

Leaving Family for Work: Ambivalence and Mental Health Among Mexican Migrant Farmworker Men

Joseph G. Grzywacz,^{1,4} Sara A. Quandt,² Julie Early,¹ Janeth Tapia,³
Christopher N. Graham,² and Thomas A. Arcury¹

Men migrating to the United States from Mexico and Central America confront opposing family norms. They need to leave their families to gain family economic security; yet, leaving renders their families vulnerable. We examined the mental health implications of the opposing family norms inherent in migration using an ambivalence framework. We interviewed 60 Latino migrant farmworkers working in North Carolina. Most were from Mexico; each had left a wife and children in his country of origin. Analysis indicated that family ambivalence was common. Ambivalence was associated with anxiety symptoms (but not depression or alcohol dependence), especially among men who were unable to contact their families regularly. Results show the usefulness of the ambivalence framework, and suggest that the origins of poor migrant mental health may reside in circumstances preceding migration. Study recommendations include facilitating family contact by expanding access to telephones among migrant workers.

KEY WORDS: immigration; farmworker; mental health; family; minority health.

INTRODUCTION

A substantial number of Latino immigrants from Mexico have poor mental health. Surveillance data from the Mexican American Prevalence and Services Survey (MAPPS) (1) indicate that one in four Mexican immigrants have had a psychiatric illness such as depression or anxiety disorder in their lifetime, and a substantial number of Latinos with one mental illness have a co-occurring mental illness (1, 2). Although the prevalence of psychiatric illness is lower among Mexican immigrants than U.S. born

Mexican Americans and the general population (3), additional research is needed because the factors that contribute to poor mental health among immigrant Mexicans are poorly understood (4, 5).

Common explanations for poor mental health among Mexican immigrants in the United States emphasize factors that occur after migration. Whether they are informed by theories of acculturative stress, social marginality, or identity disintegration, researchers tend to see the clash of cultures once immigrants arrive in the United States or injustices encountered while living in American society as the primary cause of poor mental health among immigrant Mexicans (6). The process of migrating from Mexico and Central American to the United States is physically and emotionally demanding, and it is clear that migrants confront a variety of different forms of discrimination (7); consequently, traditional approaches to immigrant mental health that focus on postmigration experiences are important. However, it is equally important to recognize that Latino immigrants interpret after-migration experiences

¹Department of Family and Community Medicine, Wake Forest University School of Medicine, Winston-Salem, North Carolina.

²Department of Public Health Sciences, Wake Forest University School of Medicine, Winston-Salem, North Carolina.

³North Carolina Farmworkers' Project, Benson, North Carolina.

⁴Correspondence should be directed to Joseph G. Grzywacz, Department of Family and Community Medicine, Wake Forest University School of Medicine, Medical Center Boulevard, Winston-Salem, North Carolina 27157-1084; e-mail: grzywacz@wfubmc.edu.

from a lens that was created, at least in part, prior to the actual migration.

In this paper we argue that migration imposes a set of incompatible normative expectations on migrants, and that the tensions arising from these incompatibilities serve as a source of compromised mental health among immigrant Mexicans. For example, the prospect of gainful employment is a powerful "pull" factor for migration because it is viewed by many male migrants as an essential step for securing a brighter future for their families (8). Regardless of the strength of this pull factor, the reality is that migration for many Latinos from Mexico and Central American requires leaving parents, spouses/partners, and children for extended periods of time, spanning months to years. Mexican and Central American migrants are exchanging the immediate care of family members and their personal time with family members in the short term for the promise of a better future for their family. Many come, initially, as men without spouses or children. Even when both spouses migrate, some or all children may remain behind. In a cultural context that emphasizes familism, i.e., an orientation toward the welfare of one's immediate and extended family (9, 10), these opposing forces create a tension that must be considered when examining the Latino experience in the United States.

