

# **Psychosocial Stressors Associated With Mexican Migrant Farmworkers in the Midwest United States**

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Although estimates suggest that there are upwards of 5 million migrant farmworkers in the United States, scant research has explored the stressors associated with their lifestyle. Contrary to previous work, the present study directly explored migrant farmworkers' *own* perceptions of what is difficult in their lives. The purposes of the present study were to qualitatively explore, from a phenomenological standpoint, the stressors associated with living as a migrant farmworker in the Midwest United States; and to determine the stressors that were most strongly related to symptoms of anxiety and depression. The findings indicated that 18 stressors were commonly experienced by the migrant farmworkers and that the farmworkers experienced overall elevated levels of anxiety and depression. A number of stressors that were not previously reported in the literature were identified. The stressors of "rigid work demands" and "poor housing conditions" were significantly associated with higher levels of anxiety and "low family income/living in poverty" and "rigid work demands" were significantly associated with depression. Implications of findings and prevention strategies are discussed.

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**KEY WORDS:** migrant farmworker; psychosocial stressors; anxiety; depression; Mexican immigrants.

## **INTRODUCTION**

### **Definition and Demographic Characteristics of Migrant Farmworkers**

It has been estimated (1, 2) that U.S. agricultural growers employ between 3 and 5 million migrant farmworkers annually. It has been further estimated (3) that 80% of migrant farmworkers in this country are of immigrant status and that over 90% of these individuals are of Mexican origin. Migrant farmworkers are individuals who migrate from one locale to another to earn a living in agriculture. They generally live in the southern half of the country during the winter and migrate north before the planting or harvesting season.

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Migrant farmworkers usually travel through one of three agricultural streams (4). The Western stream comprises primarily Mexican immigrants who return to Mexico, southern California, or Arizona after the harvest season (5, 6). The Midwestern stream comprises primarily Mexican individuals who migrate from south Texas and Mexico (7, 8). The Eastern stream begins in Florida and runs along the east coast. It comprises various ethnicities: primarily Mexican individuals, as well as Central Americans, South Americans, Puerto Ricans, and African Americans (2, 9).

Besides ethnicity and the migration patterns of farmworkers, other characteristics differentiate the streams. For example, there are differences in the types of crops (e.g., field crops such as dry beans and cucumbers in the Midwest; fruit crops such as citrus in the west coast) that are most commonly harvested in each stream (8, 10). Generally, there are better housing conditions in the Western stream (2). In addition, the Western stream—through California—is more heavily traveled than the Midwestern stream that runs through Ohio and Michigan. Upwards

of 300,000 migrant farmworkers work in California (5, 6, 11) and over half of these individuals work in California's central valley (5). This compares to the estimated 14,000 migrant farmworkers in Ohio (7) and the 40,000 migrant farmworkers in Michigan (8).

As a further comparison, according to the 2000 census (12), 38% of individuals in Fresno County are of Mexican descent. For the data collection areas in the present paper, the percentage of individuals of Mexican descent range from 1.5% in Monroe County, Michigan to 5.4% in Sandusky County, Ohio. The above statistics likely translate into more support services for farmworkers in California's central valley. For instance, central California may provide for a greater social network and more Spanish-friendly churches, media, and other community resources in comparison to southeast Michigan and northwest Ohio. Spanish-speaking migrant workers in central California may thus encounter less language barriers than do Spanish-speaking migrants in the Midwest.

#### Difficulties Associated With the Migrant Farmworker Lifestyle

Several authors (e.g., 1, 3, 13–15) have noted difficulties that appear to be associated to life as a migrant farmworker. For example, most migrant farmworker families live in poverty, earning less than \$7,500 per year. Because the migratory lifestyle may lead to difficulties in meeting the educational needs of children, the average education level of migrant farmworkers is sixth grade. Few migrant farmworkers have consistent health care, due to low income and lack of insurance benefits, and thus they suffer among the most severe health problems of any group in the United States. Furthermore, migrant farmworkers are often faced with social and geographical isolation, discrimination, and abuses by employers and supervisors. Although migrant workers typically live in labor camps provided by their employers, the housing and sanitation are often substandard. Finally, migrant farmworkers are often exposed to dangerous work conditions. The occupational health problems of migrant farmworkers include pesticide poisoning, heat stroke, eye and musculoskeletal injuries, noise-induced hearing loss, and machine-related injuries. Farm labor has the highest incidence of workplace fatalities in the United States.

It seems that the above conditions associated with the migrant farmworker lifestyle would place migrant farmworkers at risk for psychological distress. However, this list of possible stressors may not be

comprehensive given that there is a lack of research that directly questioned migrant farmworkers about what *they* perceived to cause stress in their lives. The present study therefore set out to explore the migrant farmworkers' own perceptions of the stressors they have experienced.

#### The Mental Health of Mexican-Origin Migrant Farmworkers

While there is growing research regarding the mental health of Mexican immigrants (e.g., 16–18), sparse information exists regarding the mental health of Mexican-origin migrant farmworkers. In a sample of adult Mexican migrant farmworkers in central California, Alderete *et al.* (19) examined the influences of education, income, social support, acculturation level, language conflict, worries over legal residence status, and discrimination on depressive symptomatology. They found that very low acculturation levels and high instrumental and emotional support were related to lower depression; and that greater discrimination was associated with higher depression. Alderete *et al.* concluded that continued exposure to acculturative stressors in U.S. society may lead to a deterioration in the mental health of migrant farmworkers.

