Cognitive, Affective, and Physiological Expressions of Anxiety Symptomatology Among Mexican Migrant Farmworkers: Predictors and Generational Differences

Joseph D. Hovey, Ph.D.
Cristina G. Magaña, M.A.

ABSTRACT: Scant research has examined the mental health of migrant farmworkers in the United States. The purposes of the present study were threefold: to assess the prevalence levels of anxiety symptoms in a sample of Mexican migrant farmworkers in the Midwest United States; to examine the relationship between acculturative stress and anxiety; and to determine the variables that significantly predict anxiety. High 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 the decision to live a migrant farmworker lifestyle, low religiosity, and high education were significantly related to high anxiety levels. The overall findings suggest that Mexican migrant farmworkers who experience high acculturative stress may be at risk for developing anxiety-related disorders. The findings highlight the necessity of establishing prevention and treatment services for migrant farmworkers that increase levels of emotional support, self esteem, and coping skills.

KEY WORDS: anxiety; migrant farmworker; acculturative stress; prevention; social support.

According to the 2000 census (U.S. Census Bureau, 2001), Latino/a individuals now comprise the largest minority group in the United States, numbering nearly 36 million individuals. The U.S. Census Bureau (1996) estimates that two-thirds of Latino/a individuals in the U.S. are of Mexican heritage. Despite these growing numbers, and despite the fact that many authors (e.g., Lesser, 1996) suggest that anxiety disorders are the most common of all psychiatric disorders, very few studies have assessed anxiety symptomatology among Mexican Americans.

Using data from the Los Angeles site of the Epidemiological Catchment Area Program (ECA), Karno et al. (1989) estimated the lifetime prevalences of anxiety disorders among immigrant Mexicans and Mexican Americans born in the U.S. They assessed prevalences for any anxiety disorder, panic disorder, agoraphobia, simple phobia, social phobia, and generalized anxiety disorder. They found that, in comparison to Mexican immigrants, Mexican Americans 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 U.S. may be less distressed than those who did not migrate.

Vega et al. (1998), in a sample from Fresno, CA, also found greater lifetime prevalences of anxiety disorders for Mexican Americans in comparison to Mexican immigrants: 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%). Their focus on the comparison between immigrants and nonimmigrants leads the reader to conclude that immigrants are not at risk for anxiety. Their data, however, suggest that this conclusion is too general. Immigrants who resided in the U.S. for more than 12 years reported a level of any anxiety disorder that was identical to the level reported by Mexican Americans. Thus, time in the U.S. seems to be an important explanatory factor. Acculturation stressors, over time, may have lead to increased distress among the immigrant portion of their sample (Hovey, 2000a, 2000b).

MEXICAN MIGRANT FARMWORKERS AND MENTAL HEALTH

There are approximately five million migrant farmworkers in the U.S. (Napolitano & Goldberg, 1998). Migrant farmworkers are individuals

who annually migrate from one place to another to earn a living in agriculture. This is in contrast to seasonal farmworkers who 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.

Several authors (e.g., Barger & Reza, 1994; Rothenberg, 1998) have noted the difficulties intrinsic to a migrant farmworker lifestyle. For example, migrant farmworkers are socially marginal, which is intensified by the physical isolation, discrimination, and limited opportunities which they experience. Most migrant farmworkers earn less than $6,000 per year. Farmwork is strenuous and workers often encounter dangerous working conditions such as being sprayed with pesticides. Farm labor has the highest incidence of workplace fatalities in the U.S. Child labor is common and the average education level of migrant farmworkers is sixth-grade. The housing and sanitation at migrant labor camps are often substandard. For example, small homes that lack water and toilet facilities are commonplace and drinking water and toilet facilities are often not readily available in the fields. Finally, migrant farmworkers have very limited access to medical care, although their health conditions are among the worst in the United States with an estimated average life expectancy of 49 years.

Because of the difficult living conditions of migrant farmworkers, migrant farmworkers may be at psychiatric risk and thus susceptible to anxiety-related problems. Little research, however, has explored mental health among migrant farmworkers in the U.S.

Vega, Warheit, and Palacio (1985) examined psychiatric distress among Mexican American farmworkers in central California. 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 (aged 40 to 59 years) reported elevated levels of distress in comparison to other age groups. Vega et al. conjectured that middle age is an especially high-risk period for farmworkers since significant occupational and life hazards exist to progressively degrade farmworkers' health and functional capacities. According to Vega et al., the severe lifestyle experienced by Mexican American farmworkers places them at extraordinary psychiatric risk.

