

The Mental Health of Migrant Farmworkers in the United States: Current Knowledge, Research Needs, and Service Recommendations

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Because of the difficulties inherent in a migrant farmworker lifestyle, several authors over the past two decades (e.g., De Leon Siantz, 1994; Goldfarb, 1981; Valdés, 1991) conjectured that migrant farmworkers were at risk for mental health problems. However, researchers have only recently begun to assess the mental health status of migrant farmworkers in the United States.

Research on the mental health of migrant farmworkers is still infrequent, but the picture that is slowly emerging reveals a population at risk for the development of psychiatric difficulties. The following is the current state of knowledge of the mental health of migrant farmworkers in the U.S.

Stressors Associated with the Migrant Farmworker Lifestyle

Using a semistructured interview format, researchers (Hovey & Magaña, 2000e; Magaña & Hovey, 2000) recently documented a set of stressors that are commonly experienced by Mexican migrant farmworkers in Michigan and Ohio. Included were the following:

- Language barriers.
- The unpredictable nature of finding work or housing, and the feeling of instability due to constant uprooting.
- Being away from family and friends and the consequent reduction of emotional support.
- Difficult physical labor and the health consequences related to farmwork.
- Difficulties stemming from the structure of the work environment (e.g., long hours; no days off).
- Difficulties related to migrating to the U.S. (e.g., dangerous situations such as swimming across polluted waters or walking extremely long distances in the desert).

Worries about the socialization of their children (e.g., children encountering different moral values in the mainstream society; deterioration of family values).

- Lack of daycare and supervision of children.
- Concerns over the education of children.

Poverty and the lack of necessary resources such as food and clothing

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- Poor housing conditions (e.g., overcrowded conditions; presence of vermin; leaky roofs; lack of running water; toilet and shower facilities which were frequently broken and infected with bacteria; no laundry facilities).
- Geographical and social isolation, making it difficult to meet people and to find a place to shop.
- Emotional isolation, characterized by an emotional (rather than a physical) inability to confide in others, and keeping feelings inside rather than sharing them.

Unreliable transportation.

- Experiences of discrimination.
- Exploitation by employers (e.g., lower wages than what was agreed; not being paid on time; excessive prices for food and housing supplies).
- Fear of violence in the community (e.g., domestic violence; violence due to drugs and alcohol).
- Health-related concerns such as poor health, limited access to medical care, and the migrant community's lack of knowledge regarding sexually transmitted diseases, HIV, and AIDS.

Acculturating to a new environment (e.g., lack of familiar foods and of Spanish media).

The above research is relevant for at least two reasons. First, it provides a comprehensive summary that ties together the disparate stressors that other researchers have found among Mexican migrant farmworkers in south Georgia (Perilla et al., 1998), North Carolina (Clifford, 1999), Oregon (Wiggins & Castañares, 1995), and Puerto Rican and African American migrant farmworkers in upstate New York (Harper et al., 1979). More importantly, it details the circumstances which may make migrant farmworkers susceptible to mental health problems such as depression, anxiety, substance abuse, and suicide.

Depression

Prevalence

Relatively little is known about the prevalence of depression among migrant farmworkers. The three studies mentioned below measured depression through the use of the Center for Epidemiologic Studies Depression Scale (CES-D). Typically, approximately 18% of individuals who complete the CES-D will reach caseness. Reaching caseness indicates that the individual is at significant risk for depression.

De Leon Siantz (1990a) measured the prevalence of depression among Mexican migrant mothers in Texas. She found that 41% of the mothers reached caseness. Hovey and Magaña (2000a) reported that 38% of their sample of Mexican migrants in Michigan and Ohio reached

caseness. Contrary to these high depression levels, Alderete et al. (1999) reported that 20% of Mexican migrant farmworkers in Fresno County, California reached caseness.