This study focuses on the competing tensions related to family that are inherent in the decision to migrate, and we examine the mental health-related consequences of this tension. We build our analysis around the concept of ambivalence, or the idea that individuals frequently find themselves in situations where normative expectations are completely contradictory (11), and that individuals can simultaneously hold diametrically opposed feelings about their behavior or situation (12). This theorizing contributes in three distinct ways to our understanding of Latinos' experiences in the United States. First, it argues that rather than focusing on either the benefits (e.g., the pull of "good" jobs) or the costs (e.g., acculturative stress) of migration, scholars need to acknowledge that benefits and costs coexist in migration and that a comprehensive understanding of the Latino experience requires examining the interplay of these costs and benefits. Second, it offers an important complement to the literature that tends to focus on experiences that occur after migration and overlooks relevant antecedents of poor health whose origins exist in the decision to migrate. Finally, our analysis focuses on migrant Latino men in the rural

Southeast, a region of the country that does not have an established Latino community that would likely soften the effects of ambivalence.

Mental Health of Mexican Immigrants

A substantial number of Latino immigrants from Mexico have poor mental health. Estimates from the National Health and Nutrition Examination Survey (NHANES) indicate that 10% of Mexican Americans had a major depressive episode (13), and regional estimates from California indicate that 25% of Mexican immigrants and one-third of Mexican Americans have had at least one major psychiatric illness (1). Other estimates suggest that mental illness is elevated in certain segments of the Mexican immigrant population such as migrant farmworkers. Estimates of depression among migrant farmworkers range from 20% in Fresno California (4) to nearly 40% in the Upper Midwest (5). Although immigrants tend to have lower rates of mental illness than their U.S. born counterparts (1-3), evidence suggest that conditions such as depression, anxiety disorder, and substance abuse are common among immigrants from Mexico.

Researchers studying the determinants of poor mental health among Latino immigrants tend to focus on social processes occurring after migration. Acculturative stress theory, for example, argues that the clash of traditional Mexican culture with American culture undermines Latino mental health because it creates new burdens or "stressors" that undermine the mental health of immigrants, particularly if they have inadequate resources for coping with these stressors (14, 15). Deculturation theories suggest that life in the United States promotes poor mental health because it simultaneously strips away traditional values and behaviors that protect mental health and promotes others that tend to undermine mental health (3). Finally, social marginalization theories suggest that immigrants are placed on the social, economic, and physical fringe of society, which elevates exposure to conditions and circumstances that undermine mental health (6, 16). Each of the aforementioned theoretical perspectives emphasizes unique factors in explaining variation in mental health among immigrant Latinos; nonetheless, they all focus on experiences that occur after migration.

Previous models provide important insight into aspects of Latino mental health, yet they are limited.

Acculturative stress theory is limited because there is a poor understanding of what acculturation means and it is unclear what measures of acculturation are actually measuring (17). Marginalization theories of Latino mental health are limited because they assume that access to employment, health care, or adequate housing is more inequitable in the United States than in Mexico. Evidence clearly indicates that migrant Latinos are marginalized in the United States; however, the assumption is that marginalization in the United States is more deleterious than experiences or circumstances in Mexico. Indeed, Grey and Woodrick (18) argue that Latinos' marginalized status actually allows them to have both regular work opportunities in the United States and migratory relations with their home communities. Finally, acculturative stress and marginalization theories of Latino mental health assume that after-migration circumstances or encounters in the United States are interpreted similarly by all migrants regardless of reasons or circumstances for coming to the United States. This limitation is the central focus of the present analysis.

The Ambivalence Framework

Theorizing around sociological and psychological ambivalence provides an alternative framework for considering differences in mental health among immigrant Latinos. Sociological ambivalence was introduced by Merton and Barber (19) and expanded by Coser (20) and is defined as "incompatible normative expectations of attitudes, beliefs, and behaviors" (pp. 94-95), which are situated in the way that social roles are defined for individuals. Classic examples of sociological ambivalence include expectations of physicians to be detached and professional yet compassionate. An example more relevant to the current project is the expectation that men are responsible for the economic stability of the family, yet adequate employment is not available in the community (8). Psychological ambivalence is rooted in psychoanalytic theory and has been defined as the experience of contradictory emotions or feelings about the same object (21). Most recently, Luescher and Pillemer (11) sought to integrate sociological and psychological ambivalence to understand intergenerational relationships between adults and their aging parents, and they defined "ambivalence" as the contradictory circumstances and subjective experiences that cannot be reconciled (p. 416).