Alderete, Vega, Kolody, and Aguilar-Gaxiola (1999), in a sample of Mexican migrant farmworkers in Fresno County, examined the relationship of depressive symptoms to demographic characteristics, social support, discrimination, language conflict, and worries over legal residence status. They found that 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 (Radloff, 1977). Typically about 20% of individuals from general population samples will reach caseness. This standard level of depression may be partially due to the available support network in the Fresno area (38% of individuals are of Mexican heritage, U.S. Census Bureau, 2001). Not surprisingly, farmworkers with low instrumental and emotional support reported greater depression. In addition, farmworkers who experienced high discrimination reported greater depression.

PURPOSES OF PRESENT STUDY

The above findings suggest that migrant farmworkers may be at risk for the development of psychiatric problems. Our first purpose was to assess—among Mexican migrant farmworkers in the Midwest United States—the prevalence levels of symptomatology related to anxiety disorders. We expected high levels of overall anxiety and elevated levels on the following modalities of the expression of anxiety: cognitive, affective, and physiological. Our next purpose was to determine the best predictors of anxiety. The predictors explored were 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 95 Mexican migrant farmworkers (58 females, 37 males) in the northwest Ohio/southeast Michigan area. The age of our sample ranged from 16 to 65 ($M = 30.1$, $SD = 11.3$). Of the sample, 42.1% were aged 16 to 25 years; 25.3% were 26–35; 20% were 36 to 45; 10.5% were 46 to 55; and 2.1% were 56 to 65. Of the participants, 68.4% were first generation (immigrants); 26.3% were second generation; and 5.3% were third generation.

Of the participants, 53.7% were married; 26.3% were never married; 6.3% were separated or divorced; 4.2% were widowed; and 9.5% were in a common law marriage or living together. A total of 84.2% of the participants were Catholic; 6.3% were "Christian"; 4.2% were Evangelical Pentecost; 3.2% reported "other" religious affiliations; and 2.1% reported no religious affiliation.

Measures

A self-administered battery of questionnaires was used. Our background information form assessed age, gender, marital status, ethnicity, generational status, religiosity,

education, family income, language use, and 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 (Hovey, 1999) 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.) "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 Questionnaire. 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 ("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 "I belong to a group in which I feel important"; "I have people to share social events and fun activities with"; and "I can't count on my friends to help me with problems." The PRQ85—Part 2 has been found (Hovey, 2000b; Weinert & Tilden, 1990) 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 .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 6 items. Each item is scored 1 to 4. Possible scores range from 6 to 24, with higher scores indicating 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.

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 applies to them on a 5-point ("not stressful" to "extremely stressful"). Examples of items include "People think I am unsociable when in fact I have trouble communicating in English"; and "It bothers me that family members I am close to do not understand my new values." If an item does not apply to a participant, it is assigned a score of 0. The present investigators 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 present scale thus consisted of 26 items, with possible scores ranging from 0 to 130. The SAFE scale has been found (Hovey, 2000b; Mena et al., 1987) 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 Personality Assessment Inventory (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 ("false, not at all true" to "very true"). Higher scores indicate higher anxiety. Examples of items are "I often have trouble concentrating because I'm nervous"; "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 potentially significant symptomatology which may impair functioning. It is estimated that 16% of general population individuals 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 FAD, the PRQ-85, the Adult Self-Perception Scale, and the SAFE were translated into Spanish through the double-translation procedure (Brislin, 1980) with the help of two translators.

Procedure

The primary investigator contacted community agencies who have well-established ties with migrant farmworker camps in the northwest Ohio/southeast Michigan area. These agencies helped coordinate data collection by accompanying the present researchers to the camps. The primary investigator and four research assistants collected data from ten camps. The research assistants underwent intensive training—conducted by the primary investigator—that provided instruction on the administration of the instruments and focused on issues of cultural competence.

At each labor camp, we recruited one farmworker from each dwelling. In instances where several unrelated families lived in the same household, we recruited more than one participant so that each family was represented. Following written consent, each participant first completed an open-ended interview. The purpose of these interviews was to capture the phenomenology of being a migrant farmworker. The interview findings are reported in a separate paper (Magaña & Hovey, 2002). After the interview each participant completed a questionnaire. We read questionnaire items to those participants who needed assistance. Of the participants, 62% participated in Spanish; 37.9% participated in English. We reimbursed each individual $20.00 for her or his participation.

