

# Suicide Risk Factors Among Mexican Migrant Farmworker Women in the Midwest United States

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*No previous studies have assessed suicide risk among migrant farmworkers in the United States. The purposes of the present study were threefold: (1) to assess the prevalence levels of anxiety, depression, and suicidal ideation in a sample of first-generation Mexican migrant farmworker women in the Midwest United States; (2) to examine the variables that predict depression and suicidal ideation; and (3) to qualitatively—through interviews—determine the stressors experienced by migrant farmworker women. The overall sample reported elevated levels of anxiety, depression, and suicidal ideation. Family dysfunction, ineffective social support, hopelessness, and high acculturative stress were related to high depression. Migrant farmworker women who experienced suicidal ideation reported lower self esteem, greater family dysfunction, less effective social support, greater hopelessness, higher acculturative stress, and more depression than migrant farmworker women with no suicidal ideation. In determining whether these factors could predict suicidal ideation, a logistic regression analysis accurately classified 100% of the cases. Finally, a content analysis revealed that the migrant farmworker women experienced 21 distinct stressors associated with their lifestyle. Clinical implications of the findings are discussed.*

**Keywords** acculturative stress, depression, Mexican immigrants, migrant farmworkers, stressors, suicidal ideation

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Immigration is a time of great change. Several authors (e.g., Hovey, 2000a; Hovey & King, 1997; Ponizovsky & Ritsner, 2000; Stack, 1981; Trovato, 1986) have suggested that immigration increases the risk for suicide. This increased risk has been explained by a combination of factors. These include the severing of bonds to family, friends, and country which may result in feelings of loss, loneliness, and uprootedness, and which may reduce effective coping resources. Acculturating individuals may furthermore encounter factors connected to the new society. These experiences include discrimination, language inadequacy, the lack of financial and social resources, feelings of not belonging in the new environment, identity confusion, and a sense of anxious disorientation in response to the unfamiliar surroundings. Immigrants may also feel caught between traditional values, customs, and cultural norms and the values, norms, and experiences found in the new society.

Relatively few studies have explored suicide risk within immigrant populations. Some studies (e.g., Ferrada-Noli, Asberg, Ormstad, & Nordstrom, 1995; Merrill & Owens, 1988; Stack, 1981; Trovato, 1986; Trovato & Jarvis, 1986) found positive associations between immigration and suicide rates in samples comprised of immigrants from many nationalities. However, studies that focus on risk factors for particular ethnic-immigrant groups are lacking. For example, only a handful of studies have explored suicidal ideation (Hovey, 2000b; Hovey & King, 1996), suicide attempts (Sorenson & Golding, 1988), and completed suicides (Smith, Mercy, & Warren, 1985) among Mexican immigrants.

### Characteristics of Migrant Farmworkers

It has been estimated (Napolitano & Goldberg, 1998) that there are five million migrant farmworkers in the United States.

Migrant farmworkers are people who migrate from one locale 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 or in Mexico during the winter months and migrate north before the planting or harvesting seasons.

Immigrant migrant farmworkers are a unique group because they encounter those stressors typically associated with the immigration experience in conjunction with stressors that are particular to a migrant farmworker lifestyle. Several authors (Barger & Reza, 1994; Goldfarb, 1981; Rothenberg, 1998; Valdés, 1991) have noted the difficulties inherent in the migrant farmworker lifestyle. For instance, migrant farmworkers are socially marginalized. This marginalization is intensified by the discrimination and physical isolation they experience. Most migrant farmworkers earn less than \$6,000 per year, which makes them one of the most economically deprived groups in the United States. Farm labor is physically strenuous and migrant workers are often subjected to dangerous working conditions such as being sprayed with pesticides. Thus, not surprisingly, farmwork has the nation's highest incidence of workplace fatalities. Child labor is common. Thus, the average migrant farmworker has a sixth-grade education. Migrant workers usually find housing in labor camps provided by the owners of the farms. However, the housing and sanitation are often substandard. One-room homes that lack running water and toilets are commonplace, and drinking water and toilets are often not readily available in the fields. Finally, migrants have extremely limited access to health care, although their health conditions are among the worst in the country (average life expectancy is 49 years).