Family Ambivalence in Migration

At the center of a man's decision to leave Mexico for the United States are competing norms of family responsibility. On one hand, the absence of a strong national economy along with few local job prospects push young men to the United States to secure economic well-being for their families (8). On the other hand, Mexican families rely almost exclusively on men's earnings, so decisions to migrate frequently leave a man's family economically vulnerable because of the lapse in earnings in the timeframe between his departure from Mexico and his ability to obtain work in the United States and send money home. In this timeframe, migrants' families are forced to rely on already strained extended families to obtain basic necessities for survival. Contradictory social forces, such as those that simultaneously push men to migrate for the benefit of their families yet require men to remain because their departure will compromise their families' well-being, exemplify sociological ambivalence (19) and contribute to psychological tension among those who must resolve the social contradiction (11, 12, 22).

Theory and evidence converge to suggest that family-related ambivalence inherent in migration will create a lens through which after-migration circumstances are interpreted. Transactional models of stress would argue that psychological tension would likely accentuate individuals' perceptions of threat in external events or circumstances (2). Qualitative interviews indicated that separation from family was the second most commonly cited hardship, after language barriers, confronted by migrant farmworkers (23), and that separation from family is an ongoing hardship for immigrants from Mexico who have taken up residence in the rural Southeast (24), as well as for seasonal and migrant farmworkers. Similarly, immigrant Mexicans frequently comment that their "body is in the United States but their mind and heart remain in Mexico" (25), suggesting emotional ambivalence about leaving family to come to the United States. Finally, finding slack employment in the United States is likely to be more devastating to individuals who were reluctant to leave family in the first place in contrast to those without such reservations or for those with more modest expectations of employment and financial opportunities in the United States (26, 27).

Ambivalence in migration is likely to be particularly salient when little is known about the final destination in America. Whereas some areas of

the country such as California, Texas and Arizona have had a substantial Latino population (predominantly Mexican) long before there was an Anglo population, the growth of the Latino population in other parts of the country, such as the Upper Midwest and the Southeast, is a phenomenon of the 1990s. For example, although the Latino population across the country increased by approximately 60% from 1990 to 2000, official 2000 U.S. Census counts indicate a five-fold increase in the size of North Carolina's Latino population (28). Similarly, reports by the Center for Immigration Studies indicate that North Carolina ranked eighth in the nation in terms of percentage growth in the immigrant population and 16th in the nation in terms of absolute numbers of new immigrants from 1990 to 2000 (29). The combination of rapid growth and the absence of an established community of Latino immigrants create a distinctive situation where there is relatively little communication between the sending communities in Mexico and receiving communities in the United States about employment prospects and barriers to employment, a situation that can promote ambivalence about migrating.

The aim of this study was to ascertain whether family-related sociological ambivalence inherent in migration contributes to poor mental health among migrant Latino men. We focus on farmworkers because their length of time in the United States, particularly the southeast United States, is short; consequently, possible ambivalent feelings would be more pronounced. Working from Luescher and Pillemer's (11) conceptual model, we hypothesized that ambivalent migrants, or those who strongly embraced the need to migrate to uphold family responsibilities but who were equally concerned about leaving family behind, will have poorer mental health than those less concerned. Drawing on theory and research arguing the importance of individuals' strategies for alleviating experienced ambivalence (20) and the importance of maintaining personal connection with social networks (4, 30), we also hypothesized that the detrimental effect of ambivalence on mental health would be less strong for migrants who are able to maintain more frequent contact with their family. Finally, we hypothesized that men who were ambivalent about migrating would interpret their experiences in the United States as more stressful than those without ambivalence, and that this greater perceived stress would explain the poorer mental health of those who were ambivalent about migrating.

METHODS

This study was one part of a larger project, *Casa y Campo*, which is a 4-year community-based environmental justice effort funded by the National Institute for Occupational Safety and Health that brings together environmental and occupational health scientists, health care providers, and farmworkers to address health issues of concern to the farmworker community. Through discussion among the collaborators and with the Casa y Campo Advisory Committee, stress and mental health were identified as topics for study and possible health education.

Sampling and Recruitment

Participants were 60 male migrant farmworkers recruited during June and July 2003, in a four-county area of east-central North Carolina, including Harnett, Johnston, Sampson, and Wake Counties. This is a major agricultural region in which cucumbers, sweet potatoes, blueberries and tobacco are primary crops cultivated or harvested by farmworkers. This region has the state's greatest concentration of migrant and seasonal farmworkers, estimated by the North Carolina Employment Security Commission at 14,075 workers.

