# Psychosocial Predictors of Anxiety Among Immigrant Mexican Migrant Farmworkers: Implications for Prevention and Treatment

JOSEPH D. HOVEY CRISTINA G. MAGAÑA University of Toledo

This study examined predictors of anxiety symptomatology among immigrant Mexican migrant farmworkers in the Midwest. Its purposes were to assess the prevalence of anxiety symptoms, to examine the relationship between acculturative stress and anxiety, and to determine the variables that best predict anxiety. Heightened levels were found for overall anxiety and in the cognitive, affective, and physiological expressions of anxiety. Elevated acculturative stress, low self-esteem, ineffective social support, lack of control and choice in living a migrant farmworker lifestyle, low religiosity, and high education were significantly related to high anxiety. Findings suggest that migrant farmworkers who experience elevated acculturative stress are susceptible to the development of anxiety-related disorders and highlight the importance of establishing prevention and treatment services for migrant farmworkers.

 $\bullet$  migrant farmworkers  $\bullet$  Mexican immigrants  $\bullet$  anxiety  $\bullet$  acculturative stress  $\bullet$  immigration  $\bullet$  Hispanic

According to the U.S. Bureau of the Census (2001a), Latino/Latina individuals are now the largest minority group in the United States with a population of nearly 36 million

individuals. Furthermore, the U.S. Bureau of the Census (2001b) estimates that individuals of Mexican descent comprise the largest Latino/Latina group, with a popula-

• Joseph D. Hovey and Cristina G. Magaña, Program for the Study of Immigration and Mental Health, Department of Psychology, University of Toledo.

This work was supported in part by a Summer Research Fellowship and Research Grant by the University Research Awards and Fellowship Program, University of Toledo. We thank Migrant Health Promotion, Inc., and Rural Opportunities, Inc., for their assistance in arranging data collection.

Correspondence concerning this article should be addressed to Joseph D. Hovey, Program for the Study of Immigration and Mental Health, Department of Psychology, University of Toledo, Toledo, Ohio 43606. E-mail: jhovey@utoledo.edu

tion of 21 million. Despite these estimates, few studies have assessed anxiety symptomatology among Mexican Americans. This paucity of research has occurred despite the fact that many authors (e.g., Lesser, 1996; Warren & Zgourides, 1991; Winokur & Coryell, 1991) suggest that anxiety disorders are the most common of all psychological disorders.

# **Anxiety Among Mexican Americans**

Karno et al. (1989) used data from the Los Angeles site of the Epidemiological Catchment Area Program to estimate the prevalence of anxiety disorders among Mexican immigrants and Mexican Americans born in the United States. They reported the lifetime prevalences for any anxiety disorder, panic disorder, agoraphobia, simple phobia, social phobia, and generalized anxiety disorder. Karno et al.'s findings were somewhat equivocal. In comparison with Mexican immigrants, Mexican Americans born in the United States reported significantly higher levels of any anxiety disorder (22.6% vs. 13.7%), simple phobia (12.7% vs. 7.8%), and agoraphobia (7.6% vs. 4.7%). However, when controlling for socioeconomic status, the difference in agoraphobia became nonsignificant. Karno et al. conjectured that the group differences may be the result of selective migration. That is, those individuals who migrated from Mexico to the United States may be less distressed than those who did not migrate. However, it may also be the case that the second- and greater-generation Mexican Americans encountered acculturative stressors in the mainstream society that influenced levels of anxiety.

In a community sample from Fresno, California, Vega et al. (1998) also found greater anxiety among U.S.-born Mexican Americans in comparison with Mexican immigrants. They reported greater lifetime prevalences among U.S.-born Mexican Americans versus Mexican immigrants for any anxiety disorder (23.2% vs. 13.0%),

simple phobia (10.6% vs. 5.4%), social phobia (10.9% vs. 5.3%), and agoraphobia (11.8% vs. 5.5%). Vega et al.'s focus on the comparison between immigrants and nonimmigrants leads the reader to conclude that immigrants are not at risk for anxiety disorders. However, a close examination of their findings suggests that this conclusion is too general. Immigrants who resided in the United States for longer than 12 years reported a level of any anxiety disorder that was identical to the level reported by U.S.born Mexican Americans. Time in the United States thus appears to be an important explanatory factor, given that immigrants living in the United States for an extended period were as susceptible to anxiety as Mexican Americans born in the United States.

#### **Acculturative Stress**

People feel some degree of stress when facing demands that require them to change in some manner (Comer, 2001). The state of stress has two components. A stressor is the event that creates the demands; and a stress response is the person's reaction to the demands. According to Lazarus (1999), one's stress response is influenced by the way one cognitively appraises both the stressors and one's capacity to effectively react to them. Individuals who appraise a situation as threatening are likely to experience greater stress than individuals who sense that they have the ability to respond constructively to the situation. Coping occurs when individuals change their cognitions and behaviors in an effort to manage the specific external or internal demands that they appraise are taxing their adaptive resources.

This stress model has relevance for understanding change among acculturating individuals. Acculturative stress is defined as the stress that directly results from and has its source in the acculturative process (Williams & Berry, 1991). Those individuals who appraise acculturative stress-

ors as threatening may experience greater acculturative stress than those individuals who appraise the acculturative changes more opportunistically.

Hovey and colleagues (Hovey, 2000a, 2000b; Hovey & King, 1996, 1997) have written in detail about acculturative stress. They suggest that those individuals who internalize acculturative changes as more stressful may be more susceptible to psychological problems such as depression and suicidal ideation. They have also identified several factors that may account for levels of distress among acculturating individuals. These include family support, social support in the new community, socioeconomic status (SES), control and choice in the decision to immigrate (voluntary vs. involuntary), cognitive attributes such as expectations for the future (hopeful vs. nonhopeful), religiosity, and the degree of tolerance for and acceptance of cultural diversity within the mainstream society. They identify these as possible protective factors that acculturating individuals may use to cope against distress. For example, an acculturating individual who has an effective social support system and a positive outlook toward the future may experience less anxiety than an acculturating individual with ineffective support and a pessimistic outlook toward the future.

# Mexican Migrant Farmworkers and Mental Health

It has been estimated (Napolitano & Goldberg, 1998) that there are 5 million migrant farmworkers in the United States. Migrant farmworkers are individuals who migrate from one place to another to earn a living in agriculture. This is in contrast to seasonal farmworkers who earn a living in agriculture but live in one location during the year. Migrant farmworkers generally live in the southern half of the United States during the winter and migrate north before the planting or harvesting seasons.