Because of the above factors associated with immigration and migrant farmwork,

it appears likely that migrant farmworkers are at psychiatric risk and thus susceptible to mental health problems such as anxiety, depression, and suicidal ideation. However, scant research has assessed anxiety and depression among migrant farmworkers. Moreover, no previous research has explored suicide risk among migrant farmworkers in the United States.

#### Previous Research of Mental Health Among Migrant Farmworkers in the United States

Vega, Warheit, and Palacio (1985) examined psychiatric distress among Mexican-American farmworkers (migrant and seasonal) in central California. They found that high levels of general distress were connected to reduced health statuses and an occurrence of environmental stressors. Moreover, they found that individuals aged 40 to 59 years reported higher levels of distress in comparison to 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. Vega et al. concluded the severe lifestyle, for example, the high frequencies of environmental stressors—such as hazardous working conditions—experienced by Mexican-American farmworkers puts them at extraordinary psychiatric risk.

Hovey and Magaña (2000, 2002) explored psychosocial predictors of anxiety and depression among immigrant Mexican migrant farmworkers in Ohio and Michigan. They found that 37.8% of farmworkers reached caseness (indicating the presence of potentially significant depression) on the Center for Epidemiologic Studies-Depression Scale (CES-D) (Radloff, 1977). Typically about 20% of individuals from general population samples reach caseness on the CES-D. In addition, Hovey and Magaña found that 29.5% (females 34.5%,

males 21.6%) of migrant workers reached caseness on the anxiety scale of the Personality Assessment Inventory (PAI) (Morey, 1991). Typically about 16% of general population individuals 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. Hovey and Magaña concluded that high acculturative stress (stress directly associated with the acculturation process), in conjunction with the stress related to migrant farmwork, place migrant farmworkers at risk for experiencing critical levels of psychiatric distress.

#### Purposes of Present Study

Because our previous research (Hovey & Magaña, 2002) indicated that female migrant farmworkers reported greater anxiety than male migrant workers, we decided to more closely examine the psychiatric status of female migrant farmworkers and the stressors that may be commonly experienced by them. Our present investigation thus focused on Mexican female migrants and utilized a combination of quantitative and qualitative methodologies. We used qualitative methods as a means to better understand the phenomenology of the stressors specific to female migrant farmworkers. Because previous research has not examined suicide risk among migrant farmworkers, we also decided to explore predictors of suicidal ideation in our sample.

The first purpose of the present study was to assess the prevalence levels of anxiety, depression, and suicidal ideation in a sample of immigrant Mexican migrant farmworker women in the Midwest United States. Given the stressors associated with immigration and migrant farmwork, we

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expected that the sample would reveal elevated levels of anxiety, depression, and suicidal ideation. The second purpose was to determine the best predictors of depression and suicidal ideation. These predictors included factors that previous authors (e.g., Hovey, 2000b; Hovey & King, 1996) used in assessing suicide risk among Mexican immigrants. The predictor variables explored were acculturative stress, family functioning, social support, self-esteem, hopelessness, and anxiety. The third purpose was to determine the stressors (associated with migrant farmwork) commonly experienced by immigrant migrant farmworker women.

### METHOD

#### Participants and Procedure

Participants were 20 female migrant farmworkers in the southeast Michigan/northwest Ohio area. All of the participants were mothers. The age of the sample ranged from 20 to 59 years ( $M=34.3$ ,  $SD=11.6$ ). Thirty-five percent of the sample were aged 20–25 years; 15% were 26–35; 25% were 36–45; 20% were 46–55; and 5% were 56–65. All participants were immigrants who originated from Mexico. The number of years living in the United States ranged from 1 to 31 ( $M=8.4$ ,  $SD=8.9$ ). Forty-five percent had lived in the United States for 1–5 years; 25% for 6–10 years; 20% for 11–20 years; and 10% for over 20 years.