Predictors of Depression

Because Mexican culture traditionally emphasizes familism, collectivist values, and affiliation, Mexican migrants may be particularly vulnerable to depression when they lack support from family and friends. In fact, the standard level of depression found in Alderete et al.'s (1999) sample may be partially due to the migrants' overall access to the available support network in the Fresno area. Not surprisingly, therefore, Alderete et al. found that those migrant farmworkers who indicated high levels of instrumental and emotional support reported lower depression. Hovey and Magaña (2000a) and De Leon Siantz (1990a) reported a similar relationship between positive emotional support and lower depression among Mexican migrants in Michigan, Ohio, and Texas.

Researchers have furthermore documented that high levels of depression among migrant farmworkers were associated with high acculturative stress (Hovey & Magaña, 2000a), low self-esteem (Hovey & Magaña, 2000a), discrimination (Alderete et al., 1999; Hovey & Magaña, 2000a), low religiosity (Hovey & Magaña, 2000a), lower income (White-Means, 1991), physical health problems (Vega et al., 1985), and lack of child care (De Leon Siantz, 1990a).

In addition, among first-generation migrant farmworkers in Michigan and Ohio, Hovey and Magaña (2000a) found that individuals who willingly immigrated to the United States and who agreed with the decision to work as a farmworker were less depressed than those farmworkers who did not. This indicates that the lack of empowerment to control their lives is an important indicator of depression among migrant farmworkers.

Finally, Hovey and Magaña (2000a) found that high levels of education were associated with depression. This finding suggests that, in contrast to farmworkers who compare their current situation to a lower socioeconomic experience in Mexico, farmworkers with greater education may be more sensitive to the discrepancy between their current life conditions and those of others in the U.S. These individuals may also have set life goals other than migrant farmwork and may feel that they have failed to reach them.

Anxiety

In comparison to the above literature on depression, there is even less research on anxiety. Moreover, because of the different methods that researchers have used to assess anxiety among migrant farmworkers, it is difficult to compare these findings.

Alderete et al. (2000) assessed the lifetime prevalence of anxiety disorders among Mexican and Indian migrant farmworkers in Fresno County, California. They found that 15.1% of men and 12.9% of women had experienced an anxiety disorder at some point in their lives.

Hovey and Magaña (2000b, 2000d) assessed the prevalence levels of symptoms related to anxiety disorders among Mexican migrant farmworkers in Michigan and Ohio. They measured anxiety through the use of the Personality Assessment Inventory (PAI), which, in addition to overall anxiety, measures the cognitive, affective, and physiological expressions of anxiety. Cognitive anxiety represents the expectations of harm and worry that may compromise an individual's ability to concentrate; affective anxiety reflects feelings of apprehension, tension, panic, and difficulty in relaxing; and physiological anxiety represents physical signs of anxiety.

Typically, about 16% of individuals will reach caseness for each type of anxiety. Hovey and Magaña (2000b) found that 29.5% of migrants reached caseness for overall anxiety, 25.3% for cognitive anxiety, 31.6% for affective anxiety, and 27.4% for physiological anxiety. Their overall findings suggest that migrant farmworkers may be at risk for developing anxiety-related disorders.

Interestingly, Hovey and Magaña (2000b) found that first-generation migrant farmworkers reported significantly less cognitive anxiety (18.5%) than did nonimmigrant migrants (40%). Similar to the positive relationship between education and depression, this finding may be connected to the question of comparison. Immigrant workers may compare their current life situations to a lower socioeconomic experience in Mexico, whereas second and greater generation workers--who tend to be more educated--may be more sensitive to the discrepancy between their current life conditions and those of others in the U.S. Nonimmigrants may therefore experience greater worry about the future.

Some of the other risk factors for anxiety among migrants are also similar to those for depression. For example, in Hovey and Magaña (2000b, 2000d), high anxiety was associated with ineffective social support, high acculturative stress, low self-esteem, low religiosity, and higher education. Furthermore, migrant farmworkers with greater anxiety reported that they were working in farmwork because of someone else's wishes, not their own.

It is important to note that elevated levels of anxiety may have serious implications for the physical health of migrant farmworkers. High physiological anxiety may lead to a more dangerous work situation. Moreover, chronic anxiety may lead to negative health consequences such as the suppression of immune system functioning (increasing the chance for infectious diseases), and increased risks for high blood pressure and heart disease (Comer, 2001).