Immigrant migrant farmworkers are a

unique group because they encounter stressors typically associated with the immigration experience in addition to stressors that are specific to a migrant farmworker lifestyle. In regards to the former (Hovey, 1999a, 2000c; Williams & Berry, 1991), during the process of acculturating to a new country, immigrants may experience stressors such as the breaking of bonds to family and friends, which may lead to feelings of loss and a reduction in coping resources. They may experience additional stressors that are particular to the new environment, such as discrimination, language difficulties, the lack of social and financial resources, frustration associated with unemployment or low income, feelings of not belonging in mainstream society, and a sense of anxious disorientation in response to the unfamiliar environment. These experiences, which may lead to acculturative stress, may exacerbate preexisting difficulties or lead to the emergence of new psychological problems.

Several authors have noted the difficulties intrinsic to a migrant farmworker lifestyle. Migrant farmworkers are socially marginal (Rothenberg, 1998), for example. This situation is intensified by their physical isolation and the discrimination (Barger & Reza, 1994; Goldfarb, 1981) they experience. Migrant farmworkers are one of the most economically disadvantaged groups in the country, with an average salary of \$5,000 per year (Rothenberg, 1998). Farm labor is strenuous, and migrant workers are often subjected to dangerous working conditions such as being sprayed with pesticides (Napolitano & Goldberg, 1998). Farm labor has the highest incidence of workplace fatalities in the United States (Rothenberg, 1998). Child labor is common, and the average education level of migrant farmworkers is sixth grade (Barger & Reza, 1994). Migrant workers typically find housing in labor camps provided by their employers (Napolitano & Goldberg, 1998). However, the housing and sanitation are often substandard (Barger & Reza, 1994; Rothenberg, 1998). One-room homes that lack water and toilet facilities are common, and drinking water and toilet facilities are often not readily available in the fields. Finally, migrant farmworkers have limited access to medical care (Migrant Clinicians Network, 2002) although their health conditions are among the worst in the United States.

Several authors (Barger & Reza, 1994; Napolitano & Goldberg, 1998; Rothenberg, 1998) have suggested that, because of their migratory, unstable lifestyle, migrant farmworkers may be at greater risk for health problems than seasonal farmworkers. For example, in comparison with seasonal farmworkers, employment for migrant farmworkers is more unpredictable. It is not uncommon for migrant farmworkers to travel for work without being certain of finding employment, housing, or both (Napolitano & Goldberg, 1998). Continuous traveling and the uncertainty of employment may contribute to a lesser sense of being settled and to feelings of financial insecurity.

Given the above factors, it appears likely that immigrant migrant farmworkers are at psychological risk. Scant research, however, has explored the mental health of Mexican migrant farmworkers in the United States.

Vega, Warheit, and Palacio (1985) examined psychological distress among Mexican American farmworkers in central California. Vega et al. measured distress with the Health Opinion Survey (MacMillan, 1957), a measure of general psychopathology. They found that high levels of distress were related to reduced health statuses and an occurrence of environmental stressors over the past year. In addition, they found that middle-aged individuals (age 40 to 59 years) reported elevated levels of distress in comparison with other age groups. Vega et al. conjectured that middle age is an especially high-risk period for farmworkers because significant occupational and life hazards exist to progressively degrade farmworkers' health and functional capacities. According to Vega et al., the severe lifestyle (high frequencies of environmental stressors, such as hazardous working conditions) experienced by Mexican American farmworkers places them at extraordinary psychological risk.

Vega et al.'s (1985) study is important because it was the first to examine predictors of mental health among Mexican American farmworkers in the United States. Their work was limited, however. Vega et al. did not distinguish migrant farmworkers from seasonal farmworkers in their analyses. Second, Vega et al. did not directly measure stressors that were specific to acculturation or the farmworker lifestyle. Level of environmental stress was based on one question. The participants were asked whether they experienced a stressful life event in the past 12 months, including the death of family members or friends, accidents, and job loss. Finally, as noted, Vega et al. assessed risk in a general fashion. Thus their findings do not indicate whether the farmworkers were at greater risk for anxiety or depression, for example.

Alderete, Vega, Kolody, and Aguilar-Gaxiola (1999) examined depressive symptoms and their relationship to psychosocial risk factors among Mexican migrant farmworkers in Fresno County, California. The risk factors explored were demographic characteristics, social support, acculturation level, discrimination, language conflict, and worries over legal residence status. Alderete et al. found a standard level of depression: 19.7% of the women and 21.1% of the men reached caseness (indicating the presence of potentially significant depressive symptoms) on the Center for Epidemiologic Studies—Depression scale (CES-D; Radloff, 1977). Typically about 20% of individuals from general population samples will reach caseness. Alderete et al. found that very low acculturation scores and high scores in instrumental and emotional support were associated with lower depression. Farmworkers who experienced greater discrimination reported higher depression.

Hovey and Magaña (2000) explored psychosocial predictors of depression among immigrant Mexican migrant farmworkers in Michigan and Ohio. Their sample revealed an elevated level of depression (38% caseness on CES-D). In addition, they found that high acculturative stress, low self-

esteem, family dysfunction, ineffective social support, infrequent church attendance, and a lack of control and choice in the decision to live a migrant farmworker lifestyle were significantly associated with high levels of depression. Hovey and Magaña concluded that high acculturative stress (related to the immigration experience), in conjunction with the stress related to migrant farmwork, places immigrant farmworkers at risk for experiencing critical levels of psychological distress.

Despite the paucity of mental health research among migrant farmworkers, the above findings and the lifestyle characteristics of immigrant migrant farmworkers suggest that they are susceptible to the development of psychological problems. Although previous research has focused on depressive symptomatology, immigrant farmworkers may also be at risk for anxiety symptomatology.

# **Purpose of Present Study**

The first purpose of this study is to assess, among immigrant Mexican migrant farmworkers in the Midwest United States, the prevalence levels of symptomatology related to anxiety disorders. Given the stressors associated with both immigration and migrant farmwork, it is expected that the sample will reveal elevated levels of overall anxiety and elevated levels on the following modalities of the expression of anxiety: cognitive, affective, and physiological. The second purpose is to determine the relationship between acculturative stress and anxiety. It is expected that high acculturative stress will be positively associated with heightened anxiety. The third purpose is to determine the variables that best predict anxiety. The predictor variables explored are acculturative stress, self-esteem, social support, religiosity, education, income, and control and choice in the decision to live a migrant farmworker lifestyle.