Forty-five percent of the participants were married; 5% were never married; 15% were separated or divorced; 20% were widowed; and 15% were in a common-law marriage or living together. Ninety percent were Catholic; 10% were Evangelical Pentecost. Thirty-five percent reported 0–2 years of formal education; 40% reported 3–5 years; 15% reported 6–8 years; 5% reported 9–11 years; and 5% reported being

a high school graduate. Sixty-five percent reported an annual family income of \$0–\$4,999; 35% reported \$5,000–\$14,999.

Two bilingual researchers underwent intensive training that provided instruction on the administration of instruments and focused on issues of cultural competence. The training was conducted by the primary investigator who has extensive experience in community-based research with Latin populations, including migrant farmworkers.

Participants were recruited from four migrant farmworker camps during the summer of 1999. Following consent, each participant completed an open-ended interview. The interview topics are described in the Instruments subsection. After each interview, each participant completed a questionnaire. Because of the low educational levels among some migrant workers, the researchers offered to read and clarify, if necessary, the questionnaire items to each participant. Seventy-five percent of participants requested assistance. All of the participants participated in Spanish. The interview and questionnaire required approximately 1 1/2 hours to complete. Each participant was reimbursed \$25.00 for her participation.

#### Instruments

A background information form assessed age, marital status, ethnicity, generational status, age of move to the United States, religious affiliation, education, and family income.

*Adult Self-Perception Scale.* The Global Self-Worth subscale of the Adult Self-Perception Scale (Messer & Harter, 1986) was used to measure self-esteem. The subscale consists of 6 items, each of which is scored 1 to 4 with possible scores ranging from 6 to 24. Higher scores indicate higher 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.

*Family Assessment Device.* The General Functioning subscale of the Family Assessment Device (FAD) (Epstein, Baldwin, & Bishop, 1983) was used to measure family functioning. The FAD is a self-report scale consisting of statements that participants endorse in terms of how well each statement describes their family. Items are scored on a 4-point scale ("strongly agree" to "strongly disagree"), with scaled scores ranging from 1.00 (healthy) to 4.00 (unhealthy). The General Functioning subscale consists of 12 items. Examples of items include the following: "We avoid discussing our fears and concerns"; and "In times of crisis, we can turn to each other for support." The FAD has been found (Epstein et al., 1983; Halvorsen, 1991; Hovey, 2000b) to have adequate internal consistency reliability (.71-.92), test-retest reliability (.66-.76), and construct validity among general and Mexican-American samples.

*The Personal Resource Questionnaire.* Social support was measured by the Personal Resource Questionnaire-Part 2 (PRQ85) (Weinert, 1987). The PRQ85-Part 2 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 support. Examples of items include the following: "Among my group of friends, we do favors for each other"; "I can't count on my friends to help me with problems"; "I belong to a group in which I feel important"; and "I have people to share social events and fun activities with."

The PRQ85 has been found (Hovey, 2000b; Hovey & Magaña, 2000; Weinert, 1987; Weinert & Brandt, 1987; Weinert & Tilden, 1990) to have adequate internal consistency reliability (.85-.93), test-retest reliability (.72), and construct validity among general and Mexican-American samples.

*Beck Hopelessness Scale.* The Beck Hopelessness Scale (BHS) (Beck & Steer, 1988) was used to measure hopelessness. This scale consists of 20 true-false items that measure the participants' level of negative attitudes about their short- and long-term future. Possible scores range from 0 to 20. Higher scores indicate greater hopelessness. The scale has been found (Katz, Katz, & Shaw, 1999) to have adequate internal consistency reliability and construct validity among general population 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 scale ("not stressful" to "extremely stressful"). If an item does not apply to a participant, it is assigned a score of 0. Examples of items include the following: "It bothers me that family members I am close to do not understand my new values"; "Because of my ethnic background, I feel that others exclude me from participating in their activities"; and "People think I am unsociable when in fact I have trouble communicating in English." The present investigators added two items to the scale: "I feel that I will never gain the respect that I had in my home country"; and "I feel guilty because I have left family or friends in my home

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country." The scale used in this study thus consisted of 26 items. Possible scores range from 0 to 130, with higher scores indicating higher acculturative stress. The SAFE has been found (Hovey, 2000b; Hovey & Magaña, 2000; Mena et al., 1987; Padilla, Alvarez, & Lindholm, 1986) to have adequate internal consistency reliability (.89-.90) and construct validity among Mexican-American samples.