Substance Abuse

As suggested by several authors (e.g., Alaniz, 1994; Inciardi et al., 1999; Perilla et al., 1998; Watson et al., 1985), migrant farmworkers may use alcohol and other drugs as coping mechanisms. In other words, they may use alcohol and other drugs to offset the stressors of migrant life, boredom, and feelings of depression and anxiety.

Prevalence

A handful of studies have explored the frequency and quantity of alcohol use among migrant farmworkers. Watson et al. (1985) found that African American migrant men in western New York drank frequently and in large quantities. Twenty-four percent of the men drank daily, another 33% drank two to three times per week, and 38% consumed five or more drinks at each sitting. Chi and McClain (1992) also found elevated levels of alcohol use among migrant men in New York. Twenty-five percent of the men consumed more than six drinks per sitting.

In terms of alcohol level among migrant men in northern California, Alaniz (1994) reported an average of 10 drinks per episode on the weekends. The range was 6 to 24 drinks per worker. Finally, Alderete et al. (2000) found that alcohol abuse--with a prevalence of 12.2%--was the most common psychiatric disorder among Mexican migrant men in Fresno County, California. This level appears elevated. The substance abuse prevalence for adults in the U.S. is 7%. (Comer, 2001).

Predictors and Negative Consequences of Substance Abuse

Alderete et al. (2000) found that the rates of alcohol abuse for migrant men in California were 12 times higher than they were for women. Migrant farmworkers who were over the age of 25, who had more than six years of education, and whose main country of residence was the U.S. were also at greater risk for alcohol abuse. Watson et al. (1985) and Chi and McClain (1992) found that social isolation was the primary risk factor for elevated alcohol consumption among African American migrant men in New York.

Alcohol and drug abuse among migrants create safety hazards. These include working and driving while under the influence (Alaniz, 1994), fighting among men (Alaniz, 1994; Clifford, 1999), and an increased chance for domestic violence (Van Hightower et al., 2000). Finally, numerous negative health consequences of alcohol abuse are well-documented (Comer, 2001). Chronic alcohol abuse may lead to nutritional deficiencies; the erosion of the esophagus and stomach lining; a weakened heart muscle and reduced blood flow; high blood pressure; an increased risk for cancer of the larynx, esophagus, liver, and colon; memory impairment; delirium; and cirrhosis of the liver.

Suicide Risk

Research that assesses suicide risk among migrant farmworkers is almost completely absent from the literature. Using a combination of interview and questionnaire data, Hovey and Magaña (2000e) examined the prevalence and predictors of suicidal ideation among 20 Mexican migrant mothers in Michigan and Ohio. They found that 35% of the women reported a history of suicidal thoughts. In comparison to the women without a history of suicidal thoughts, they reported the following risk factors: lower self-esteem, a more dysfunctional family environment, less effective social support, more hopelessness about the future, greater acculturative stress, and more depression.

Although this research is of a preliminary nature, it begins to identify factors that may make migrant farmworker mothers susceptible to suicidal ideation. In fact, using the above six factors, Hovey and Magaña were able to predict, with 100% accuracy, which migrant women had experienced suicidal ideation and which had not.

Mental Health of Migrant Farmworker Women

Anxiety

Migrant women may be at relatively greater risk for anxiety than are men. In addition to working all day in the fields, women usually bear the full responsibility for domestic labor (Alaniz, 1994; Hovey & Magaña, 2000e). They prepare and cook meals, and are responsible for childcare and household duties such as cleaning the home and doing the laundry. Moreover, migrant women often experience sexual harassment and seldom receive maternity leave or prenatal care (Alaniz, 1994). Despite the apparent at-risk nature of the female migrant lifestyle, research has yet to fully document gender differences in anxiety among migrant farmworkers. In their study of migrant workers in Michigan and Ohio, Hovey and Magaña (2000c) found that women reported significantly greater anxiety than men.