#### Method

# **Participants**

Participants were 65 immigrant Mexican migrant farmworkers (40 female, 25 male) in the southeast Michigan/northwest Ohio area. The age of the sample ranged from 17 to 65 years (M=33.75, SD=11.13). Of the sample, 27.7% were age 17 to 25 years; 27.7% were 26 to 35; 26.1% were 36 to 45; 15.4% were 46 to 55; and 3.1% were 56 to 65.

A total of 56.9% of the participants were married, 18.5% were never married, 7.7% were separated or divorced, 6.1% were widowed, and 10.8% were in a common law marriage or living together. Of the sample, 84.6% were Catholic, 4.6% were Christian, 6.2% were Evangelical Pentecost, 3.1% reported "other" religious affiliations, and 1.5% reported no religious affiliation.

#### Measures

A self-administered battery of questionnaires was used. A demographic information form asked the participants about their ethnicity and generational status (place of birth of participants, parents, and grandparents). In addition, the form assessed their age, gender, marital status, religiosity, education, family income, language use, and their control and choice in the decision to live a migrant farmworker lifestyle.

RELIGION VARIABLES. To assess perception of religiosity and influence of religion, we asked the following questions (these questions were previously used by Hovey, 1999b, to assess religiosity among Mexican immigrants): "How religious are you?" (possible responses were the following:  $1 = not \ at \ all \ religious$ ,  $2 = slightly \ religious$ ,  $3 = somewhat \ religious$ ,  $4 = very \ religious$ ) and "How much influence does religion have upon your life?" (possible responses were the following:  $1 = not \ at \ all \ influential$ ,  $2 = slightly \ influential$ ,  $3 = somewhat \ influential$ ,  $4 = very \ influential$ ).

CONTROL AND CHOICE IN THE DECISION TO LIVE AS A MIGRANT FARMWORKER. To assess perception of control and choice in the decision to live as a migrant farmworker, we asked the participants whether they contributed to the decision to live as a migrant farmworker (1 = not at all, 2 = some [a little bit], 3 = moderate [pretty much], 4 = very much [a great deal]) and whether they agreed with the decision to live as a migrant farmworker (1 = strongly disagreed, 2 = disagreed, 3 = agreed, 4 = strongly agreed).

THE PERSONAL RESOURCE QUESTION-NAIRE. The Personal Resource Questionnaire—Part 2 (PRQ85; Weinert, 1987) was used to measure social support. This scale measures the perceived effectiveness of social support and consists of 25 items rated on a 7-point scale (ranging from 1 = strongly disagree to 7 = 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 has been found (Hovey, 2000b; Weinert, 1987; Weinert & Brandt, 1987; Weinert & Tilden, 1990) to have adequate internal consistency reliability (.85 to .93), test-retest reliability (.72), and construct validity among general and Mexican American samples. The Cronbach alpha for the present study was .92.

ADULT SELF-PERCEPTION SCALE. Self-esteem was measured with the Global Self-Worth subscale of the Adult Self-Perception Scale (Messer & Harter, 1986). The subscale consists of six items. Each item is scored 1 to 4 with possible scores ranging from 6 to 24. Higher scores indicate higher levels of self-esteem. The Global Self-Worth subscale has been found (Knight, Virdin, Ocampo, & Roosa, 1994; Messer & Harter, 1986) to have adequate internal consistency reliability, test–retest reliability, and construct validity

among general and Mexican American samples. The Cronbach alpha for the present study was .70.

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 toward acculturating populations. Participants rate each item that they have experienced on a 5-point scale (1 = not at allstressful to 5 = extremely stressful). 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." If an item does not apply to a participant, it is assigned a score of 0. We added two items to the scale: "I feel guilty because I have left family or friends in my home country" and "I feel that I will never gain the respect that I had in my home country." The scale used in this particular study thus consisted of 26 items, with possible scores ranging from 0 to 130. Higher scores indicate higher levels of acculturative stress. The SAFE scale has been found (Fuertes & Westbrook, 1996; Hovey, 2000b; Mena et al., 1987; Padilla, Alvarez, & Lindholm, 1986) to have adequate internal consistency reliability (.89 to .90) and construct validity among Mexican American samples. The Cronbach alpha for the present study was .88.

PERSONALITY ASSESSMENT INVENTORY (PAI). The four anxiety scales of the PAI (Morey, 1991) were used to measure clinical features of symptomatology related to anxiety disorders. The Cognitive Anxiety subscale measures expectations of harm and ruminative worry that may compromise an individual's ability to concentrate. The Affective Anxiety subscale measures subjective feelings of apprehension, tension, panic, nervousness, and difficulty in relaxing. The

Physiological Anxiety subscale measures physical signs of anxiety. An overall Anxiety scale reflects all three expressions of anxiety. The scales include 24 items rated on a 4-point scale (0 = false, not at all true to 3 =very true). Higher scores indicate higher anxiety levels. Examples of items include the following: "I often have trouble concentrating because I'm nervous," "I am so tense in certain situations that I have great difficulty getting by," "When I'm under a lot of pressure, I sometimes have trouble breathing," and "I usually worry about things more than I should." The accepted caseness threshold is a T score of 60, which represents one standard deviation above the mean score in the census-matched standardization sample. Caseness signifies potentially significant symptomatology that may impair functioning. It is estimated that 16% of individuals in the general population will reach caseness. The scales have been found (Fantoni-Salvador & Rogers, 1997; Morey, 1991; Rogers, Flores, Ustad, & Sewell, 1995) to have adequate internal consistency reliability (.90), test-retest reliability (.88), and construct validity among general and Mexican American samples. The Cronbach alpha for the present study was .91.

TRANSLATION. The Spanish version of the PAI (Morey, 1992) was translated by Psychological Assessment Resources, Inc. The background information form, the PRQ85, the Adult Self-Perception Scale, and the SAFE were translated into Spanish by a bilingual researcher of Mexican descent. A second bilingual researcher then back-translated (Brislin, 1980) the measures to English. Content discrepancies were discussed by the researchers until they reached consensus regarding conceptual equivalence.

#### Procedure

The primary investigator (Joseph D. Hovey) contacted community agencies who have well-established ties with migrant farmworker camps in the southeast Michigan/northwest Ohio area. These agencies helped

coordinate data collection by accompanying the present researchers to the camps. Hovey and four research assistants collected data from 10 camps. The research assistants were two master's-level public health workers and two clinical psychology graduate students.