*Personality Assessment Inventory.* The Anxiety scale of the Personality Assessment Inventory (PAI) (Morey, 1991) was used to measure anxiety. This scale measures clinical features of symptoms related to anxiety disorders and consists of 24 items rated on a 4-point scale ("false, not at all true" to "very true"). Higher scores indicate greater anxiety. Examples of items include the following: "I usually worry about things more than I should"; "I am so tense in certain situations that I have great difficulty getting by"; "I often have trouble concentrating because I'm nervous"; and "When I'm under a lot of pressure, I sometimes have trouble breathing." The accepted caseness threshold is a *T* score of 60. A score of 60 or greater represents potentially significant anxiety which may impair functioning. It is estimated (Morey, 1991) that 16% of general population individuals will reach caseness. The scales have been found (Fantoni-Salvador & Rogers, 1997; Hovey & Magaña, 2002; 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.

*Center for Epidemiologic Studies Depression Scale.* Depression was measured with the Center for Epidemiologic Studies Depression Scale (CES-D) (Radloff, 1977). The CES-D measures level of depression within the previous 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 higher depression. The accepted caseness is a score of 16 or more, which represents the upper 20% of scores. Several studies (Golding & Aneshensel, 1989; Golding, Aneshensel, & Hough, 1991; Hovey, 2000b) have found that the CES-D has adequate internal consistency reliability (.81-.90) and construct validity among Mexican-American samples.

*Suicidal Ideation and Interview Topics.* In assessing suicidal ideation, each participant was asked whether she ever thought about suicide. If the participant reported having thought about suicide, then she was counted as someone with some level of suicidal ideation. If the participant responded that she had never thought of committing suicide, then she was counted as someone who had not experienced suicidal ideation.

The interview schedule included questions concerning history of immigration, history of employment, and history of migrant farmwork. In addition, we asked participants about their social support system, medical history, plans for the future, and positive aspects of their experiences as migrant farmworkers. Because this qualitative data is outside the scope of this paper, we will not report them. Rather, our focus is on the stressors that are associated with migrant farmwork. We asked each participant about the specific stressors she has experienced while working and living as a migrant farmworker. Rather than assuming that we knew what was stressful about their lifestyle, participants used their own words to generate and describe their perception of stressors.

### Data Analyses

Descriptive statistics are presented first. Pearson correlation coefficients that were

used to determine the relationships among the predictor variables (acculturative stress, family functioning, social support, self-esteem, hopelessness, anxiety and depression) are then presented. Finally, analyses of variance (ANOVAs) and a logistic regression analysis are presented. The ANOVAs were used to analyze the individual relationships among the predictor variables and suicidal ideation, and the logistic regression analysis was used to assess whether the combined influences of the predictor variables could predict the participants' experiences of suicidal ideation.

## RESULTS

### Descriptive Statistics

*Self Esteem, Family Functioning, and Social Support.* The mean score for self esteem was 20.0 ( $SD=2.8$ ). This represents a moderate level of self esteem. The mean score for the FAD was 1.85 ( $SD=0.49$ ). This represents a moderate level of family functioning. The mean score for the PRQ85 was 142.4 ( $SD=14.2$ ). This represents a moderate level of social support.

*Acculturative Stress and Anxiety.* The mean score for the SAFE scale was 53.3 ( $SD=15.2$ ). The mean score for the PAI anxiety scale was 51.5 ( $SD=9.8$ ). The present sample revealed a relatively high level of anxiety. Twenty-five percent of the participants reached caseness for anxiety with a score of 60 or greater compared to the expected 16%.