Domestic Violence

Prevalence. Female migrant farmworkers may also be at risk for domestic violence. Findings from McFarlane et al. (1991) indicated that 20% of migrant farmworker women were the victims of physical abuse during the past year. Rodriguez (1998) found that 10% of migrant women reported forced sexual activity over the past year.

More recently, Van Hightower et al. (2000) examined the prevalence of domestic violence in a large nationwide sample of migrant farmworker women (91% Latina). Only women who were not in the company of male partners participated in the study. Nineteen percent of the women reported that they were physically abused within the past year. Within these 19%, one-fourth reported that they were also sexually abused. These figures may be underestimates, given the cultural factors that discourage Latina women from acknowledging and reporting domestic abuse.

Predictors and Explanations. Van Hightower et al. (2000) found that drug and alcohol use by the partner increased the chance of abuse by 600%; and that migrant status (compared to seasonal status) increased the chance of abuse by 47%.

Alcohol use influences rates of domestic violence in several ways. Alcohol produces physiological and cognitive changes which interact with frustration to produce aggressive behavior (Conner & Ackerly, 1994). Alcohol and drugs may also facilitate the continuation of violence by enabling perpetrators to rationalize their abuse (blaming the bottle instead of themselves) (Zubretsky & Digirotama, 1996).

The physical and social isolation of migrant women provides the abuser with a greater opportunity to engage in violent behavior (Websdale, 1997). Moreover, the migratory lifestyle itself impedes the development of social and community ties that may detour violence (Van Hightower et al., 2000). The lack of English skills, telephones, and transportation furthermore inhibit the use of potentially supportive domestic violence services in the community (Pinn & Chunko, 1997).

Mental Health of Children

The psychological pressures of growing up in the world of migrant farmwork are trying at best, and debilitating at worst. Difficulties include, but are not limited to, poverty, hunger, unsanitary living conditions, and poor health; working in the fields from a young age; the constant mobility and consequent breaking of ties with family and friends; the lack of English proficiency (Wright, 1991); leaving the school year early, entering school late, being older than other students in the same grade level (Wright, 1991), and eventually dropping out from school altogether (Cranston-Gingras & Anderson, 1990; Henning-Stout, 1996); having a depressed and thus emotionally unavailable mother (De Leon Siantz, 1990b); and frequently being ostracized by parents and peers as undesirable playmates (Kupersmidt & Martin, 1997).

Anxiety, Depression, and Disruptive Behaviors

Kupersmidt and Martin (1997) assessed the prevalence of psychiatric disorders in children (aged 8 through 11 years) of Mexican and African-American migrant workers in North Carolina. The elevated levels of pathology found are striking. Fifty-nine percent of the children revealed one or more psychiatric disorders. The most common disorders (experienced by 50% of the children) were anxiety related. These included phobias, separation anxiety, over anxiety, and avoidance. Seventeen percent of the children displayed disruptive behaviors and 8% were

depressed. Kupersmidt and Martin believed that the elevated anxiety constituted a normal response to psychological pressures such as those outlined in the previous paragraph.

Child Maltreatment

Using state data sources, Larson et al. (1990) assessed the incidence of abuse and neglect of migrant children in New York, New Jersey, Pennsylvania, Florida, and Texas. They found that migrant children were significantly more likely to be maltreated than other children. The overall rate of maltreatment was 27.7 incidents per 1,000 children. This is approximately three times the rate of maltreatment found in the general population of these five states.

This high incidence of maltreatment is likely a function of multiple factors (Alvarez et al., 1988; Larson et al., 1987, 1990). For example, economic frustration and distress may lead to a greater potential for family conflict, thus increasing the migrant child's vulnerability to maltreatment. Social and physical isolation--the result of a migratory lifestyle--also place the child at a higher risk because it reduces the emotional support and assistance which can help alleviate family stressors. Poverty often leads to poor prenatal care. This, in turn, is frequently associated with low birth weight and perinatal complications, which are characteristics often observed in families with a history of maltreatment. Finally, because many migrant parents have been maltreated as children, they may be more predisposed to using parenting styles that result in aggression.