The research assistants underwent intensive training-conducted by Hovey-that provided instruction on the administration of the instruments and focused on issues of cultural competence. In regards to cultural competence, efforts were made to obtain the knowledge, attitudes, skills, and protocols that allowed us to render research activities across cultural lines in an effective manner. Training encompassed many stages, including attempts to understand our own cultural background; to recognize that cultural difference is not synonymous with cultural inferiority; and to acknowledge and learn about the participants' value, belief, and behavioral systems. As an example, a critical factor in the success or failure of the recruitment of participants was our ability to establish trust with the farmworkers. Having the support of the community organizations helped to establish trust. (To note, we informed the farmworkers that continued services from community agencies were not contingent on their participation.) In addition, the research assistants were trained to be aware of some of the cultural norms that cue participants as to whether they can trust them. For instance, in traditional Mexican culture, a way to show appreciation and genuineness toward another is to accept when someone offers a beverage or lunch. Although traditional research methodology discourages this, we felt it was in our best interest to show appreciation toward the participants by accepting what was offered, thus increasing the likelihood that she or he would feel comfortable with us and be more forthright when answering our questions.

At each labor camp, we approached each dwelling and explained the study to potential participants. Individuals who showed interest in participating were evaluated to ascertain that they were living temporarily in

the region to be employed in farmwork. In instances in which several unrelated families lived in the same household, we recruited more than one participant so that each family was represented. Ninety-five percent of individuals contacted agreed to participate. Following written consent, each participant first completed an open-ended interview. The purpose of these interviews was to capture the phenomenology of the migrant farmworker lifestyle. The interview findings are reported in a separate article (Magaña & Hovey, 2002). After the interview, each participant completed a questionnaire. We read questionnaire items to those participants who needed assistance. The participants had the option of participating in either Spanish or English; 90.8% participated in Spanish and 9.2% participated in English. The interview and questionnaire required approximately 1 hr to complete. We reimbursed each individual \$20 for her or his participation.

# Data Analyses

The data analyses are presented in three steps. First, descriptive statistics are presented. Correlation coefficients that were used to assess the relationships among the predictor variables and the anxiety variables are then presented. In particular, Pearson coefficients were used to assess the relationship among the continuous predictors (acculturative stress, social support, self-esteem, perception of religiosity, and influence of religion) and anxiety; and Spearman coefficients were used to assess the relationships among the ordinal predictors (education, income, contribution, and agreement) and anxiety. Finally, a multiple regression analysis of overall anxiety is presented.

#### Results

# Descriptive Statistics

EDUCATION AND INCOME. Most individuals reported relatively low levels of education and

extremely low levels of income. Of the participants, 24.6% reported 0–2 years of education, 26.1% reported 3–5 years, 20% reported 6–8 years, 18.5% reported 9–11 years, 7.7% reported being a high school graduate, and 3.1% reported attending college. A total of 38.1% of the sample reported an annual family income of \$0–\$4,999, 39.7% reported \$5,000–\$14,999, 19% reported \$15,000–\$24,999, and 3.2% reported \$25,000–\$34,999.

CONTRIBUTION TO AND AGREEMENT WITH THE DECISION TO LIVE AS A MIGRANT FARM-WORKER. In response to the question of whether they contributed to the decision to live as a migrant farmworker, 18.5% reported "not at all," 9.2% reported "some [a little bit]," 21.5% reported "moderate [pretty much]," and 50.8% reported "very much [a great deal]." The mean contribution was 3.05 (SD = 1.2). In response to the question of whether they agreed with the decision to live as a migrant farmworker, 6.2% reported "strongly disagreed," 14.1% reported "disagreed," 37.5% reported "agreed," and 42.2% reported "strongly agreed." The mean agreement was 3.16 (SD = 0.9).

Perception of Religiosity and Influence of Religion. The mean score for perception of religiosity was 2.47~(SD=0.8). The mean score for influence of religion was 2.91~(SD=0.95). Based on the anchor points of each question, these means represent moderate religiosity and relatively high influence.

SOCIAL SUPPORT, SELF-ESTEEM, AND ACCULTURATIVE STRESS. The mean score for the PRQ85 was 131.3 (SD = 29.5). This mean represents a moderate level of social support (Weinert, 1987). The mean score for self-esteem was 19.0 (SD = 3.2). This mean represents a moderate level of self-esteem (Messer & Harter, 1986). The mean score for the SAFE scale was 56.4 (SD = 19.7). To note, analyses of variance (ANOVAs) revealed no significant main effects for gender, age (16-25, 26-35, 36-45, 46-55, and

56–65 years), and language of participation on acculturative stress.

ANXIETY. Table 1 lists the means and standard deviations for the PAI anxiety scales. The present sample revealed a relatively high level of overall anxiety (M = 53.9, SD = 12.9) in comparison with the mean of 50.5 (SD = 10.6) found in Morey's (1991) censusmatched standardization sample, t(64) = 2.2, p < .02. In the present sample, ANOVAs revealed no significant main effects for gender, age, and language of participation on the anxiety scales.

Table 2 shows the percentages of individuals reaching caseness on the anxiety scales. The expected 16% was surpassed on all scales. Chi-square tests revealed no significant gender differences on caseness levels.

# Correlations Among Predictor Variables and Anxiety

Table 3 lists the correlations among the predictor variables and the anxiety scales. Low self-esteem, ineffective social support, low religiosity, low influence of religion, low agreement with the decision to live as a migrant farmworker, and elevated acculturative stress were associated with high scores on each anxiety scale. Low contribution to the decision to live as a migrant farmworker and greater education were associated with high scores on each anxiety scale except affective.

Multiple Regression Analysis of Anxiety

Acculturative stress, self-esteem, social support, influence of religion, perception of re-

ligiosity, contribution, agreement, and education were entered together as predictors in a multiple regression analysis of overall anxiety. Significant independent predictors were acculturative stress ( $\beta$  = .57, t = 5.7, p < .0001), contribution to the decision to live as a migrant farmworker ( $\beta$  = -.31, t = -3.0, p < .005), and influence of religion ( $\beta$  = .20, t = 2.0, t < .05). The overall model, t (8, 54) = 5.5, t < .0001, accounted for 45% of the variance in anxiety.