Data Analyses

After presenting descriptive statistics, we detail bivariate and multivariate analyses of the relationships among the predictor variables and the anxiety variables. We used Pearson coefficients to determine the relationship among the continuous predictors

(acculturative stress, social support, self esteem, perception of religiosity, influence of religion) and anxiety variables; Spearman coefficients to assess the relationships among the ordinal predictors (contribution, agreement, education, income) and anxiety variables; and a multiple regression to determine the best predictors of overall anxiety.

RESULTS

Descriptive Statistics

Education and Income. Of the participants, 16.8% reported 0–2 years of education; 17.9% reported 3–5 years; 19.0% reported 6–8 years; 32.6% reported 9 to 11 years; 9.5% reported being a high school graduate; and 4.2% reported attending college. Forty percent of the sample reported an annual family income of $0–$4,999; 40.0% reported $5,000–$14,999; 16.7% reported $15,000–$24,999; 3.3% reported $25,000–$34,999.

Contribution to and Agreement with the Decision to Live as a Migrant Farmworker. In response to the question of whether they contributed to the decision to live as a migrant farmworker, 22.1% reported "not at all"; 12.6% reported "some [a little bit]"; 21.1% reported "moderate [pretty much]"; and 44.2% reported "very much [a great deal]." The mean contribution was 2.87 (*SD* = 1.2). In response to the question of whether they agreed with the decision to live as a migrant farmworker, 7.5% reported "strongly disagreed"; 17.0% reported "disagreed"; 38.3% reported "agreed"; and 37.2% reported "strongly agreed." The mean agreement was 3.05 (*SD* = 0.92).

Perception of Religiosity and Influence of Religion. The mean score for perception of religiosity was 2.56 (*SD* = 0.82). The mean score for influence of religion was 2.94 (*SD* = 0.93).

Social Support, Self Esteem, and Acculturative Stress. The mean score for the PRQ85 was 132.91 (*SD* = 26.48). The mean score for self esteem was 18.33 (*SD* = 3.35). The mean score for the SAFE scale was 55.59 (*SD* = 17.9).

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* = 55.2) in comparison to the mean of 50.5 found

TABLE 1

Mean Scores and Standard Deviations
on Anxiety Scales

	Anxiety Overall	Anxiety Cognitive	Anxiety Affective	Anxiety Physiological
	Mean SD			
Overall Sample				
(N = 95)	55.2 (12.3)	53.6 (10.5)	55.3 (13.4)	55.0 (12.8)
Females (n = 58)	56.2 (12.2)	54.5 (11.0)	56.3 (13.3)	56.2 (12.4)
Males (n = 37)	53.3 (12.3)	52.2 (9.8)	53.6 (13.4)	53.2 (13.5)
Immigrant Status				
(n = 65)	53.9 (12.9)	51.8 (10.6)	54.9 (14.3)	54.0 (13.3)
Nonimmigrant				
Status (n = 30)[a]	57.7 (10.6)	57.6 (9.4)	56.1 (11.4)	57.2 (11.7)

[a]Nonimmigrants reported significantly greater cognitive anxiety in comparison to immigrants, F (1, 93) = 6.7, $p < .01$.

in Morey's (1991) census-matched standardization sample, t (94) = 3.7, $p < .005$. ANOVAs revealed no significant main effects for gender, age (16–25 years, 26–35, 36–45, 46–55, 56–65), and language of participation on the anxiety scales. A significant main effect was found for generation level on cognitive anxiety, F (1, 93) = 6.7, $p < .01$. Nonimmigrants reported greater cognitive anxiety in comparison to immigrants.

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. In comparison to immigrants, nonimmigrants reported a significantly higher level of caseness on cognitive anxiety, χ^2 (1, N = 95) = 5.05, $p < .03$.

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 contribution, low agreement, greater education, and elevated acculturative stress were associated with high scores on each anxiety scale. Low

TABLE 2

Percentages of Caseness on Anxiety Scales

	Anxiety Overall	Anxiety Cognitive	Anxiety Affective	Anxiety Physiological
Overall Sample (N = 95)	29.5%	25.3%	31.6%	27.4%
Females (n = 58)	34.5%	29.3%	32.8%	29.3%
Males (n = 37)	21.6%	18.9%	29.7%	24.3%
Immigrant Status (n = 65)	27.7%	18.5%	27.7%	24.6%
Nonimmigrant Status (n = 30)[a]	33.3%	40.0%	40.0%	33.3%

[a]Nonimmigrants reported a significantly higher level of caseness on cognitive anxiety in comparison to immigrants, χ^2 (1) = 5.05, $p < .03$.