In an earlier study, Vega *et al.* (20) examined psychological distress among adult Mexican Farmworkers in central California through the use of the Health Opinion Survey (HOS). The HOS is a measure of general psychopathology that has been used to screen for chronic mental disorders, stress reactions, and poor physical health. They found that reduced health statuses and an occurrence of environmental stressors over the past year were associated with high distress levels. Furthermore, they found that individuals aged 40–59 years reported elevated distress when compared to other age groups. They conjectured that Mexican farmworkers are at an especially high risk for health problems during their middle ages because of continuous occupational and life hazards that may progressively degrade their health and functional capacities. When comparing their findings with those from other national samples, Vega *et al.* concluded that Mexican farmworkers are at a greater risk for psychological distress than are educated urban Mexican Americans and the general population.

To our knowledge, Vega *et al.* (20) was the first published study to examine predictors of mental health in Mexican farmworkers in the United States. However, their findings were limited in a few respects.

First, in their reported analyses, they did not distinguish between migrant farmworkers and seasonal farmworkers (who live in one location throughout the year). Thus it is not possible to infer whether migrant farmworkers are at greater risk for health problems, due to their migratory, unstable lifestyle. Second, Vega *et al.* assessed for general stressful life events. Therefore, their data did not capture stressors that were specifically associated with being a migrant farmworker. Finally, the HOS is a measure of general psychological distress and thus does not measure, for example, the specific symptoms of anxiety or depression, which are two common reactions to stressful events.

White-Means (21) explored the relationship between work productivity and physical and mental health in a sample of predominantly Latino/a migrant farmworkers in rural New York. White-Means assessed mental health with a general index of well-being. Her findings suggested that poor mental health, more so than poor physical health, served to significantly decrease farmworkers' wages. She concluded that providing mental health services for migrant farmworkers can enhance their earning potential and thus increase their overall quality of life.

Hovey and Magaña (22) explored psychosocial predictors of anxiety and depression among immigrant Mexican migrant farmworkers in Ohio and Michigan. They found that 38% of farmworkers reached caseness (indicating the presence of potentially significant depression) on the Center for Epidemiologic Studies—Depression Scale (CES-D) (23). Typically about 20% of individuals from general population samples reach caseness on the CES-D. They furthermore found that 30% of farmworkers reached caseness on the anxiety scale of the Personality Assessment Inventory (PAI) (24). It is estimated that 16% of general population individuals will reach caseness on this scale. Hovey and Magaña found that high acculturative stress, low self-esteem, family dysfunction, ineffective social support, low religiosity, and a lack of control and choice in the decision to live a migrant farmworker lifestyle were significantly associated with high levels of anxiety and depression.

The existing research suggests that difficulties inherent in the lifestyle of migrant farmworkers potentially contribute to psychological morbidity and poor mental health. Given these findings, it appears important that researchers explore the stressors experienced by migrant farmworkers and the influence of these stressors upon the mental health of the migrant farmworkers.

## Purposes of Present Study

The present paper reports qualitative findings from the sample that produced Hovey and Magaña (22). As noted, in addition to quantitatively examining predictors of anxiety and depression among migrant farmworkers, we decided to directly question the farmworkers about their own perceptions of the difficulties they have encountered. We decided this was necessary because we, as outsiders, could not assume that we knew all that was stressful in their lives. The purposes of the present study were twofold: to qualitatively—through interviews of participants—identify the stressors associated with being a migrant farmworker in the Midwest United States; and to explore the associations among migrant farmworker stressors to anxiety and depressive symptomatology. In specific, we were interested in determining the stressors that were most strongly related to symptoms of anxiety and depression.

## METHODS

### Participants and Procedures

The participants were 75 migrant farmworkers (38 females, 37 males) of Mexican descent in the northwest Ohio and southern Michigan area. The participants' ages ranged from 16 to 65 ( $M = 29.01$ ;  $SD = 11.01$ ). Forty-four percent of the participants were aged 16–25 years; 26.7% were 26–35; 20% were 36–45; and 9.3% were 46–65 years old. A majority of the participants were married (56%); 32% were never married; 8% were living together; and 4% were either divorced or separated. The sample reported a low overall level of education; 84% completed less than 12 years of formal education. Low overall levels of income were reported; 69.4% of participants earned less than \$15,000 annually.

Sixty percent of the participants were first-generation (immigrants); 33.3% were second generation; and 6.7% were third generation. The number of years living in the United States for the immigrant participants ranged from 1 to 35 ( $M = 11.70$ ;  $SD = 9.04$ ). Nearly half of the immigrant participants (46.5%) had lived in the United States for more than 10 years. In regards to migrating for the purposes of doing farmwork, during the agricultural season at the time of the interviews, 77.5% of participants migrated with family; 5.6% migrated with friends; 12.7% migrated with family and friends; and 4.2% migrated alone. Eighty-three percent of the participants

reported being Catholic and attending church at least once per month. However, most participants (62.7%) reported attending church less frequently during the summer harvest season due to their busy work schedule.

The data were collected during the 1998 summer harvest season. Participants were recruited from labor camps, a migrant rest center, and an apartment complex. Local community agencies who had well-established ties to this population aided in the recruitment process. Participation was voluntary, anonymous, and confidential. Following consent, the qualitative interview was conducted in either Spanish (52%) or English (48%), according to the participant's language preference. After the qualitative interview, participants were asked to complete a self-administered battery of questionnaires. In instances where participants were illiterate or preferred to have the researchers' assistance, the researchers read the questionnaires to the participants. Most participants completed the study within 1 h. Each participant was compensated \$20 for her or his participation.