Inclusion criteria were: currently employed as a farmworker, age 18 years or older, resident in one of the study counties, born in Mexico or Central America, and married or living as married ("en pareja") with spouse still in country of origin. Only males were recruited; virtually all female farmworkers who meet the marital status criterion are accompanied by a spouse.

The farmworker population in these four North Carolina counties is very similar to the larger farmworker population employed in the eastern piedmont and coastal plain of Georgia, South Carolina, North Carolina, Virginia and Maryland, as well as in Kentucky and Tennessee. The farmworkers in this region are predominantly from Mexico and Central America, many are undocumented, most come directly to work in specific areas and crops and do not follow crops, and most come as unaccompanied men (31). Until 1990, most of the farmworkers in the larger region included African American and Afro-Caribbean workers.

The Latino population of North Carolina differs from the national Latino population, as well as that established in other regions, such as California and

Texas. North Carolina's Latino population is new and expanded rapidly from 76,745 in 1990 to 378,963 in 2000. This expansion was largely foreign born Latinos. Less than half the Latinos in the United States (44%) and in California (48%) and Texas (35%) are foreign born, compared to 68% in North Carolina as a whole and 72% in the study counties. Foreign born Latino residents in North Carolina appear to be less acculturated than those residing elsewhere. According to U.S. Census data, only 41% report speaking English "well," "very well," or exclusively (only 38% in the study counties), compared to 52% nationally and 51% and 48% in California and Texas, respectively.

Workers were located and recruited with the assistance of the North Carolina Farmworkers' Project, a nonprofit agency that provides health education and other services to farmworkers. Farmworkers constitute a hard-to-reach population that makes locating and recruiting participants extremely difficult. There is no list of farmworkers from which to select a sample. Farmworkers live in small groups that are scattered over large areas, often in camps that are located on unpaved roads miles from main roads. Many farmworkers do not want to be found, and are hesitant to participate in any activity that appears to be official, as they do not have immigration documents. A site-based sampling method was used to surmount these problems to recruit participants (32). A similar method has been used in previous farmworker health research (32, 33) and has been recommended for use in hard-to-reach populations (34). Briefly, such an approach reasons that every farmworker is a member of at least one group, or "site." Sites can include, but are not limited to: trailer parks, migrant camps, sports teams, church congregations, schools, business clientele, work groups, or patients of a clinic. If sites that vary across characteristics of the community (e.g., grower-provided versus rental housing) are chosen and respondents are selected from a variety of sites, the resulting sample should reflect the variability in the community. Because farmworkers often live in groups that are from the same town in Mexico and share the same working conditions, the focus in recruitment for this study was to spread recruitment across as many sites as possible.

Project staff compiled a list of sites in the study counties. Individuals at the sites were approached for participation. Respondents were recruited at 26 sites, including farm labor camps, trailer parks, and rooming houses. To obtain informed consent, interviewers explained the purpose of the study, the study proce-

dures, and the risks and benefits of the study. They stated that the respondent would receive a small gift (baseball cap with study logo) at the end of the interview. The interviewers answered any questions of the farmworkers and asked for consent to proceed with the interviews. The respondents were given information sheets in Spanish with the same information on them that had been reviewed orally. The sheets contained the contact information for the Wake Forest University School of Medicine Institutional Review Board, which had approved this protocol.

The method used to recruit this sample may result in some biases. Those farmworkers living in the most geographically (e.g., hidden camps far from paved roads) and socially (e.g., employer limited access) isolated places were less likely to be included in this sample. It is possible that these more isolated farmworkers experience greater ambivalence, anxiety, and depression. Therefore, the results of this analysis may underestimate the prevalence of mental health problems among farmworkers.

Data Collection

Three interviewers collected questionnaire data in face-to-face interviews conducted in Spanish during June and July 2003. Two interviewers were college students employed as summer interns by Student Action for Farmworkers, a nonprofit organization that places bilingual college students, most of whom are children of farmworkers, in agencies serving farmworkers in North and South Carolina. The third was one of the authors (J.T.), a bilingual staff member of the North Carolina Farmworkers' Project. All interviewers were native Spanish speakers. Interviewers participated in a training session that included training in confidentiality, recruitment, and questionnaire administration.