Conclusions and Recommendations

Research

Although scant research has addressed the mental health of migrant farmworkers in the United States, what we do know points to a population at risk. High levels of pathology have been found for depression, anxiety, alcohol abuse, and violence toward women and children. In addition, preliminary data suggest that some migrant farmworkers may be at risk for suicide. In order to arrive at more precise prevalence estimates, we need to further explore the rates of these and other disorders with large-scale studies of a representative design. Implicit in this recommendation is that future research should be comprehensive and should thus explore the health of migrant farmworkers in all areas of the country. Only then will we have a clear picture of the at risk nature of the migrant lifestyle. Longitudinal research can track the fluctuations in mental health status, and can, for example, determine whether individuals are at greater risk during the migratory agricultural season in comparison to the "off-season." Finally, future research should attempt to isolate risk and protective factors. This will help detail the possible points for service intervention.

Service

As implied above, our current state of knowledge suggests the need for prevention, assessment, and treatment services for migrant farmworkers who may be at elevated risk for domestic violence and for the development of psychiatric problems. It is thus imperative that additional mental health programs for migrant workers are funded and developed. The following are recommendations for service.

Services for migrant workers should be physically, linguistically, and culturally accessible. Because migrant workers may be unaware of existing services, efforts should be

made to inform them of their availability. Moreover, due to the migratory nature of their lifestyle, services for migrant workers should be short-term in focus, and the provider should be aware of services that are available in their other areas of residence. Service providers should also be linguistically and culturally capable in their communication with migrant farmworkers. Ideally, the provider should not only speak Spanish and English (when working with Latin clients), but should understand the nuances of migrant culture. Another option is to have professional translators available, although this alternative should be utilized only if necessary.

Due to their demanding work schedule, prevention efforts should be targeted to times and places that are convenient to migrant farmworkers (e.g., at the labor camps on evenings or weekends; outreach efforts in Texas or Florida during the off-season).

Possible preventive strategies include the distribution of information about mental disorders and their associated risk factors. Possible avenues of distribution include the inclusion of educational articles in migrant newsletters, and the distribution of mental health literature at migrant health fairs.

Other strategies include the establishment of support groups--at camps or local community centers--where migrant workers can discuss their difficult experiences and the ways in which they can cope with distress. Support groups would increase farmworkers' self-esteem and would reduce their isolation by providing emotional support. Educational presentations--conducted by health professionals--can also be offered. These presentations can address specific topics such as risk factors for anxiety and depression, substance abuse, and learning to cope with migratory stressors. English classes can be held on-site to offset the inherent difficulties of not knowing English. Finally, mental health services can be integrated into mobile health clinic programs. Mobile clinics have been found (Lee & O'Neal, 1994; Wilson et al., 1995) to be effective in providing health care to rural, underserved populations.

The church is another possible prevention resource (Hovey, 1999). Religious organizations help foster social networks and therefore reduce psychiatric risk through social support. Church attendance may also provide exposure to basic religious beliefs thought to increase coping. Church members may use their priests and ministers as sources for emotional support. In addition to providing direct support, the clergy may disseminate information to farmworkers about the availability of other community resources. The cultural importance of the church extends beyond scheduled religious services. Therefore, outreach programs sponsored by the church, but not necessarily held at the church, will likely have the respect of farmworkers.

Lastly, prevention efforts can be incorporated into Camp Health Aide or *Promotora* programs (Booker et al., 1997). These programs train migrant farmworkers to provide health information and support to the migrant farmworker community. The Camp Health Aides are trusted members of the community. They organize and facilitate educational sessions and act as liaisons between community health agencies and migrant workers. In addition to providing education, these programs provide social contacts and increase self-esteem among the Camp Health Aides and participants.