### Measures

This study was part of a larger research project with additional goals. The measures and procedures relevant to this portion of the study will be discussed here. For details regarding the quantitative portion of the project, please see Ref. (22).

#### *Exploratory Interview*

An exploratory qualitative interview was conducted individually with each participant. The foci of the interviews were to obtain contextual descriptions of perceived stressors in the migrant farmworker lifestyle and the coping mechanisms employed in response to the stressors. This was achieved through an open-ended interview format so as to generate data in the participants' own words. The first part of each interview consisted of demographic and work-related questions (e.g., age, ethnicity, marital status, place of birth, religious preference, history of employment including farmwork, annual patterns of migration, reasons for choosing farmwork). The participant was then asked to talk about the stressful experiences that she or he had encountered as a migrant farmworker. Once the participant generated and described each stressor, the participant was asked how she or he coped with the particular stressor. Each participant

was questioned about stressors to the point where she or he did not generate more responses. Each interview was audio-recorded and transcribed.

#### *Personality Assessment Inventory (PAI)*

The anxiety scale of the Personality Assessment Inventory (PAI) (24) was used to measure clinical features of symptomatology related to anxiety disorders. The scale includes 24 items rated on a 4-point scale (*false, not at all true to 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 anxiety symptomatology that may impair functioning. It is estimated that 16% of individuals in the general population will reach caseness. The scales have been found (24–26) 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 .91.

#### *Center for Epidemiologic Studies—Depression Scale*

The CES-D (23) was used to assess depressive symptomatology. The CES-D measures level of depressive symptoms over the past week and consists of 20 items rated on a 4-point scale (*rarely or none of the time to most or all of the time*). Possible scores range from 0 to 60, with higher scores indicating a higher degree of depressive symptomatology. Caseness is reached with a score of 16 or higher, suggesting that the participant is at risk for depression. It is estimated that approximately 20% of individuals in the general population will reach caseness. The CES-D was selected for use in this study because it is one of the most widely used measures of psychological distress in community samples and has been found (e.g., 16, 19, 27, 28) to have good internal reliability and construct validity among Mexican Americans. The Cronbach alpha for the present study was .80.

### Translation

The Spanish version of the PAI (29) used in the present study was translated by Psychological Assessment Resources, Inc. The CES-D had been previously translated (16, 30) into Spanish through the double-translation procedure (31). The qualitative interview questions were developed in English by the second author and translated into Spanish by the first author who consulted with other bilingual professionals on the accuracy of the translation.

### Data Analyses

The data analyses are presented in three steps. First we present the results of content analyses that were performed to identify migrant farmworker stressors along with the coping responses that were utilized in response to the stressors. Second, in an effort to estimate the sample's overall level of anxiety and depressive symptoms, we report descriptive statistics for anxiety and depression. Next we present the associations among the migrant farmworker stressors to anxiety and depressive symptoms. In specific, we used point-biserial correlations to analyze the association between the identification of each stressor to anxiety and depression. The point-biserial correlation ( $r_{pb}$ ) is a test that analyzes the association between a dichotomous variable and a continuous variable (32). For the purposes of our analyses, we coded each stressor variable as follows: 0 = *stressor was not identified by the participant*; 1 = *stressor was identified by the participant*. Finally, for each stressor variable that was significantly associated with anxiety and/or depression, we report its eta square ( $\eta^2$ ) value as an estimate of the strength of the stressor's influence on anxiety and/or depression (33).

## RESULTS

### Migrant Farmworker Stressors

In order to systematically analyze the interview data, content analyses of each interview were conducted to identify the specific stressors and their associated coping mechanisms. Two graduate student research assistants—trained in content analysis by a clinical psychologist—independently analyzed and coded stressors from the interviews conducted in English ( $n = 36$ ). Through an examination of each interview transcription, they first developed thematically independent categories as well as an opera-

tional definition for each category. Following this initial analysis of the data, the raters met with the present researchers to discuss the category names and definitions they had generated. Once concurrence was reached on the category names and the definitions were fully operationalized, the raters coded the stressors (0 = *stressor not reported*; 1 = *stressor was reported*) from each interview using the agreed upon category names and definitions. The interrater reliability, calculated as a percentage agreement, indicated a high degree of agreement between the raters (90%). The raters met with the present researchers to reach consensus on the stressors in which there were disagreements.

Two trained bilingual raters conducted a separate content analysis on the Spanish interviews ( $n = 39$ ). Spanish stressor categories were equivalent to the English stressor categories. The interrater reliability analysis for the Spanish interviews also revealed high agreement (95%) between the raters.

Eighteen stressors emerged from our analyses. Table I shows the percentages of participants who experienced each stressor. The most common stressors and their associated coping responses are presented in detail below.

*Being Away From Family and Friends.* Separation from family and friends who were living elsewhere at the time was reported as one of the most stressful aspects of being a migrant farmworker. When asked how they coped with this stressor, participants reported that they called loved ones on the phone and wrote them letters.

*Rigid Work Demands.* Rigid work demands were those difficulties resulting from the structure of the work environment (e.g., working long hours; having no days off; working while it is raining). The most typical coping response was to “just put up with it.” “Nothing can be done about it.”

*Unpredictable Work/Housing and Uprooting.* This category represented both the unpredictable nature of finding work or housing, and the feeling of instability due to constantly being uprooted. With regards to work being unpredictable, some participants reported looking elsewhere for employment while others stated that they did not do anything and simply waited for work to pick up. To offset the instability of constantly finding and leaving housing, the farmworkers reported that they stayed with friends/relatives or in the Migrant Rest Center, their vehicle, or parks. They also reported that they looked for homes to rent outside of the migrant camps and they searched for work that included free housing.