*Hopelessness, Depression, and Suicidal Ideation.* The mean score for the BHS was 4.3 ( $SD=3.8$ ). This represents a moderate level of hopelessness. The mean score for the CESD was 12.3 ( $SD=10.1$ ). The sample revealed a relatively high level of depression. Thirty percent of individuals reached caseness with a score

of 16 or greater on the CESD compared to the expected 20%. Thirty-five percent of the sample reported experiencing suicidal ideation since immigrating to the United States and doing farmwork. Sixty-five percent reported no history of suicidal ideation.

*Stressors Associated with Migrant Farmwork.* Table 1 lists the results of a content analysis which identified the stressors commonly experienced by the female farmworkers. The coding of stressors, which involved no preset categories, was conducted by three researchers blind to the study's hypotheses. The interrater reliability, calculated as a percentage agreement, was 94%. Disagreements were resolved by consensus.

As noted in Table 1, language barriers was the most common stressor. It was mentioned by all participants. The overall analysis revealed 21 distinct stressors. Eleven of the stressors were reported by at least 40% of participants. Nineteen of the 21 were reported by at least 25% of participants.

The following defining characteristics of the stressors are given to help clarify and understand the distinction among some of the stressors. "Hard physical labor" represented those difficulties due to the actual work itself (e.g., difficult physical nature of work; physical pain and health consequences related to work; not having enough water to drink while in the fields). This compares to "rigid work demands," which were those difficulties resulting from the structure of the work environment (e.g., long hours; no days off). "Unpredictable work/housing and uprooting" represented both the unpredictable nature of finding work or housing, and the feeling of instability due to constantly being uprooted. "Worries about the socialization of children" were those instances in which participants reported worrying about possible negative influences on the socialization of their children (e.g., drug use; less

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TABLE 1. Stressors Identified by Female Migrant Farmworkers

Stressors	Percentage of Farmworkers Who Experienced Stressor (N = 20) (%)
Language barriers	100
Unpredictable work or housing/uprooting	70
Being away from family or friends	70
Hard physical labor/physical pain related to farmwork	65
Migration experience	60
Rigid work demands	55
Worries about socialization of children	55
Undocumented status	50
Low family socioeconomic status/poor pay/poverty	45
Acculturating to new environment	45
Education of self or children	40
Lack of daycare and supervision of children	35
Poor housing conditions	30
Geographical and social isolation	30
Lack of transportation/unreliable transportation	30
Loss of spouse	30
Discrimination from society/exploitation by employer	25
Domestic abuse/poor spousal relations	25
Emotional isolation	25
Limited access to medical care/paperwork for social services	20
Responsibilities specific to being a female	15

moral values of friends of children). This compares to "lack of daycare and supervision of children," which was defined as the farmworkers' worries over not having anyone to supervise their children while they worked. The "migration experience" represented those stressors related to the migration experience itself (e.g., owing money to individuals who helped them cross the border; dangerous situations such as swimming across polluted waters or walking extremely long distances in the desert to avoid being caught by immigration authorities). "Acculturating to the new environment" included stressors such as the lack of familiar foods and the lack of Spanish media. "Geographical and social isolation" represented those stressors associated with being physically isolated (e.g., difficult to meet people; no place for grocery shopping). On the other hand, "emotional isolation" was characterized by an emotional (rather than physical) inability to confide in others, and keeping feelings inside rather

than sharing feelings with others. "Responsibilities specific to being a female" involved stressors related to duties that some view as belonging solely to women (e.g., husband not helping with childcare and household duties because it is the responsibility of the woman). Finally, "loss of spouse" represented those stressors due to the spouse no longer being in the home (e.g., death of spouse; spouse leaving or being kicked out of home).

### Relationships Among Predictor Variables and Depression

Family dysfunction ( $r = .51, p = .02$ ), ineffective social support ( $r = -.34, p = .07$ ), high acculturative stress ( $r = .58, p < .005$ ), and high levels of hopelessness ( $r = .57, p < .005$ ) were significantly related to high depression. Due to lack of power, anxiety ( $r = .21, p = .19$ ), and self-esteem ( $r = -.17, p = .24$ ) were not significantly



related to depression, although their associations were in the hypothesized directions.