References

- Alaniz, M. L. (1994). Mexican farmworker women's perspectives on drinking in a migrant community. *The International Journal of the Addictions, 29*, 1173-1188.
- Alderete, E., Vega, W. A., Kolody, B., & Aguilar-Gaxiola, S. (1999). Depressive symptomatology: Prevalence and psychosocial risk factors among Mexican migrant farmworkers in California. *Journal of Community Psychology, 27*, 457-471.
- Alderete, E., Vega, W. A., Kolody, B., & Aguilar-Gaxiola, S. (2000). Lifetime prevalence of and risk factors for psychiatric disorders among Mexican migrant farmworkers in California. *American Journal of Public Health, 90*, 608-614.
- Alvarez, W. F., Doris, J., & Larson, O. (1988). Children of migrant farm work families are at high risk for maltreatment: New York state study. *American Journal of Public Health, 78*, 934-936.
- Booker, V. K., Robinson, J. G., Kay, B. J., Gutierrez-Madera, L., & Stewart, G. (1997). Changes in empowerment: Effects of participation in a lay health promotion program. *Health Education and Behavior, 24*, 452-464.
- Chi, P. S., McClain, J. (1992). Drinking, farm and camp life: A study of drinking behavior in migrant camps in New York State. *Journal of Rural Health, 7*, 45-51.
- Clifford, S. (1999, October/November). Addressing emotional health among Latino farmworkers: A North Carolina Experience. *MCN Streamline, 5* (5), 1-3.
- Comer, R. J. (2001). *Abnormal psychology*. New York: Worth Publishers.
- Conner, K. R., & Ackerly, G. D. (1994). Alcohol-related battering: Developing treatment strategies. *Journal of Family Violence, 9*, 143-155.
- Cranston-Gingras, A., & Anderson, D. J. (1990). Reducing the migrant student dropout rate: The role of school counselors. *The School Counselor, 38*, 95-104.
- De Leon Siantz, M. L. (1990a). Correlates of maternal depression among Mexican-American migrant farmworker mothers. *Journal of Child and Adolescent Psychiatric Nursing, 3*, 9-13.
- De Leon Siantz (1990b). Maternal acceptance/rejection of Mexican migrant mothers. *Psychology of Women Quarterly, 14*, 245-254.
- De Leon Siantz, M. L. (1994). The Mexican-American migrant farmworker family: Mental health issues. *Mental Health Nursing, 29*, 65-72.
- Goldfarb, R. L. (1981). *Migrant farm workers: A caste of despair*. Ames, IA: Iowa State University Press.
- Harper, D., Babigian, H. M., Paris, R., & Mills, B. (1979). Migrant farm workers: Social conditions, adaptive belief systems, and psychiatric care. *Psychiatric Quarterly, 51*, 28-38.
- Henning-Stout, M. (1996). ¿Que podemos hacer?: Roles for school psychologists with Mexican and Latino migrant children and families. *School Psychology Review, 25*, 154-164.
- Hovey, J. D. (1999). Religion and suicidal ideation in a sample of Latin American immigrants. *Psychological Reports, 85*, 171-177.
- Hovey, J. D., & Magaña, C. (2000a). Acculturative stress, anxiety, and depression among Mexican immigrant farmworkers in the Midwest United States. *Journal of Immigrant Health, 2*, 119-131.
- Hovey, J. D., & Magaña, C. (2000b). *Predictors of anxiety among Mexican migrant farmworkers in the Midwest United States*. Manuscript submitted for publication.

Hovey, J. D., & Magaña, C. (2000c). *The psychiatric functioning of Mexican-American migrant farmworkers in the Midwest United States*. Manuscript submitted for publication.

Hovey, J. D., & Magaña, C. (2000d). *Psychosocial predictors of anxiety among immigrant Mexican migrant farmworkers: Implications for prevention and treatment*. Manuscript submitted for publication.

Hovey, J. D., & Magaña, C. (2000e). *Suicide risk factors among Mexican migrant farmworker women in the Midwest United States*. Manuscript submitted for publication.

Inciardi, J. A., Surratt, H. L., Colón, H. M., Chitwood, D. D., & Rivers, J. E. (1999). Drug use and HIV risks among migrant workers on the DelMarVa peninsula. *Substance Use and Misuse, 34*, 653-666.