Table I. Stressors Identified by Migrant Farmworkers

	Total [N = 75 (%)]	Female [n = 38 (%)]	Male [n = 37 (%)]
Being away from family or friends <sup>a</sup>	38.7	26.3	51.4
Rigid work demands	38.7	39.5	37.8
Unpredictable work/housing and uprooting	38.7	35.6	45.9
Low family income/poverty/poor pay	37.3	34.2	40.5
Poor housing conditions	36.0	47.4	24.3
Language barriers	33.3	23.7	43.2
Education of self or children	25.3	31.6	18.9
Hard physical labor	25.3	26.3	24.3
Lack of transportation/unreliable transportation	25.3	21.1	32.4
Exploitation by employer	14.7	13.2	16.2
Lack of daycare	14.7	18.4	10.8
Geographical isolation	10.7	10.5	10.8
Limited access to medical care	10.7	10.5	10.8
Discrimination	9.3	7.9	10.8
Undocumented status	9.3	2.6	16.2
Acculturating to new environment	8.0	2.6	13.5
Worries about socialization of children	5.3	10.5	—
Paperwork for social services	4.0	7.9	—

<sup>a</sup>Males vs. females  $\chi^2(1, N = 75) = 5.0, p < 0.05$ .

*Low Family Income/Living in Poverty/Receiving Poor Pay.* Limited financial resources made it difficult for the farmworkers to purchase necessary items such as food, clothing, and medical care. To cope with this, they asked for assistance from government agencies and charities, limited their consumption in order to save as much money as possible, and borrowed money.

*Poor Housing Conditions.* Substandard living conditions were another common source of stress. Participants living in migrant camps frequently reported the lack of stoves and running water in the homes. In addition, they noted that toilet and shower facilities were often outdoors and were frequently broken, dangerous, and infected with bacteria. Other housing concerns included poor insulation, leaky roofs, having to share their housing with other families thus leading to feelings of being overcrowded, and the lack of air conditioning, heaters, public phones, and laundry facilities. Most of the participants reported that they felt they could not do anything to change the conditions. Making their living situation more comfortable by creative methods was the only reported coping response suggested by the participants.

*Language Barriers.* Limitations with the English language made it difficult to seek assistance at medical care settings, social service agencies, and shopping centers. Nearly all the participants who noted this stressor asked others—including their children—to interpret for them. Only a few farmworkers had taken English classes.

*Educational Stressors.* Participants reported worries about the education of themselves and their children. To cope with these concerns, participants involved their children and/or themselves in remedial schoolwork such as enrolling in summer school or night classes, staying after school for tutoring, migrating after their children finished the school year, and leaving before the end of the harvest season so that their children would not miss the beginning of the school year.

*Hard Physical Labor.* Hard physical labor represented those difficulties due to the actual work itself (e.g., difficult physical nature of work; health consequences related to work such as heatstroke, allergies, chronic back pain, asthma, and rashes; not having enough water to drink while in the fields). In coping with this, over half of the participants who reported this stressor said that they did not do anything. Others coped by using positive thinking, working faster, thinking about having time off in the winter, using humor, and taking short breaks.

*Lack of Transportation and Unreliable Transportation.* The farmworkers coped with these difficulties in a variety of ways. Those individuals who did not own a vehicle stated that they received rides from friends or family when migrating and worked where the employer provided transportation. As protective measures against unreliable vehicles, other participants did preventive maintenance on their vehicles, traveled in tandem with other vehicles, and stopped often in rest areas.

**Exploitation.** Exploitation by employers and crew leaders included being paid a lower hourly wage than the amount that was agreed; not being paid on time; inaccurate amounts in paychecks; and being excessively charged for supplies. Nearly half the participants who endorsed this stressor approached their employer to resolve the inaccuracy. Others found another job as a way to cope with the exploitation.

**Lack of Daycare.** This stressor represented the farmworkers' worries over not having anyone to care for or to supervise their children when they were working. Nearly half the participants who reported lack of daycare used informal arrangements (having older children and extended relatives care for the children). Other reported coping strategies included formal daycare arrangements, bringing children to work, and missing work in order to care for children.

The other less commonly reported stressors are listed in Table I. To help clarify the distinction among some of the remaining stressors, the following defining characteristics are given. "Geographical isolation" represented those stressors associated with being physically isolated (e.g., difficult to meet people; no place for grocery shopping). "Undocumented status" represented concerns about working and living in the United States without proper documentation. "Acculturating to new environment" included stressors such as the lack of familiar foods, cultural activities, and Spanish media. "Worries about socialization of children" represented participants' worries about possible negative influences on the socialization of their children (e.g., drug use; less moral values of friends of children). "Paperwork for social services" represented difficulties in completing the necessary paperwork to receive services via federally funded government programs.

In comparing the reporting of each stressor across gender, more males than females identified being away from family and friends [ $\chi^2(1, N = 75) = 5.0, p < 0.05$ ] as a stressor. No gender differences were found for the other stressors.

### Anxiety and Depression

Table II lists the means and standard deviations for anxiety (PAI) and depression (CES-D). The sample reported a relatively high overall level of anxiety symptoms ( $M = 56.2$ ) in comparison to the mean of 50.5 found (24) in the census-matched standardization sample [ $t(74) = 3.8, p < 0.0005$ ]. Thirty-one percent of participants (39% of females; 22% of males)

**Table II.** Participants' Mean Scores and Standard Deviations on Measures of Anxiety and Depression

	Mean (SD)	
	Anxiety	Depression
Overall	56.1 (12.7)	
Females	58.7 (12.7)	
Males	53.3 (12.3)	

reached caseness on the anxiety scale with a score of 60 or more.