TABLE 3

Correlations Among Predictor Variables and Anxiety Scales

	Anxiety Overall	Anxiety Cognitive	Anxiety Affective	Anxiety Physiological
Self Esteem	−.31****	−.30****	−.26***	−.31****
Social Support	−.19**	−.18**	−.22***	−.13*
Influence of Religion	−.20**	−.03	−.26****	−.25***
Perception of Religiosity	−.16**	−.07	−.17**	−.20**
Contribute to Farmwork	−.22***	−.25***	−.13*	−.21**
Agreement with Farmwork	−.29****	−.32****	−.18**	−.27****
Education	.30****	.40****	.15*	.29****
Income	.11	.20**	.06	−.01
Acculturative Stress	.55****	.33****	.59****	.55****

Note. Significance levels are based on one-tailed tests.
*$p < .10$, **$p < .05$, ***$p < .01$, ****$p < .005$.

influence of religion and low religiosity were associated with high scores on each anxiety scale except cognitive.

Multiple Regression Analysis of Anxiety

Acculturative stress, self esteem, social support, influence of religion, perception of religiosity, contribution, agreement, and education were entered together as predictors in a multiple regression analysis of overall anxiety. Significant independent predictors were acculturative stress ($\beta = .52$, $t = 5.7$, $p < .0001$), contribution ($\beta = -.25$, $t = -2.8$, $p < .005$), and education ($\beta = .14$, $t = 1.6$, $p < .10$). The overall model (F [8, 84] = 5.9, $p < .0001$) accounted for 36% of the variance in anxiety.

DISCUSSION

Level of Anxiety Among Migrant Farmworkers

The present findings indicated that about 30% of farmworkers reached caseness on each anxiety scale. These percentages are elevated in comparison to the expected 16% (Morey, 1991). It should be noted that the high overall rate of anxiety found in the present sample does not imply that all migrant farmworkers, per se, are highly anxious, but that the experiences that go into being a migrant farmworker potentially influence psychiatric status.

Predictors of Anxiety

Acculturative Stress. Migrant farmworkers who experienced elevated levels of acculturative stress reported higher anxiety. These farmworkers may feel caught between the influence of traditional values and norms and the values, norms, and hardships experienced in the mainstream society. Because of their continual migration, they may experience the breaking of ties to family and friends, which may lead to feelings of loss and a reduction in coping. Migrant workers may experience additional acculturative stressors including economic hardship, language difficulties, feelings of not belonging in the new society, and discrimination. The present findings are congruent with previous findings (Hovey, 2000a, 2000b) that suggested that Mexican and Central American immigrants experiencing high acculturative stress were at risk for depression and suicidal ideation.

Many farmworkers reported encountering discrimination. The following interview narratives, from a 22-year-old female and a 31-year-old female, respectively, vividly capture these experiences.

We don't feel welcomed by the people in the area. When we are out in the field working, some guys pass through there and call us names. My dad said, "Just try to ignore them." We don't come over here to do harm. We just come here to work. . . . There are always racists.

Yesterday we were looking to buy a car. We saw this car for sale and it was off the road. We pulled off the side where the car owner lives. The owner came out and asked what we wanted. We told him we were interested in the car for sale. . . . He told us to leave his property.

Social Support and Self Esteem. The present study assessed the perceived effectiveness of social support rather than access to social support networks. Many authors (e.g., 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 social support may be a more accurate predictor of psychiatric distress than is quantity of social support. The present findings indicated a significant connection between ineffective social support and heightened anxiety, thus suggesting that effective social support may help migrant farmworkers cope against anxiety.

The following is a narrative example from a 36-year-old male farmworker. In speaking about stressors he has experienced in his migrant lifestyle, he poignantly described his lack of social support and its connection to feelings of distress:

It's difficult coming here. . . . I cry because of the loneliness and because there is nobody to talk to. You can't just walk up to someone and carry on a conversation. It makes me feel like a stray vagrant. I get this hopeless feeling, a helpless feeling. You want to make friends with somebody and you can't because everybody knows that you are just temporary and just passing through, so they don't trust you. They don't want to take the responsibility of helping you.