Kupersmidt, J. B., & Martin, S. L. (1997). Mental health problems of children of migrant and seasonal farm workers: A pilot study. *Journal of the American Academy of Child and Adolescent Psychiatry, 36*, 224-232.

Larson, O. W., Doris, J., & Alvarez, W. F. (1987). Child maltreatment among U.S. east coast migrant farm workers. *Child Abuse and Neglect, 11*, 281-291.

Larson, O. W., Doris, J., & Alvarez, W. F. (1990). Migrants and maltreatment: Comparative evidence from central register data. *Child Abuse and Neglect, 14*, 375-385.

Lee, E. J., & O'Neal, S. (1994). A mobile clinic experience: Nurse practitioners providing care to a rural population. *Journal of Pediatric Health Care, 8*, 12-17.

Magaña, C., & Hovey, J. D. (2000). *Psychosocial stressors associated with migrant farmwork*. Manuscript submitted for publication.

McFarlane, J., Christoffel, K., Bateman, L., Miller, V., & Bullock, L. (1991). Assessing for abuse: Self-report versus nurse interview. *Public Health Nursing, 8*, 245-250.

Perilla, J. L., Wilson, A. H., Wold, J. L., & Spencer, L. (1998). Listening to migrant voices: Focus groups on health issues in south Georgia. *Journal of Community Health Nursing, 15*, 251-263.

Pinn, V. W., & Chunko, M. T. (1997). The diverse faces of violence: Minority women and domestic abuse. *Academic Medicine, 72* (Suppl. 1), 65-71.

Rodriguez, R. (1998). Clinical interventions with battered migrant farm worker women. In J. C. Campbell (Ed.), *Empowering survivors of abuse: Health care for battered women and their children* (pp. 271-279). Thousand Oaks, CA: Sage Publications.

Valdés, D. N. (1991). *Al norte*. Austin, TX: University of Texas Press.

Van Hightower, N. R., Gorton, J., & DeMoss, C. L. (2000). Predictive models of domestic violence and fear of intimate partners among migrant and seasonal farm worker women. *Journal of Family Violence, 15*, 137-154.

Vega, W., Warheit, G., & Palacio, R. (1985). Psychiatric symptomatology among Mexican American farmworkers. *Social Science and Medicine, 20*, 39-45.

Watson, J., Mattera, G., Morales, R., Kunitz, S. J., & Lynch, R. (1985). Alcohol use among migrant laborers in western New York. *Journal of Studies on Alcohol, 46*, 403-411.

Websdale, N. (1997). *Rural woman battering and the justice system: An ethnography*. Thousand Oaks, CA: Sage.

White-Means, S. I. (1991). The economic returns from investments in physical and mental health: A case study of migrant farmworkers in rural New York. *Journal of Health and Social Policy, 2* (3), 39-51.

Wiggins, N. & Castañares, T. (1995). Mental and psychosocial health issues among migrant and seasonal farmworkers in Oregon: Preliminary research with intervention applications. In H. H. McDuffie, J. A. Dosman, K. M. Semchuk, S. A. Olenchock, & A. Senthilselvan (Eds.), *Agricultural health and safety: Workplace, environment, sustainability* (pp. 503-510). Boca Raton, FL: CRC press.

Wilson, K. G., Croupy, C. D., Greene, G., Gaul in-Jones, B., Detour, E., & Karol, C. T. (1995). Consumer satisfaction with a rehabilitation mobile outreach program. *Archives of Physical Medicine and Rehabilitation*, 76, 899-904.

Wright, A. (1991). America's migrant children: Most at risk. In D. Elkind (Ed.), *Perspectives on early childhood education: Growing with young children toward the 21st century* (pp. 159-167). Washington, DC: National Education Association.

Zubretsky, T. M., & Digirotama, K. M. (1996). The false connection between adult domestic violence and alcohol. In A. R. Roberts (Ed.), *Helping battered women: New perspectives and remedies* (pp. 222-228). Oxford: Oxford University Press.