The sample also revealed a relatively high level of depressive symptoms. Thirty-nine percent of participants (42% of females; 35% of males) reached caseness on the depression scale with a score of 16 or greater. When using a more conservative caseness threshold score of 24, 17% of the sample (18.4% of females; 16.2% of males) reached caseness.

### The Relationship of Migrant Farmworker Stressors to Anxiety and Depression

The identification of rigid work demands ( $r_{pb} = 0.28, p = 0.008$ ) and poor housing conditions ( $r_{pb} = 0.30, p = 0.005$ ) were significantly associated to high levels of anxiety symptoms. The identification of rigid work demands ( $r_{pb} = 0.15, p = 0.10$ ) and low family income/living in poverty ( $r_{pb} = 0.21, p = 0.03$ ) were associated to high levels of depressive symptoms. The identification of the other stressors were not significantly associated with anxiety or depressive symptoms.

$\eta^2$  values of 0.01, 0.06, and 0.14 typically represent small, medium, and large effect sizes, respectively (26). Accordingly, both rigid work demands ( $\eta^2 = 0.08$ ) and poor housing conditions ( $\eta^2 = 0.09$ ) had a medium to large influence on anxiety; and rigid work demands ( $\eta^2 = 0.03$ ) and low family income/living in poverty ( $\eta^2 = 0.05$ ) had a small to medium influence on depression.

### DISCUSSION

This study generated valuable information regarding the stressful experiences of migrant farmworkers from a very unique perspective: their own. As indicated earlier, although the conditions associated with being a migrant farmworker would seem to place migrant farmworkers at risk for psychological distress, previous research has not directly questioned

migrant farmworkers about their perceptions of the stressors they have experienced. The present findings therefore provide critical information that allows for a more in-depth awareness of those factors that contribute to stress in migrant farmworkers, and how migrant farmworkers cope in reaction to stress.

### Qualitative Narratives of Stressors Associated With Migrant Farmwork

We give narrative examples of some of the stressors to portray the sense of richness and individual experience that qualitative data bring. The narratives also serve to highlight our discussion and to further underscore the differences in characteristics among the stressors.

Being away from family and friends was one of the most commonly mentioned stressors despite the fact that 91% of participants reported that they migrated with family members and/or friends. Salgado de Snyder (34) has studied the migration patterns of Mexican migrants and has found that individuals often leave family members behind in order to maximize the earning power of the family. For example, it is not uncommon for a father to migrate with a son of working age while leaving his wife and younger children at their home base. The following is the narrative of a 44-year-old male who migrated to the Midwest with his son:

When it comes to family what is hard is when you call them and they say that they want us to come back because they want to see us. It is not easy to say when we will go back because we don't know if we will see each other again. Since I am already here, I may as well deal with the absence a little longer so that they have food to eat in Mexico because it is too hard to make money in Mexico . . . It feels terrible when you know family members are sick in Mexico and you don't know if you will have work so that you can help them.

In the next narrative, a 36-year-old male describes how painful it has been for him to migrate alone:

It is difficult coming here without my family. 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.

As noted earlier, the farmworkers coped with separation from loved ones by talking on the telephone and writing to family and friends. However, the geographical isolation and lack of money and transportation made it difficult to write or telephone as often as they desired.

Although rigid work demands was identified by a large percentage of participants in the present study, it had not been identified as a stressor by previous authors. Moreover, in the present sample it was significantly linked to higher anxiety and depression. Included under rigid work demands were those instances in which the employer showed inflexibility in allowing the farmworker to take days off or to leave the field when the weather conditions worsened. For example, according to a 29-year-old female, "When it's raining you have to work." "And lightning, even if it's lightning you have to be picking." A 22-year-old male adds,

Here we have to work even if it rains. The weather is so different here because it rains and then the sun comes out. Our clothes get wet and then it dries on our bodies and that is bad for our health.

As indicated earlier, participants frequently felt that they had to "just put up" with the rigid work demands since "nothing can be done" about them.

Unpredictable work and housing was another stressor that was frequently mentioned by present participants yet had not been documented as such by previous work. Unpredictable work and housing was also significantly associated with higher anxiety. The following narrative is an example of unpredictable work. Here, a 43-year-old female talks about the inconsistency of work:

The work every year is not the same. Because of the weather, sometimes there is good work and sometimes there is not. Two years ago, it didn't rain and we didn't make as much money as we did in other years. Sometimes the storms bring hail and then there isn't anything left (to pick)—very damaging.

In the next narrative, a 28-year-old female describes her difficulties in finding housing:

What is most stressful is when we don't have anywhere to live. If they don't let us live in the camp, then we have to find a place to live or a place to rent. Even when we got here, they gave us this small dirty house. Last year they gave us one with running water but this year they gave us this one. I don't like this.

Similar to rigid work demands, participants felt they could do little to offset the inconsistent nature of work and housing. Moreover, they felt little could



be done about negative housing conditions once they did find a place to live. These stressors were viewed by many as inherent in their lifestyle. A 43-year-old male reacts to his housing situation:

I am not comfortable there. It is a large ranch where 200 people live. There are only three bathrooms. We can't wash dishes in our room. You have to bring water in a bucket into your room and wash with that. We can't wash where we shower nor where we use the bathroom. There is only one washing machine for 200 people and it broke yesterday and today it is not working. How can I wash my clothes? It is a problem.