Personal data collected were: age, marital status, children, location of children and spouse, and country of origin. Marital status had the options of single, married, living as married, and widowed/divorced/separated. Participants were administered three scales to measure psychological distress: the anxiety scale of the Personality Assessment Inventory (PAI) (35), the Center for Epidemiologic Studies Depression Scale (CES-D) (36), and the Migrant Farmworker Stress Inventory (MFWSI) (5). Participants were asked to respond to a series of statements concerning the issues they considered in deciding to come to the United States.

These included reasons that might have made them want to come to the United States and others that might have made them want to stay in their home country. Possible responses were on a three-point scale in which higher numbers indicated greater salience of the idea for their decision.

Independent Variables

Three indicators of ambivalence, the primary independent variable, were constructed from items obtained at the time of the interview probing specific factors from the literature that are known to compel or "push" men into coming to the United States (e.g., no work in Mexico, family responsibility, and adventure) as well as factors that held or "pulled" men to Mexico (e.g., leaving spouse/partner, prejudice against Latinos in the United States). *Marital ambivalence* was coded as 1 if the participant recalled that leaving his wife made him "doubtful" or "very doubtful" about coming to the United States and he rated fulfilling family obligations by going to the United States as "very important" or "important" in his decision to come to the United States. Men who reported that leaving their wives did not undermine their decision to migrate (i.e., "not very doubtful") or who reported that "family obligations" were not very important in deciding to come to the United States were coded 0. *Parental ambivalence* was coded 1 if a respondent recalled that leaving his children made him "very doubtful" or "doubtful" of his decision to come to the United States and he rated fulfilling family obligations by going to the United States as "very important" or "important." *Filial ambivalence* was coded 1 if a respondent rated leaving his parents as making him "very doubtful" or "doubtful" of his decision to come to the United States and he rated fulfilling family obligations by going to the United States as "very important" or "important."

Ambivalence resolution was indicated by the variable *call relative*. A respondent was asked how often he called a relative in Mexico or his country of origin. Responses were seven ordered categories from "only about once a year or less" to "about every day."

Difficulty in the United States was assessed using the MFWSI (5). The MFWSI is a 39-item self-report instrument that assesses the quality and severity of stress inherent in migrant farmwork for adults, and was developed to be either self- or interviewer-administered. Respondents are asked to rate how

stressful they find the experience described in each statement. Items tap a variety of aspects of migrant farmwork including perceived discrimination, acculturative stress, poor working conditions, and physically demanding work. Respondents rate each item that they have experienced on a five-point scale ("Have Not Experienced" to "Extremely Stressful"). The total MFWSI score is obtained by summing the scores for all 39 items. Possible MFWSI scores range from 0 to 156, with higher scores indicating a greater degree of stress related to the migrant farmworker lifestyle. The Cronbach's alpha for the present study was 0.91.

Dependent Variables

Anxiety was measured with the anxiety scale of the PAI (35). This scale measures clinical features common to three different modalities of the experience of anxiety: cognitive, affective, and physiological. The total scale consists of 24 items rated on a four-point scale ("false, not at all true" to "very true"). Higher scores indicate higher anxiety levels. Examples of items include: "I usually worry about things more than I should," "It is easy for me to relax," and "I often feel jittery." Raw scores for subscales and the total scale are transformed to T-scores (with a mean of 50 and standard deviation of 10) based on a standardization sample of 1000 community-dwelling adults matched to 1995 census projections. The PAI anxiety scale has been found to have adequate internal consistency reliability (0.80–0.90), test-retest reliability (0.85–0.88), and construct validity among general, farmworker, and Mexican-American samples (23, 35, 37, 38). The Cronbach's alpha for the present study was 0.89.

Depression was assessed with the CES-D (36). The CES-D assesses level of depressive symptoms within the previous week and consists of 20 items rated on a four-point scale of 0 to 3, from "rarely or none of the time" to "most or all of the time." Possible scores range from 0 to 60. Higher scores indicate higher depression. Several studies (23, 39–41) have found that the CES-D has adequate internal consistency reliability (0.81–0.90) and construct validity among Mexican-American samples and migrant farmworker samples. The Cronbach's alpha for the present study was 0.90.