#### Discussion

The major theme of this study is that the immigration experience in concurrence with the migrant farmworker lifestyle may place an individual at risk for psychological problems. As noted, little to no previous research has examined anxiety symptomatology among immigrant migrant farmworkers in the United States. The present findings thus contribute important information to the literature on the mental health of migrant farmworkers, the acculturative stress literature, and the cultural literature on anxiety.

When assessing the mental health of migrant farmworkers in the United States, it is imperative that we consider the differential characteristics of the streams in which migrant farmworkers travel. We cannot, for example, assume that a migrant farmworker in central California will encounter experiences similar to those encountered by a migrant farmworker in southeast Michigan. For instance, as noted, Alderete et al. (1999) found a standard level of depressive symptomatology among Mexican migrant farm-

TABLE 1 Mean Scores and Standard Deviations on Anxiety Scales

| Sample             | Overall |      | Cognitive |      | Affective |      | Physiological |      |
|--------------------|---------|------|-----------|------|-----------|------|---------------|------|
|                    | M       | SD   | M         | SD   | M         | SD   | M             | SD   |
| Overall $(N = 65)$ | 53.9    | 12.9 | 51.8      | 10.6 | 54.9      | 14.3 | 54.0          | 13.2 |
| Female $(n = 40)$  | 54.0    | 12.1 | 51.5      | 10.6 | 55.0      | 14.0 | 54.5          | 11.8 |
| Male $(n = 25)$    | 53.9    | 14.3 | 52.3      | 10.7 | 54.7      | 15.0 | 53.4          | 15.6 |

| TABLE 2 | Percentages    | of | Caseness o  | n. | Anxiety  | Scales |
|---------|----------------|----|-------------|----|----------|--------|
| IADLE 4 | 1 el celliages | OΙ | Caselless 0 | ш. | Allxiety | Scare  |

| Sample             | Anxiety |           |           |               |  |  |
|--------------------|---------|-----------|-----------|---------------|--|--|
|                    | Overall | Cognitive | Affective | Physiological |  |  |
| Overall $(N = 65)$ | 27.7    | 18.5      | 27.7      | 24.6          |  |  |
| Female $(n = 40)$  | 27.5    | 17.5      | 27.5      | 25.0          |  |  |
| Male $(n = 25)$    | 28.0    | 20.0      | 28.0      | 24.0          |  |  |

workers in Fresno County, California. On the other hand, Hovey and Magaña (2000) and the present findings indicate relatively high rates of depression and anxiety symptomatology. Contrary to Alderete et al.'s study, these findings from the Midwest suggest that the experiences that go into being a migrant farmworker may contribute to the development of mental health problems.

The divergent rates of pathology may be partially due to the available support network found in each area of data collection. According to the 2000 census (U.S. Bureau of the Census, 2001b), 37.8% of individuals in Fresno County are of Mexican descent. For the data collection areas in the present study, the percentage of individuals of Mexican descent range from 1.5% in Monroe County, Michigan, to 5.4% in Sandusky County, Ohio. These figures likely translate into a relatively greater number of support services for migrant farmworkers in Fresno

County. For example, central California may provide for more Spanish-friendly churches, radio stations, and other community resources than southeast Michigan and northwest Ohio provide.

# Acculturative Stress in Relation to Anxiety

As noted in our discussion of the acculturative stress model, two acculturating individuals may experience the same acculturative stressors with equal frequency but may not experience the same amount of acculturative stress. The stressors would have a greater negative impact on the individual who appraised them as more threatening. The SAFE acculturative stress scale takes this logic into consideration. It measures not only whether the individual has experienced certain acculturative events but the individual's appraisal of the stressfulness of each event.

TABLE 3 Correlations Among Predictor Variables and Anxiety Scales

|                           | Anxiety |           |           |               |  |  |
|---------------------------|---------|-----------|-----------|---------------|--|--|
| Variable                  | Overall | Cognitive | Affective | Physiological |  |  |
| Self-esteem               | 29***   | 23**      | 25**      | 33****        |  |  |
| Social support            | 24**    | 22**      | 24**      | 19*           |  |  |
| Influence of religion     | 32****  | 16*       | 38****    | 33****        |  |  |
| Perception of religiosity | 27**    | 24**      | 25**      | 27***         |  |  |
| Contribute to farmwork    | 23**    | 26***     | 09        | 26***         |  |  |
| Agreement with farmwork   | 25**    | 23**      | 16*       | 27***         |  |  |
| Education                 | .26**   | .40****   | .10       | .28***        |  |  |
| Income                    | .15     | .24**     | .06       | .09           |  |  |
| Acculturative stress      | .60**** | .40****   | .63****   | .61****       |  |  |

Note. Significance levels are based on one-tailed tests.

 $<sup>*</sup>p < .10. \quad **p < .05. \quad ***p < .01. \quad ****p < .005.$ 

In the present study, acculturative stress was a strong predictor of anxiety. Immigrant migrant farmworkers who experienced elevated levels of acculturative stress reported higher levels of anxiety. These individuals may feel pulled between the influence of traditional values, norms, and customs and the values, norms, and difficulties experienced in the mainstream society. Furthermore, immigrant farmworkers may experience the breaking of ties to family and friends, which may lead to feelings of loss and a reduction in coping resources. Additional acculturative stressors such as economic hardship, language difficulties, feelings of not belonging in the mainstream society, and discrimination may further contribute to distress during the acculturative process. Although this is the first study that has explored the link between acculturative stress and anxiety symptomatology among immigrant farmworkers, the present findings are congruent with previously reported findings that indicated that high acculturative stress was significantly associated with depression among immigrant farmworkers (Hovey & Magaña, 2000) and with depression and suicidal ideation among Mexican (Hovey, 2000b; Hovey & King, 1996) and Central American (Hovey, 2000a) immigrants. The connection between acculturative stress and anxiety is not surprising, given the comorbidity often found (Craig & Dobson, 1995) between anxiety and depression.