Given living situations such as these, it is not surprising that poor housing conditions was significantly associated with higher levels of anxiety.

The next narrative is an example of low family income/living in poverty. As noted, the identification of low family income/living in poverty as a stressor was significantly associated with higher depression levels. In this narrative, a 48-year-old female states,

I get so worried that my head hurts in thinking about how I am going to save enough money to make the truck payments. The payments are \$500. We have to make enough money for the payments. I feel so worried and desperate.

The final narrative is an example of language barriers. As highlighted in this narrative from a 27-year-old male, not being able to effectively communicate in English can have serious health repercussions:

Not knowing English is stressful. At times we have to take our little girl to the hospital at night and we have to first find an interpreter to go with us. It is tough. At times I take my dictionary to be able to go buy the prescriptions that the doctor gives.

Of the above stressors, language barriers had the most consistent coping response: asking others to interpret. In fact, parents oftentimes asked their children—who were more quickly acquiring the characteristics of the new culture and language—to serve as interpreters at locations such as health care settings, social service agencies, and shopping centers. Relying on children for translation purposes, however, may be problematic in several respects. Children translating for parents may alter the dynamics of the parent-child relationship. For example, elevating a child to a greater position of power in the family may bring shame to the parents and may diminish parents in the eyes of their children. Translation responsibilities may also be beyond what is culturally expected for children at their stage of psychosocial development. Finally, because young children may lack the matu-

rity and language skills to accurately understand and interpret what the parents and other adults are saying, they often provide for poor quality interpretation. The consequence of this may be harmful, such as a health care situation in which the parent and the provider miscommunicate about symptoms and treatment.

Several of the stressors (e.g., rigid work demands and housing conditions) reported in this study have undertones of abusive and exploitative work practices. A relatively small percentage of participants, however, identified exploitation as a stressor. Some growers (people who own and/or operate the farms) and crew leaders appeared to hold a “protective stance” toward the migrant workers that in some ways places them at their mercy. For example, it was common for the growers to decide who gains entry to the camps, thus restricting outsiders’ access to the migrant farmworkers. In addition, in bad weather, it was the growers—who often disregarded the opinions of the workers—who decided when to start and end work. It was our observation that many farmworkers were either unaware of their rights as U.S. workers to fair work and living practices (and were thus unaware of being exploited), or they felt there was little they could do to capitalize on their rights.

### Model of Stress

Individuals feel some degree of stress when they encounter demands that require them to change in some manner (35). A stressor is the event that creates the demands and a stress response is the individual’s reaction to the demands. According to Lazarus (36), the stress response is influenced by the way people cognitively appraise both the stressors and their capacity to effectively react to the stressors. Individuals who appraise an event as threatening are likely to experience greater stress than individuals who sense they have the ability to respond constructively to the event. Coping occurs when individuals change their cognitions and behaviors in an attempt to manage the particular external or internal demands that they appraise are taxing their adaptive resources.

Implicit in this stress model is the notion that two individuals may experience the same stressor(s) with equal frequency and duration, yet may not experience the same level of stress. Two migrant farmworkers, for example, may encounter the same set of migrant farmworker stressors yet experience different levels of migrant farmworker stress. This is because one of

the farmworkers may appraise the stressors as relatively more threatening, thus inducing more stress.

This points to a limitation in our study. Although we were able to generate a set of stressors and associated coping responses that were commonly experienced by the migrant farmworkers, due to the qualitative nature of our data, we were not able to assess the *severity* of stress that resulted from these specific stressors. Without an assessment of the appraisal of migrant farmworker stressors, it is not surprising that we found a relative lack of association among the identification of stressors and greater anxiety and depression. In order to more precisely explore the relationship of migrant farmworker stress to anxiety, depression, and other mental health indicators, future research should develop measures that assess both the *type* of stressors experienced by migrant farmworkers and the *level* of stress experienced in response to the stressors.

### Inactive Coping, Anxiety, and Depression

As highlighted earlier, in response to several of the stressors, many participants reported an inactive coping style. The migrant farmworkers frequently perceived the stressors as external, uncontrollable, and unchangeable. This was especially evident in reaction to rigid work demands, poor housing conditions, hard physical labor, exploitation, and unpredictable work. A common response to these stressors was that “we just put up with it” or something similar. This type of response likely represents the chronic nature of these stresses (this is how life is; there’s nothing we can do), and given their chronicity, migrant farmworkers may have difficulty identifying *immediate* mechanisms for coping. Put differently, chronic migrant farmworker stress may lead to a learned helplessness (37) among some of the farmworkers. And this inability to avoid the ongoing stress may create a sense of hopelessness among the farmworkers, and thus a susceptibility to anxiety and depression.

The relatively high overall levels of anxiety and depressive symptoms found in the present sample were therefore not surprising. Over 30% of the farmworkers reached caseness on the anxiety scale (PAI) and nearly 40% reached caseness for depression (CES-D). As a comparison, it has been estimated (23) that 18–20% of individuals from general population samples reach caseness on the CES-D. As a further comparison, Vega *et al.* (38) noted the very high prevalence of depressive symptoms found within their sample of Mexican immigrants. They found that 42% of their sample reached caseness on the CES-D.

### Research Limitations and Directions for Future Research

Further limitations of the present study include its limited sample size, its single-informant self-report methodology, and its cross-sectional design. Because settlements in the Midwest by Mexican origin individuals are not as prevalent as in other areas of the country (4), social networks and social support systems—which are important in the successful adaptation to a new society—in the Midwest may not be as highly developed. The stressors reported by the present sample may thus differ somewhat from those experienced by farmworkers in other migrant streams.