Relationships Among Predictor Variables and Suicidal Ideation

*Analyses of Variance (ANOVAs).* ANOVAs were used to assess differences among migrant farmworkers who have experienced suicidal ideation and migrant farmworkers who have not experienced suicidal ideation. Differences between the two groups were assessed on the variables of self-esteem, family functioning, social support, hopelessness, acculturative stress, anxiety, and depression. As indicated in Table 2, migrant farmworkers with suicidal ideation reported significantly lower self-esteem, greater family dysfunction, less effective social support, more hopelessness, higher acculturative stress, and greater depression than migrant farmworkers without suicidal ideation.

*Logistic Regression.* A logistic regression analysis was used to determine whether self-esteem, family functioning, social support, hopelessness, acculturative stress, and depression could predict the presence of suicidal ideation. The model's chi-square

value ( $\chi^2 [6] = 25.9, p = .0002$ ) and Cox and Snell's  $R^2 (.73)$  indicated a significant goodness of fit of the model (George & Mallery, 2000), suggesting that the predictor variables had a significant combined influence on suicidal ideation (Menard, 1995). The model accurately classified 100% of the cases. The Wald statistic indicates the level of influence that each predictor variable has on the dependent variable in a logistic regression analysis (Menard, 1995). In the present analysis, the Wald statistic was used to determine the relative strength of each predictor on suicidal ideation. The Wald values were as follows, in order of strength: social support (Wald = 1.76), acculturative stress (1.07), hopelessness (1.00), family functioning (0.94), depression (0.40), and self-esteem (0.12).

DISCUSSION

The major premise of this study is that the migrant farmworker experience, in conjunction with the immigration experience, may place female migrant farmworkers at psychiatric risk. As noted, scant research has addressed mental health among migrant farmworkers in the United States. The present study is the first to qualitatively examine stressors specific to female

TABLE 2. Mean Scores and Standard Deviations for Migrant Farmworkers with History of Suicidal Ideation versus Migrant Farmworkers without History of Suicidal Ideation

	History of Suicidal Ideation				F (1, 18) df
	Yes (n = 7)		No (n = 13)		
	M	SD	M	SD	
Self-esteem	18.4	2.6	20.9	2.6	3.88*
Family functioning	2.22	0.48	1.66	0.40	7.79**
Social support	131.1	10.8	148.4	12.1	9.87***
Hopelessness	6.3	3.7	3.2	3.4	3.39*
Acculturative stress	62.7	15.9	48.2	12.5	5.10**
Anxiety	50.6	8.0	52.0	11.0	0.09
Depression	18.9	9.7	8.7	8.6	5.78**

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

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migrant farmworkers, and the first to explore suicide risk among migrant farmworkers.

### Levels of Anxiety and Depression Among Migrant Farmworkers

Relatively high levels of anxiety and depression were found in the present sample. As noted, 25% of the sample reached caseness for anxiety compared to the 16% found in Morey's (1991) census-matched standardization sample. Thirty percent of the sample reached caseness for depression compared to the 20% typically found in general population samples (Radloff, 1977). The present findings are consistent with our earlier work (Hovey & Magaña, 2000, 2002) which indicated relatively high levels of anxiety and depression among Mexican migrant farmworkers in Michigan and Ohio. In our earlier work, 30% (females 35%, males 22%) reached caseness for anxiety and 39% (females 42%, males 35%) reached caseness for depression.

### Model of Suicidal Ideation Among Migrant Farmworker Women

Our overall findings suggest that the influence of a combination of factors (e.g., severe environmental stressors, inadequate social support, family dysfunction, weakened sense of self, hopelessness) commonly experienced by female migrant workers may lead to reduced coping and a susceptibility for risk. As noted, the set of predictor variables accurately classified which farmworkers had thought of committing suicide, and which farmworkers had not. It thus appears that the present model may be effective in detecting those migrant farmworker women who are at risk for experiencing suicidal ideation.