Many immigrant farmworkers in the present sample reported experiencing discrimination. For example, the following narratives (from the interview data) vividly capture the experience of discrimination:

There are lots of thieves. On one occasion I got one guy that was trying to steal from our home. I got him and took him to the police. He came to our home and stole and the policeman said we could press charges so we did but the thief was released on the third day because he was a U.S. citizen. The bottom line is that they let him go free because we are here illegally so the police did not pay attention to our charges. (26-year-old male)

At times, the problem (in addition to housing

conditions) is finding housing. There is still lots of racism . . . I was going to rent an apartment with some friends but since we were people of color they did not rent to us. They said that they did not rent to people of color. (27-year-old male)

Many farmworkers also reported being exploited by employers:

They are supposed to pay us weekly or every other week and they take longer in paying us. They make excuses such as they have not gotten the checks. Or they may say to come on another day. We need the money right away and they say that they don't have the money and don't pay us. Some people threaten to go to the police and tell them that we are not being paid, but we are afraid to. Usually the contractors take advantage of the workers who have just arrived here and know nothing about being here. (26-year-old male)

# Social Support and Self-Esteem

Many authors (e.g., Golding & Burnam, 1990; Holtzman & Gilbert, 1987; Sarason, Levine, Basham, & Sarason, 1983) have stated that a larger social network does not ensure that the support will be effective, and therefore the perceived quality of emotional support may be a more accurate indicator of distress than is quantity of support. The present study thus measured the perceived effectiveness of social support rather than access to social support networks. Although social support was not a significant independent predictor in the multiple regression analysis, the bivariate analyses indicated that ineffective social support was moderately associated with high scores on each anxiety scale. These give some support to the notion that effective social support may help immigrant migrant farmworkers cope against anxiety. The present findings are congruent with Hovey and Magaña (2000) and Alderete et al. (1999), who found that effective social support was related to less depression among Mexican migrant farmworkers.

A number of farmworkers spoke about their social isolation and lack of support. As an example, as a 44-year-old man spoke about difficulties he has experienced as a migrant farmworker, he movingly depicted his separation from family and friends in Mexico, the lack of support he experiences as a migrant worker, and his consequent feelings of anguish:

It is difficult when you call family and friends and they say they want us to come back because they want to see us. It is difficult to talk to them because we don't know if we will ever see each other again. Because I am already here, I might as well deal with the separation and lack of support a little longer. My family in Mexico needs money to buy food because it is hard to make money in Mexico. It feels terrible when you know that loved ones are sick in Mexico and you don't know if you will find work to help them.

Because Mexican culture traditionally emphasizes collectivist values and affiliation (Alvarez, 1987), immigrant Mexican migrant workers may feel especially vulnerable when they lack social support. Given that social support helps provide acculturating individuals with a sense of belonging and identity (Smart & Smart, 1995), ineffective social support may lead immigrant farmworkers to feel undervalued and contribute to low self-esteem. Moreover, because selfesteem may help protect against distress during the acculturative process (Espin, 1987; Williams & Berry, 1991), low selfesteem may place the immigrant farmworker at an increased risk for anxiety. Not surprisingly, the bivariate analyses in the present study indicated that low self-esteem was associated with high scores on each anxiety scale.

# Control and Choice in the Decision to Live a Migrant Farmworker Lifestyle

Vega, Kolody, and Valle (1987) and Salgado de Snyder (1987), in their respective studies of depression risk factors among Mexican immigrants, found that those individuals who voluntarily immigrated ("wanted to") to the United States reported significantly less depression than those individuals who involuntarily immigrated ("had to"). These find-

ings suggested that individuals who are willing to immigrate may be at less risk for depression than those who are not willing. That is, greater depression among those who involuntarily migrated may result from the effects of the lack of empowerment to control their lives when migration occurs. This idea has relevance for the present study. Although the present study focused on anxiety and the participants' migration as farmworkers rather than depression and international migration, it was thought that those farmworkers who willingly migrated would reveal less anxiety than those who did not. The present study assessed the farmworkers' willingness to migrate by asking whether they contributed to and agreed with the decision to live a migrant farmworker lifestyle or whether they lived as a migrant worker because of the desire of others. As expected, those farmworkers who were willingly involved in the migrant lifestyle reported significantly less anxiety.

# Limitations and Directions for Future Research

Although caseness scores on the PAI anxiety scales are indicative of anxiety symptomatology that may negatively influence functioning (Morey, 1991), the present study did not directly examine levels of impaired functioning. Future research of anxiety among migrant farmworkers should therefore measure the level of impaired functioning by assessing for specific anxiety disorders rather than anxiety symptomatology per se. This would provide for better generalizations from previous studies (Karno et al., 1989; Vega et al., 1998) that explored anxiety-related disorders among individuals of Mexican descent.

Other limitations of this study include its relatively limited sample size, its single-informant self-report methodology, and its cross-sectional design. Because of the homogeneity of the sample in terms of ethnicity and area sampled, these findings should not be generalized to migrant farmworkers in other regions of the country or to migrant farmworkers of other ethnicities in the Mid-

west. Although the measures used were shown to be reliable in the present study and have previously been validated on Mexican immigrants, these measures have yet to be fully validated on Mexican migrant farmworkers. The present study assessed religion through the use of two items. Because religion and spirituality are salient dimensions of Mexican culture, future research should use a more comprehensive measure of religion that is able to distinguish among the social aspects, religious practices, and spiritual dimensions of religion.

Further research that increases the study's generalizability is needed. This includes research of a representative nature that examines the specific mental pathologies found among migrant farmworkers, explores the mental health differences between migrant and seasonal farmworkers, and—because of the differential social–cultural characteristics found in migrant streams—assesses the psychological functioning of migrant farmworkers in other areas of the country.

# Implications for Prevention and Treatment

PREVENTION. Currently, in the area sampled, there is little to no prevention and treatment options available for immigrant farmworkers who are experiencing psychological problems. This situation most likely exists in other areas of the country as well. The present findings, however, suggest the need for prevention, assessment, and treatment services for immigrant farmworkers.

It is essential that prevention efforts be directed toward those immigrant farmworkers who may be at risk for anxiety disorders. These include farmworkers who are isolated, who lack emotional support and self-esteem, and who experience elevated acculturative stress.

Because of their demanding work schedule, efforts toward prevention should be targeted to times and places that are convenient to migrant farmworkers (e.g., at the labor camps on evenings or weekends; outreach efforts in Texas during the offseason). Such scheduling assumes that migrant farmworkers would be interested in attending preventive activities. However, it is our experience that many migrant farmworkers are receptive to receiving mental health-related information and assistance and thus would be motivated to participate in preventive activities. We have, for example, provided consultation and distributed literature at well-attended migrant health fairs. At these fairs, and during the course of research activities, we have encountered many migrant farmworkers who have expressed a strong interest in the establishment of support groups and informational workshops. We believe that such interest bodes well for the success of preventive and treatment programs.