Future research should focus on increasing the study’s generalizability. This includes examining whether the reported stressors in this study are also present in farmworkers in other migrant streams. In addition, longitudinal research is needed that more clearly addresses the adaptation process in the migrant lifestyle, including the relationships among inactive coping, hopelessness, and distress. Finally, given the elevated levels of anxiety and depressive symptoms that were found, future research should fully examine the etiology of anxiety and depression in this population.

### Clinical Implications and Considerations

In the area sampled, currently there are few prevention, treatment, and educational opportunities available to migrant farmworkers. The present findings however suggest the need for prevention, treatment, and education services for migrant farmworkers, especially in relation to those daily experiences that may contribute to negative psychological functioning. Possible preventive and treatment strategies include the establishment of support groups at the campsites, where migrant farmworkers can talk about their difficulties and learn successful ways of coping with them. In addition, mental and physical health screening programs are needed to assess and adequately refer migrant farmworkers to appropriate services, given the detrimental impact of mental disorders on the physical health and functioning of individuals. Part of the referral process can include psychoeducation detailing the impact of poor mental health on work productivity. This might increase the level of motivation for farmworkers to follow-through with referrals and treatment. In addition to farmworkers receiving appropriate physical and mental health services, it is important for

growers to be aware of the impact that these stressors have on the well-being of their labor force. It is hoped that such awareness will serve as an impetus for change.

The following are suggestions for possible areas of outreach education. Because transportation difficulties were reported by one-fourth of the sample, it is important that outreach efforts consistently target each migrant camp.

Because only a small percentage of the present sample reported concerns about their undocumented status, it is possible that many of the migrant farmworkers were eligible for government aid programs. Particularly helpful would be assistance in filling out the appropriate applications for aid in addition to educating farmworkers about retaining the appropriate documentation that would qualify them for services. Several of the women interviewed described frustration with government agencies and saw them as burdensome and not helpful. Few had been successful in qualifying for government services despite being eligible and many resorted to nonprofit organizations and churches for aid that could have been provided by government agencies.

Several of the stressors reported by the present sample deal with the lack of information regarding their rights as residents of this country. For example, although some farmworkers recognized that the living conditions, work demands, and health care problems were abusive, few farmworkers reported knowing where to seek the proper authorities to resolve their concerns. One way of addressing this issue would be to provide legal aid workshops in Spanish and English—at the migrant camps, church communities, or nonprofit organizations—that aim to educate farmworkers on available legal recourses, regardless of the migrant farmworkers' legal status. Organized labor organizations have had some success in reducing the incidences of abuse (4). However, despite the presence of a labor union in the region where the data were gathered (4), none of the participants reported membership in the union. It may be fruitful for agencies working with migrant farmworkers to network with local labor unions in hopes of alleviating exploitation and abuse.

Many farmworkers were unaware of outreach services that were available to them. For example, when participants discussed difficulties associated with traveling and medical care, many did not know about the existence in the area of a Migrant Rest Center that provided free lodging and medical care for migrant workers. More effective dissemination of

information regarding the available services to migrant workers is thus necessary.

The migrant farmworkers' perceptions and experiences that health care providers do not want to serve them hinder them from actually seeking necessary services. What is needed here is a coordination of services among the providers that serve this population. Many individuals in the present sample had specific destination and departure states and had been migrating in the same pattern (e.g., south Texas to a specific location in Michigan and back again) for many years. With this type of information, it might be feasible for states to work together in facilitating the transfer of records so that continuous health care can be provided. In addition, seminars that educate service providers on the health care needs of migrant farmworkers (e.g., the need for bilingual staff and the importance of cultural sensitivity) may eventually increase the migrants' utilization of services.

Participants who reported language difficulties frequently expressed a desire to learn English. Many individuals however were not aware of English classes being offered. Of the individuals who knew where English classes were offered, many could not attend due to their work demands or transportation difficulties. A potential way in which educational institutions could alleviate this problem would be to establish fieldwork projects where students such as Spanish majors would provide English classes at migrant camps. Not only might this prove to be a valuable experience for the students, but this would be incredibly beneficial for migrant farmworkers—especially because some of the other stressors appear to be mediated by their limitation with the English language.

## CONCLUSIONS

Our findings indicate that migrant farmworkers experience very harsh living and working conditions. The chronic nature of migrant farmworker stressors may create a sense of learned helplessness among some farmworkers, thus leading to reduced coping and an increased susceptibility for anxiety and depression. Because of their mobility, providing services to migrant farmworkers is a challenge. However, if we are to improve the quality of life for these individuals who are a vital clog in the U.S. economy, collaborative work among employers, health care providers, social service organizations, universities, and the farmworkers themselves is imperative.