### Individual Predictors of Depression and Suicidal Ideation

*Acculturative Stress.* Previous research (Hovey, 2000a, 2000b; Hovey & King, 1996, 1997) has suggested that immigrants who experience elevated levels of acculturative stress (stress which directly results from, and has its source in the acculturative process) are at risk for developing depression and suicidal ideation. In the present study, high acculturative stress was significantly related to depression and the presence of suicidal ideation. These findings corroborate those from Hovey (2000b) and Hovey and King (1996) who found that greater acculturative stress increased the risk for depression and suicidal ideation among Mexican adult and adolescent immigrants.

*Family and Social Support.* The present findings indicated that family dysfunction and inadequate social support were associated with greater depression and suicidal ideation. These relationships are not surprising. The family is a core characteristic of Mexican culture (Rueschenberg & Buriel, 1989) and has traditionally been essential in providing emotional support for its members. Thus, a more arduous acculturative experience can be anticipated if the family does not provide stability and emotional support. Similarly, because Mexican culture traditionally emphasizes collectivist values and affiliation (Alvarez, 1987), Mexican migrant farmworkers may be particularly vulnerable to distress when they lack support from friends. Several authors (e.g., Holtzman & Gilbert, 1987; Sarason, Levine, Basham, & Sarason, 1983) have observed that larger family and social networks do not ensure that the support will be more effective, and thus the perceived quality of support may be a more

accurate indicator of psychiatric distress than is the quantity of support. This notion is especially relevant for migrant farmworkers, since the social networks of migrant workers are typically limited because of geographical isolation. The present study measured the perceived effectiveness of support, and its findings suggest that support of high quality may help migrant workers cope against depression and suicidal ideation.

*Hopelessness, Depression, and Immediate Stressors.* As noted, the present findings indicated significant relationships among hopelessness, depression, and suicidal ideation. These findings were expected, given previous work that found linkages between hopelessness and depression (e.g., Beck, Steer, Kovacs, & Garrison, 1985) and hopelessness and suicidal thoughts and behaviors (e.g., Weishaar & Beck, 1992).

The notion of hopelessness is particularly crucial in the context of immigration. Beck and Steer (1988) stated that hopelessness involves negative expectancies about the future and is comprised of the following four cognitive components: Nothing I do will turn out right; I will never succeed at what I do; My important goals can never be reached; and My worst problems will never be solved. Deciding to immigrate to the United States to work as a migrant farmworker is a major life decision that involves a complete uprooting of lifestyle. In the present scenario, a migrant farmworker may believe that the decision to uproot and migrate here provides further opportunities. She may thus feel hopeful about the future, which may positively affect her ability to cope and adapt to the new surroundings. On the other hand, the migrant worker may believe that uprooting what was familiar to her was a mistake, and her hopelessness may limit her ability to adapt and contribute to feelings of depression and suicidal ideation. The present findings

are suggestive of previous work by Hovey (2000b) and Hovey and King (1996) who found that Mexican immigrants who held nonhopeful expectations for the future experienced more depression and suicidal ideation during the acculturative process.

In their discussion of stress, coping, and suicide, Yufit and Bongar (1992) suggested that during times of change, the experience of immediate, severe life stressors—such as loss—may overwhelm an individual's capacity to cope. This weakened sense of coping may precipitate an increase in hopelessness and depression, which may contribute to a loss of meaning in life and a greater risk for suicide. This notion has relevance for the present study. As noted, the migrant farmworker women reported numerous stressors associated with their lifestyle. These included both real loss (being away from loved ones; losing a spouse; leaving the country of origin) and more subtle psychological loss (e.g., emotional isolation; discrimination and the consequent diminished sense of self). Although the present study did not directly assess the relationships among the stressors and suicide risk, it would not be unexpected if the farmworkers whose coping capacities were overwhelmed by the accumulation of stressors were at an increased risk.

To share the sense of the individual experiences of female migrant farmworkers, as well as to highlight some of the specific stressors they have experienced, we give the following narrative examples. The first narrative was reported by a 31-year-old female migrant. She spoke about the experience of discrimination and her weakened sense of self.