Because Mexican culture emphasizes collectivist values and affiliation (Alvarez, 1987), Mexican migrant workers may feel particularly vulnerable when they lack support. Social support helps provide acculturating individuals with a sense of belonging and identity (Smart & Smart, 1995). Thus, ineffective social support may contribute to feelings of being undervalued and low self esteem. Moreover, because healthy self esteem may protect against distress during the acculturative process (Espin, 1987), low self esteem may place an individual at an increased

risk for anxiety. Not surprisingly, the present findings indicated a very strong inverse relationship between self esteem and anxiety.

Control and Choice in the Decision to Live a Migrant Farmworker Lifestyle. Vega, Kolody, and Valle (1987) and Salgado de Snyder (1987), in examining depression among Mexican immigrants, found that individuals who voluntarily immigrated ("wanted to") to the U.S. reported significantly less depression than individuals who involuntarily immigrated ("had to"). Their findings suggest that individuals who are willing to immigrate may be at less risk for depression than those who are not willing. Greater depression among those who unwillingly migrate may be due to the influence of the lack of empowerment to control their lives when migration occurs. Although the present study focused on the migration of farmworkers rather than 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 due to the desire of others. As expected, those farmworkers who were willingly involved in the migrant lifestyle reported significantly less anxiety.

Education and Immigrant Status. Williams and Berry (1991) stated that education may help provide acculturating individuals with the resources to cope with the mainstream society. They believed that educated individuals may have greater cognitive, economic, and social resources with which to deal with acculturative changes. With this notion in mind, the direction and strength of education as a predictor in the present study was unexpected. High education was related to high scores on each anxiety scale, especially for cognitive anxiety. Generally, immigrants in the present sample were less educated than nonimmigrants $(\chi^2[5, N = 95] = 29.34, p < .0001)$. The association between high education and greater anxiety may partly depend on the question of comparison. For immigrant workers, the context for comparison may be a lower socioeconomic experience in Mexico. On the other hand, the point of reference for more educated nonimmigrant farmworkers may swing towards the mainstream. In other words, farmworkers who are more educated may be more sensitive to the discrepancy between their current life conditions and those of other individuals in the U.S. Those who are more educated may also, at some point, have set life goals other than migrant farmwork and may believe that they failed to achieve these

goals. This notion is supported by the present finding that higher educated nonimmigrants reported significantly greater cognitive anxiety symptoms than did lower educated immigrants.

Clinical Implications

The present findings suggest the need for prevention, assessment, and treatment services for migrant farmworkers. It is crucial that we direct our prevention efforts toward those farmworkers who may be at risk for anxiety-related disorders. These include farmworkers who are isolated, lack emotional support and self esteem, and who experience elevated acculturative stress. Possible preventive strategies include the establishment of support groups—at the camps, local community centers, or churches—where migrant farmworkers can talk about the difficulties that they experience and the ways in which they can cope with distress. Support groups would provide emotional support and increase self esteem.

In addition, educational workshops and presentations, conducted by health professionals, can be established at migrant camps, community centers, or local schools. These lectures and workshops can address particular topics such as 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 thwart future problems in these areas.

Finally, prevention efforts can be incorporated into lay health worker programs (Booker, Robinson, Kay, Gutierrez-Najera, & Stewart, 1997) which utilize former or current migrant farmworkers who are trained to provide health information to migrant farmworkers. The lay health workers organize and run educational and preventive workshops (HIV/AIDS risk factors, e.g.) and act as liaisons between community health agencies and migrant farmworker communities. Lay health worker programs have been shown (Booker et al., 1997) to be effective preventive resources and to be very empowering for migrant farmworkers. In addition to being educational, these programs may provide social contacts and increase self esteem among migrant workers.

The clinical evaluation and treatment of migrant farmworkers should carefully address the stressors related to migrant farmwork and acculturation, their social support, sense of self, hopes and expectations for the future, and their 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 clini-

cian should be aware of the psychiatric services that are available in the farmworkers' other areas of residence.

Limitations and Directions for Future Research

This study should be considered preliminary because of its relatively limited sample size, single-informant self-report method, and cross-sectional design. Because of the homogeneity of the sample in terms of ethnicity and area sampled, these findings should not be generalized to other migrant farmworker streams. Further research should concentrate on increasing the study's generalizability. This includes research of a representative nature that assesses the specific pathologies found among migrant farmworkers, explores the psychiatric differences between migrant and seasonal farmworkers, and examines the psychiatric functioning of migrant farmworkers in other migrant streams.

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