.

Similar to Hovey and King's (1996) study of acculturative stress among Latino adolescents, the present findings also indicate that emotional closeness is an important determinant of acculturative stress. Moreover, family support appears to be a better predictor than is social support outside the family. The strength of family closeness as a predictor is not surprising. The family is a core feature of Latino culture and has traditionally been important in providing emotional support for its members. Several researchers (e.g., 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 familism. Thus, without the family providing stability and emotional support, a more difficult acculturative experience is expected.

The qualitative data of the present study provide a sense of individual experience that is sometimes lacking in quantitative data. For example, in response to the open-ended question, several participants detailed their feelings of hopefulness about the future and the efforts that they and their family members were making to have a better future:

I think the future will be much better than . . . now . . . because we are all working toward the future, from the little one of the family to the oldest person who is in the house. Really, answering this questionnaire gives me the opportunity to think about my family, and to realize how much I value them. (28-year-old woman)

I think that we are going in a good direction. We are working a lot, and making the effort to have a better life economically, intellectually, and health-wise. I am sure that we will achieve this, but all this is down the road. (21-year-old woman)

The future is unstable. But by working hard, as we have done up until now, we can achieve our goals that we have set. Sure, this would be in the long run. . . . But we will be able to satisfy our needs that go beyond the basic needs: like our economic needs, intellectual needs, and health needs. Above all, we will do this with God. (28-year-old woman)

According to the acculturative stress model (Williams & Berry, 1991), the specific features of socioeconomic status—education and income—may provide acculturating individuals with the resources to cope with the larger society. The present findings give limited support to the notion that high levels of income are related to lower acculturative stress. Vega, Kolody, Valle, and Hough (1986) noted that economic marginality may combine with other factors (such as dimin-

ished family support) to compound the severity of perceived distress and narrow the range of coping alternatives. With a relatively lower income, for example, fewer available resources will be available for health maintenance or preventive care (Vega, Warheit, & Palacio, 1985). Although several studies (e.g., Vega et al., 1986) have revealed associations between lower levels of income and depression among Mexican immigrants, there are no published findings on the relationship between income and acculturative stress.

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 acculturative stress than those who do not. The present findings support the notion that positive expectations for the future may buffer against acculturative stress, as positive expectations for the future were strongly related to lower acculturative stress levels.

Examples of individual expectations for the future are provided, to share the sense of depth, richness, and individual experience found within the present sample, as well as to portray the differences between those open-ended responses coded as positive and those coded as nonpositive. The first response is positive. A 20-year-old woman described her belief that learning the English language is the key to a brighter future:

I think that if everything continues like now things will become better. . . . For example, what interests me the most right now is learning to speak and to write English perfectly, because I think that at my age I have my entire future ahead of me. I want to feel better each day and feel proud about what I do.

The next example is a positive response from a 31-year-old woman:

The future will have highs and lows, with more triumphs than failures, since this is what we are preparing for by learning the English language. We need to go forward by searching for better work opportunities. Learning the English language is our first priority in this country. We need positive thoughts for the struggle to go forward, and to put into practice the knowledge we gained in our country and develop them in the United States.

The next example is a positive response from a 22-year-old woman:

My future will be much better than how I am now. And for my family, their future will also be better, since I will put all of my being toward that. You have to always think positively. Youth, we are the future of the world.

The responses in the next set (Hovey, 2000b) are nonpositive:

I see my future as very disorganized, because I feel confused. I see that I won't be able to organize the future. (21-year-old woman)

I think that everything gained is going backwards. (49-year-old man)

I think that the future is going to be a disaster. (32-year-old man)

The future will be worse than now if the new president of the United States is Republican. I've already been affected a lot with the simple fact of having Pete Wilson as the governor of California. I think that there will be a lot of stress, not only in my family, but in many families that are not Anglo. Employment right now is very difficult and it will be even more so. The future will be hard for my children and my parents. I don't have confidence in the government, education, morality, and crime. (20-year-old man)

Limitations and Directions for Future Research

Limitations of the present study include its uses of a convenience sample, a single-informant self-report methodology, and a cross-sectional design. Moreover, the range of hopefulness (expectations for the future) was restricted, given that the individuals within the sample had taken the "hopeful" step of attending ESL classes. Although the FAD and PRQ85-Part 2 were shown to be internally reliable in the present study, these measures have yet to be fully validated with Mexican immigrants. Because these scales were normed on English-dominant individuals, the construct validity of these scales for non-English-speaking groups such as Mexican immigrants is uncertain (Dinges & Cherry, 1995; Olmedo, 1981). Caution should therefore be taken in the interpretation of data. The homogeneity of the sample in terms of ethnicity and area sampled suggests that the present findings should be generalized with caution.

Future research should concentrate on increasing the present study's generalizability. For example, acculturative stress and its predictors 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 acculturative stress should be explored. These factors include coping skills, self-esteem, 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 present study focused on acculturative stress, which is defined as stress that has its source in the acculturative process. Immigrants may also experience stressors unrelated to the acculturative process. To better isolate the specific effects of acculturative stress, future researchers should incorporate both an acculturative stress scale and a measure of generalized stress into their designs.

Clinical Implications

The present findings highlight the importance of assessing and treating migrant individuals within a cultural context. In other words, the initial clinical

evaluation should assess the stress relating to acculturation, family and social support, and cognitive attributes such as attitudes and expectations for the future. 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. Finally, it is important to note that each person who encounters difficulties during the acculturative process has a unique history that modulates and defines the parameters of his or her specific problems. Seldom does an individual enter treatment and state that he or she has "acculturation problems" or "psychological problems due to migration."

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