Yesterday, we were looking to purchase a car. We saw this car for sale. We pulled off the side of the road where the car owner lives. The car owner came out and asked what we wanted. We told him we were interested in purchasing the car.

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He told us to leave his property. Many times when I see people who have lots of money (such as the car owner), I feel inferior to them. I become anguished and cry. I feel like a weak woman.

The next example is from a 52-year-old farmworker. She reported that, although there are people—including her husband, brother, and children—with whom she can share her feelings, she feels emotionally isolated.

I don't share my worries with anyone. I keep them inside. One always has worries nearly every day, but I usually keep everything inside. The men can go out to drink (to deal with their worries), but they don't notice mine. I sometimes have to remind myself that there are others who are worse off than I.

The following is an example of rigid work demands, narrated by a 28-year-old farmworker.

I have to work in bad weather. In storms, we get drenched. We work in mud and everything. We *have* to work, because the cucumbers continue to grow. If we don't pick them, we don't get paid. We also have to work when we are sick. And I have worked when I didn't own shoes.

The next narrative is from a 25-year-old farmworker who had migrated to the United States four years earlier. She vividly recalled her dangerous migration experience.

Having to cross over was the most difficult thing I have ever encountered. When I was crossing, I was worried that something might happen to us. There are a lot of dope heads on the border and I was terrified that they would do something to us. I thought they might kill us.

The final narrative is from a 35-year-old migrant. Her narrative includes examples of lack of daycare, being away from family, and unreliable transportation.

I think the most difficult thing is daycare for children. One time I left my children for a year in Mexico because, although I did find someone to baby-sit them, the baby-sitter would not feed them. It was very difficult to work from dawn to dusk, and then come home to find out that my children were not being fed. So I took my children to Mexico, although it pained me to be away from them.

We travel in a van that nearly did not make it here. It was making all sorts of noises on the road. I told my husband that even though we made it here, how are we going to get back? This is a huge worry of mine, that we have a car that may break. If a car breaks on the road, what are we going to do with the entire family? This has happened to many migrant families, and then they become stranded.

### Limitations and Future Directions for Research

This study should be considered preliminary because of its limited sample size and exploratory nature. Because of the preliminary scope of the design, the findings should be generalized with caution. The homogeneity of the sample in terms of gender, ethnicity, and area sampled suggests that the findings should not be generalized to male migrant workers, female migrant workers of other ethnicities, or female migrant workers who reside in other areas of the United States. The present study assessed suicidal ideation by asking each farmworker about her history of suicidal thoughts. To assess the severity of suicidal ideation, future research should utilize a more comprehensive measure of suicidal ideation.

Despite the study's preliminary nature, its findings are compelling because they suggest that some Mexican migrant farm-

worker women are at psychiatric risk, and they suggest variables that may account for the degree of risk. Further exploration in the area of suicide risk among migrant farmworkers is thus warranted. Future research should concentrate on increasing the present study's generalizability. This includes larger-scale research of a representative nature that explores suicide risk among Mexican migrant farmworker women in particular, and migrant farmworkers in general (including migrant farmworkers in other geographical regions and of different ethnicities). In addition, future researchers should develop and incorporate into their work a quantitative scale that assesses the quality and severity of the stress inherent in the migrant farmworker lifestyle. Such a scale is necessary in order to directly measure the relationships among migrant farmwork stress, depression, and suicidal ideation. Finally, further qualitative research is needed to explore the effectiveness of the coping strategies employed by migrant farmworkers in

response to the environmental stressors they experience.

#### Clinical Implications

The present findings have important implications for clinical work with female migrant farmworkers. In the evaluation and treatment of the migrant farmworker woman who may be experiencing symptoms of anxiety, depression, and suicidal ideation, the clinician should carefully explore the severity of stressors related to her migrant farmworker lifestyle, the effectiveness of support from her family and friends, her sense of self, her expectations for the future, and the effectiveness of her past coping and adaptation to change. Because of their migratory lifestyle, treatment for migrant farmworkers should be short term in focus. Finally, the clinician should be aware of mental health services that are available in the migrant farmworkers' other areas of residence.

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