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## REFERENCES

- Napolitano M, Goldberg B: Migrant health. In: Loue S, ed. *Handbook of Immigrant Health*. New York: Plenum; 1998:261-276
- Center for Disease Control and Prevention: Prevention and control of tuberculosis in migrant farm workers: Recommendations of the Advisory Council for the Elimination of Tuberculosis. *MMWR* 1992; 41(RR-10):1-12
- US Department of Labor: Findings from the National Agricultural Workers Survey (NAWS) 1997-1998: A demographic and employment profile of United States farmworkers. Research Report No. 8. Washington, DC: Author; 2000
- Barger WC, Reza EM: *The Farm Labor Movement in the Midwest: Social Changes and Adaptation Among Migrant Farmworkers*. Austin, TX: University of Texas Press; 1994
- Bugarin A, Lopez ES: *Farmworkers in California*. CRB Publication No. 98-007. Sacramento, CA: California Research Bureau, California State Library; 1998
- California Institute for Rural Studies: *Suffering in Silence*. Woodland Hills, CA: The California Endowment; 2000
- Office of Workforce Development: *Migrant Agricultural Ombudsman Report*. Columbus, OH: Ohio Department of Job and Family Services; 2001
- Family Independence Agency, State of Michigan: *Profile of Michigan's Migrant Agriculture Labor Force* [on-line]. Available: <http://www.michigan.gov/documents/profile.29957.7.pdf>; 2001
- US Department of Health and Human Services: *An Atlas of State Profiles Which Estimate Number of Migrant and Seasonal Farmworkers and Members of Their Families*. Rockville, MD: Author; 1990
- US Department of Labor: *California findings from the National Agricultural Workers Survey: A demographic and employment profile of perishable crop farm workers*. Research Report No. 3. Washington, DC: Author; 1993
- Farm Labor Data: *Rural Migration News* 1999; 5(2). Available: <http://migration.ucdavis.edu>
- US Bureau of the Census: *Profile of General Demographic Characteristics: 2000 Census of Population and Housing*. Washington, DC: US Department of Commerce; 2001
- Martinez YG, Cranston-Gingras A: Migrant farmworker students and the educational process: Barriers to high school completion. *The High School J* 1996; 80:28-38
- Perilla JL, Wilson AH, Wold JL, Spencer L: Listening to migrant voices: Focus groups on health issues in South Georgia. *J Community Health Nurs* 1998; 15:251-263
- Valdés DN: *Al Norte*. Austin, TX: University of Texas Press; 1991
- Hovey JD: Acculturative stress, depression, and suicidal ideation among Mexican immigrants. *Cultur Divers Ethni Minor Psychol* 2000; 6:134-151
- Salgado de Snyder VN: Factors associated with acculturative stress and depressive symptomatology among married Mexican immigrant women. *Psychol Women Q* 1987; 11:475-488
- Vega WA, Kolody B, Aguilar-Gaxiola S, Alderete E, Catalano R, Caraveo-Anduga J: Lifetime prevalence of DSM-III-R psychiatric disorders among urban and rural Mexican Americans in California. *Arch Gen Psychiatry* 1998; 55:771-778
- Alderete E, Vega WA, Kolody B, Aguilar-Gaxiola S: Depressive symptomatology: Prevalence and psychosocial risk factors among Mexican migrant farmworkers in California. *J Community Psychol* 1999; 27:457-471
- Vega WA, Warheit GJ, Palacio R: Psychiatric symptomatology among Mexican American farmworkers. *Soc Sci Med* 1985; 20:39-45
- White-Means SI: The economic returns from investments in physical and mental health: A case study of migrant farm workers in rural New York. *J Health Soc Policy* 1991; 2:39-51
- Hovey JD, Magaña C: Acculturative stress, anxiety, and depression among Mexican immigrant farmworkers in the Midwest United States. *J Immigrant Health* 2000; 2:119-131
- Radioff LS: The CES-D Scale: A self-report depression scale for research in the general population. *Appl Psychol Meas* 1977; 1:385-401
- Morey LC: *Personality Assessment Inventory: Professional Manual*. Odessa, TX: Psychological Assessment Resources; 1991
- Fantoni-Salvador P, Rogers R: Spanish versions of the MMPI-2 and PAI: An investigation of concurrent validity with Hispanic patients. *Assessment* 1997; 4:29-39
- Rogers R, Flores J, Ustad K, Sewell KW: Initial validation of the Personality Assessment Inventory—Spanish version with clients from Mexican American communities. *J Pers Assess* 1995; 64:340-348
- Guarniccia PJ, Angel R, Worobey JL: The factor structure of the CES-D in the Hispanic Health and Nutrition Examination Survey: The influence of ethnicity, gender, and language. *Soc Sci Med* 1989; 29:85-94
- Roberts R, Vernon SW, Rhoades HM: Effects of language and ethnic status on reliability and validity of the Center for Epidemiologic Studies—Depression Scale with psychiatric patients. *J Nerv Ment Dis* 1989; 177:581-592
- Morey LC: *Personality Assessment Inventory: Spanish Translation*. Odessa, TX: Psychological Assessment Resources; 1992
- Hovey JD: Acculturative stress, depression, and suicidal ideation among Central American immigrants. *Suicide Life Threat Behav* 2000; 30:125-139
- Brislin RW, Lonner WJ, Thorndike EM: *Cross-Cultural Research Methods*. New York: Wiley; 1973
- Kinnear PR, Gray CD: *SPSS for Windows Made Simple: Release 10.0*. East Sussex, United Kingdom: Psychology Press; 2000
- Green SB, Salkind NJ, Akey TM: *Using SPSS for Windows: Analyzing and Understanding Data*. Upper Saddle River, NJ: Prentice-Hall; 2000
- Salgado de Snyder VN: Las que se van al Norte y las que se quedan: El estrés y la depresión en las mujeres migrantes y en las no migrantes. *Análes del Instituto Mexicano de Psiquiatría* 1991; 2:153-158
- Comer R: *Abnormal Psychology*. New York: Worth Publishers; 2001
- Lazarus RS: *Stress and Emotion: A New Synthesis*. New York: Springer; 1999
- Peterson C: The future of optimism. *Am Psychol* 2000; 55:44-55
- Vega WA, Kolody B, Valle R, Hough R: Depressive symptoms and their correlates among immigrant Mexican women in the United States. *Soc Sci Med* 1986; 22:645-652