As alluded to, possible preventive strategies include the establishment of support groups—at camps or local community centers-where farmworkers can discuss their difficult experiences and the ways in which they can cope with distress. Support groups would provide emotional support and increase self-esteem. Educational workshops and presentations, conducted by health professionals, can also be established. These workshops and lectures can address specific topics, including risk factors for anxiety and depression, substance abuse, and how to cope with migratory stressors. These educational programs would be preventive because active participation would help detour future problems in these areas. English classes can be held on-site to offset the inherent difficulties of not knowing English. Mental health services can be integrated into mobile health clinic programs. Mobile clinics have been found (Lee & O'Neal, 1994; Wilson et al., 1995) to be effective in providing health care to rural underserved populations.

The church is another possible prevention resource. Several characteristics of the church may be preventive (Hovey, 1999b). Religious organizations help foster social networks and therefore reduce psychological risk through social support. Church at-

tendance may also provide exposure to basic religious beliefs thought to increase coping. The present findings provide support for this notion. Individuals who reported high levels of religiosity and influence of religion also reported lower anxiety. Church members may use their priests and ministers as sources for emotional support. In addition to providing direct support, the clergy may disseminate information to farmworkers concerning the availability of other community resources. The cultural importance of the church extends beyond scheduled religious services. Therefore, outreach programs sponsored by the church, but not necessarily held at the church, will likely have the respect of farmworkers.

Finally, prevention efforts can be incorporated into Camp Health Aide or Promotora programs (Booker, Robinson, Kay, Gutierrez-Najera, & Stewart, 1997). These programs train former or current migrant farmworkers to provide health information and support to the migrant farmworker community. The promotoras organize and facilitate educational sessions (one example of a topic is HIV/AIDS prevention) and act as liaisons between community health agencies and migrant workers. Promotora programs have been shown (Booker et al., 1997) to be effective preventive resources and to be empowering for migrant farmworkers. In addition to being educational, these programs may help provide social contacts and increase self-esteem among migrant workers.

TREATMENT. Vega, Kolody, Aguilar-Gaxiola, and Catalano (1999) found that, in comparison with Mexican American individuals, Mexican immigrants were less likely to use mental health services. Mexican immigrants appeared more receptive in seeking assistance from general health practitioners than from mental health service providers. These findings have important implications. In their assessment of immigrant Mexican migrant farmworkers, physicians, nurses, and other general health providers should consider the influence of mental health problems on the farmworkers' overall health and

functioning. If necessary, the practitioner should make an effort to help destigmatize mental health care and refer the farmworker to a mental health provider.

For the immigrant farmworker who may be experiencing psychological difficulties during the acculturation process, the findings underline the importance of assessment and treatment within a cultural context. In evaluating and treating the immigrant farmworker, the clinician should carefully address the following: the stressors connected to migrant farmwork and acculturation, including the migration experience itself; the farmworker's sense of self; social support; the farmworker's hopes and expectations for the future; and past and present coping strategies, including religion. Because of the migratory nature of their lifestyle, treatment for migrant farmworkers should be short term in focus. Moreover, the clinician should be aware of health services that are available in the farmworker's other areas of residence.

# References

Alderete, E., Vega, W. A., Kolody, B., & Aguilar-Gaxiola, S. (1999). Depressive symptomatology: Prevalence and psychosocial risk factors among Mexican migrant farmworkers in California. *Journal of Community Psychology*, 47, 457–471.

Alvarez, R. R. (1987). *Familia*. Berkeley: University of California Press.

Barger, W. K., & Reza, E. M. (1994). *The farm labor movement in the Midwest*. Austin: University of Texas Press.

Booker, V. K., Robinson, J. G., Kay, B. J., Gutier-rez-Najera, L., & Stewart, G. (1997). Changes in empowerment: Effects of participation in a lay health promotion program. *Health Education and Behavior*, *24*, 452–464.

Brislin, R. W. (1980). Translation and content analysis of oral and written material. In H. C. Triandis & J. W. Berry (Eds.), *Handbook of cross-cultural psychology: Vol. 2. Methodology* (pp. 389–444). New York: Wiley.

Comer, R. (2001). Abnormal psychology. New York: Worth.

- Craig, K. D., & Dobson, K. S. (1995). Anxiety and depression in adults and children. Thousand Oaks, CA: Sage.
- Espin, O. M. (1987). Psychological impact of migration on Latinas. Psychology of Women Quarterly, 11, 489–503.
- Fantoni-Salvador, P., & Rogers, R. (1997). Spanish versions of the MMPI-2 and PAI: An investigation of concurrent validity with Hispanic patients. *Assessment*, 4, 29-39.
- Fuertes, J. N., & Westbrook, F. D. (1996). Using the social, attitudinal, familial, and environmental (S.A.F.E.) acculturation stress scale to assess the adjustment needs of Hispanic college students. Measurement and Evaluation in Counseling and Development, 29, 67–76.
- Goldfarb, R. L. (1981). Migrant farm workers: A caste of despair. Ames: Iowa State University Press.
- Golding, J. M., & Burnam, M. A. (1990). Stress and social support as predictors of depressive symptoms in Mexican Americans and non-Hispanic Whites. *Journal of Social and Clinical Psychology*, 9, 268–287.
- Holtzman, E. H., & Gilbert, L. A. (1987). Social support networks for parenting and psychological well-being among dual-earner Mexican-American families. *Journal of Community Psychology*, 15, 176–186.
- Hovey, J. D. (1999a). Psychosocial predictors of acculturative stress in Central American immigrants. *Journal of Immigrant Health*, 1, 187–194.
- Hovey, J. D. (1999b). Religion and suicidal ideation in a sample of Latin American immigrants. *Psychological Reports*, 85, 171–177.
- Hovey, J. D. (2000a). Acculturative stress, depression, and suicidal ideation among Central American immigrants. Suicide and Life-Threatening Behavior, 30, 125–139.
- Hovey, J. D. (2000b). Acculturative stress, depression, and suicidal ideation in Mexican immigrants. Cultural Diversity and Ethnic Minority Psychology, 6, 134–151.
- Hovey, J. D. (2000c). Psychosocial predictors of acculturative stress in Mexican immigrants. *Journal of Psychology*, 134, 490–502.
- Hovey, J. D., & King, C. A. (1996). Acculturative stress, depression, and suicidal ideation among immigrant and second generation Latino adolescents. *Journal of the American Acad*emy of Child and Adolescent Psychiatry, 35, 1183–1192.

- Hovey, J. D., & King, C. A. (1997). Suicidality among acculturating Mexican-Americans: Current knowledge and directions for research. Suicide and Life-Threatening Behavior, 27, 92–103.
- Hovey, J. D., & Magaña, C. (2000). Acculturative stress, anxiety, and depression among Mexican immigrant farmworkers in the Midwest United States. *Journal of Immigrant Health*, 2, 119–131.
- Karno, J., Golding, J. M., Burnam, M. A., Hough, R. L., Escobar, J. I., Wells, K. M., & Boyer, R. (1989). Anxiety disorders among Mexican Americans and non-Hispanic Whites in Los Angeles. *Journal of Nervous and Mental Disease*, 177, 202–209.
- Knight, G. P., Virdin, L. M., Ocampo, K. A., & Roosa, M. (1994). An examination of the cross-ethnic equivalence of measures of negative life events and mental health among Hispanic and Anglo-American Children. American Journal of Community Psychology, 22, 767–783.
- Lazarus, R. S. (1999). Stress and emotion: A new synthesis. New York: Springer.
- Lee, E. J., & O'Neal, S. (1994). A mobile clinic experience: Nurse practitioners providing care to a rural population. *Journal of Pediatric Health Care*, 8, 12–17.
- Lesser, I. M. (1996). Diagnostic considerations in anxiety disorders. In C. Lindemann (Ed.), *Handbook of the treatment of the anxiety disorders* (pp. 17–41). Northvale, NJ: Jason Aronson.
- MacMillan, A. (1957). The Health Opinion Survey: Technique for estimating prevalence of psychoneurotic and related types of disorders in communities. *Psychological Reports*, *3*, 325–329.
- Magaña, C. G., & Hovey, J. D. (2002). Psychosocial stressors associated with Mexican migrant farmworkers in the Midwest United States. Manuscript submitted for publication.
- Mena, F. J., Padilla, A. M., & Maldonado, M. (1987). Acculturative stress and specific coping strategies among immigrant and later generation college students. *Hispanic Journal* of Behavioral Sciences, 9, 207–225.
- Messer, B., & Harter, S. (1986). *Manual: Adult Self-Perception Scale*. Denver, CO: University of Denver Press.
- Migrant Clinicians Network. (2002). Farmworker health issues. Retrieved May 4, 2002: http://

- $www.migrantclinician.org/about/mighealth. \\html$
- Morey, L. C. (1991). Personality Assessment Inventory: Professional manual. Odessa, FL: Psychological Assessment Resources.
- Morey, L. C. (1992). Personality Assessment Inventory: Spanish translation. Odessa, FL: Psychological Assessment Resources.
- Napolitano, M., & Goldberg, B. (1998). Migrant health. In S. Loue (Ed.), *Handbook of immi*grant health (pp. 261–276). New York: Plenum Press.
- Padilla, A. M., Alvarez, M., & Lindholm, K. J. (1986). Generational status and personality factors as predictors of stress in students. Hispanic Journal of Behavioral Sciences, 8, 275–288.
- Radloff, L. S. (1977). The CES-D scale: A selfreport depression scale for research in the general population. Applied Psychological Measurement, 1, 385–401.
- Rogers, R., Flores, J., Ustad, K., & Sewell, K. W. (1995). Initial validation of the Personality Assessment Inventory—Spanish version with clients from Mexican American communities. *Journal of Personality Assessment*, 64, 340–348.
- Rothenberg, D. (1998). With these hands: The hidden world of migrant farmworkers today. New York: Harcourt Brace.
- Salgado de Snyder, V. N. (1987). Factors associated with acculturative stress and depressive symptomatology among married Mexican immigrant women. *Psychology of Women Quarterly*, 11, 475–488.
- Sarason, I. G., Levine, H. M., Basham, R. B., & Sarason, B. R. (1983). Assessing social support: The Social Support Questionnaire. *Jour*nal of Personality and Social Psychology, 44, 127–139.
- Smart, J. F., & Smart, D. W. (1995). Acculturative stress of Hispanics: Loss and challenge. *Journal of Counseling and Development*, 73, 390–396.
- U.S. Bureau of the Census. (2001a). Overview of race and Hispanic origin: Census 2000 brief. Washington, DC: U.S. Department of Commerce.
- U.S. Bureau of the Census. (2001b). Profile of general demographic characteristics: 2000 census of

- population and housing. Washington, DC: U.S. Department of Commerce.
- Vega, W. A., Kolody, B., Aguilar-Gaxiola, S., Alderete, E., Catalano, R., & Caraveo-Anduaga, J. (1998). Lifetime prevalence of DSM-III-R psychiatric disorders among urban and rural Mexican Americans in California. Archives of General Psychiatry, 55, 771-778.
- Vega, W. A., Kolody, B., Aguilar-Gaxiola, S., & Catalano, R. (1999). Gaps in service utilization by Mexican Americans with mental health problems. American Journal of Psychiatry, 156, 928–934.
- Vega, W. A., Kolody, B., & Valle, J. R. (1987). Migration and mental health: An empirical test of depression risk factors among immigrant Mexican women. *International Migration Review*, 21, 512–530.
- Vega, W., Warheit, G., & Palacio, R. (1985). Psychiatric symptomatology among Mexican American farmworkers. Social Science and Medicine, 20, 39–45.
- Warren, R., & Zgourides, G. D. (1991). Anxiety disorders: A rational-emotive perspective. New York: Pergamon Press.
- Weinert, C. (1987). A social support measure: PRQ85. Nursing Research, 36, 273–277.
- Weinert, C., & Brandt, P. A. (1987). Measuring social support with the Personal Resource Questionnaire. Western Journal of Nursing Research, 9, 589–602.
- Weinert, C., & Tilden, V. P. (1990). Measures of social support: Assessment of validity. *Nursing Research*, 39, 212–216.
- Williams, C. L., & Berry, J. W. (1991). Primary prevention of acculturative stress among refugees: Application of psychological theory and practice. *American Psychologist*, 46, 632–641.
- Wilson, K. G., Crupi, C. D., Greene, G., Gaulin-Jones, B., Dehoux, E., & Korol, C. T. (1995).
  Consumer satisfaction with a rehabilitation mobile outreach program. Archives of Physical Medicine and Rehabilitation, 76, 899–904.
- Winokur, G., & Coryell, W. (1991). Anxiety disorders: The magnitude of the problem. In W. Coryell & G. Winokur (Eds.), *The clinical management of anxiety disorders* (pp. 3–9). New York: Oxford University Press.