Alcohol dependence was measured using the CAGE, a short screening instrument widely used in clinical settings to identify alcohol abuse and

dependence as defined by the DSM-IV. It consists of four questions, which form the basis of the acronym. Its Spanish translation is known as 4M, and it has been found to be valid in Latino populations in the United States (42, 43).

Data Analyses

Analyses began with univariate statistics to describe our sample demographically, as well as with regard to family-related ambivalence, and mental health. We then examined bivariate associations among personal characteristics, ambivalence, and mental health indicators to identify control variables to include in the multivariate regression models. We tested our primary hypotheses using ordinary least squares regression. To avoid over-fitting our regression equations in this small sample, we specified six regression equations (two for each outcome variable). We tested our mediation hypothesis by following the three-step process outlined by Baron and Kenny (44) that includes: 1) establishing an association between the primary independent variable and the dependent variable (ambivalence with mental health); 2) establishing an association between the independent variable and the proposed mediating variable (i.e., ambivalence with difficulty in the United States); and 3) identifying whether the magnitude of association between the primary independent variable and the dependent variable is attenuated after adjusting for the proposed mediator. In all the multivariate analyses we use a *p*-value of 0.10 to determine significance, given our small sample and the fact that we are testing directional hypotheses.

RESULTS

The obtained sample of migrant Latino men was fairly homogenous with some variability in participants' ages (32.1 ± 6.2 [mean \pm SD]) and the amount of time they have worked in agriculture (ranged from 1 to 24 years). Approximately 90% ($n = 52$) had the equivalent of a high school education or less, 95% ($n = 57$) were from Mexico and most of these ($n = 39$) were from states in central Mexico (e.g., Durango, Nayarit, and San Luis Potosi) (see Table I). Eighty percent ($n = 50$) of men came directly from their country of origin to North Carolina and had been in the country for less than 3 years, and 75% of men had not seen their wives (and presumably family) in the past 6 months. About half had one or two

Table I. Descriptive Statistics for All Variables Used in the Analyses^a

Variable	<i>n</i> or <i>M</i>	% or SD
Ambivalence, <i>n</i> (%)		
Marital	44	73.3%
Filial	40	66.7%
Parental	49	81.7%
Mental health, <i>M</i> (SD)		
Anxiety symptoms	17.5	10.1
Depressive symptoms	14.1	14.1
Alcohol dependence	1.1	1.1
Age, <i>M</i> (SD)	32.1	32.1
Educational attainment, <i>n</i> (%)		
Primary	29	48.3%
Secondary	23	38.3%
Preparatory	7	11.7%
University	1	1.7%
Country of origin, <i>n</i> (%)		
Mexico	57	95.0%
Guatemala	2	3.3%
Honduras	1	1.7%
Years lived in the United States, <i>n</i> (%)		
<1	40	67.8%
1-3	8	13.6%
4-6	8	13.6%
7-11	3	5.0%
Years lived in North Carolina <i>n</i> (%)		
<1	41	69.5%
1-3	9	25.3%
2-7	9	25.3%
Years worked in agriculture, <i>n</i> (%)		
<1	10	16.9%
1-3	23	39.0%
4-6	18	30.5%
>6	8	13.6%
Number of children, <i>n</i> (%)		
1	12	20.7%
2	21	36.2%
3	14	24.1%
4-6	11	19.0%
Time apart from wife (months), <i>n</i> (%)		
1-3	33	57.9%
4-6	13	22.8%
>6	11	19.3%

^a*n*, number, *M*, mean, SD, standard deviation.

children, with the remainder up to a maximum of six children.

There was substantial family-related ambivalence in this sample of migrant Latino men. Three-quarters of participants confronted marital and parental ambivalence in their migration decision, and two-thirds confronted filial ambivalence in deciding whether to come to the United States. Despite the large proportion of men experiencing each form of ambivalence, these indicators are not redundant. Fifty-eight percent ($n = 35$) of men experienced

Table II. Ordinary Least Squares Estimates of the Association Between Family-Related Ambivalence and Anxiety Symptoms (from Personality Assessment Inventory (34))^a

	Marital ambivalence		Filial ambivalence		Parental ambivalence	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Marital ambivalence (MA)	9.89** (3.65)	6.95* (3.81)				
Filial ambivalence (FA)			6.48* (3.73)	4.15 (3.49)		
Parental ambivalence (PA)					6.83* (3.30)	4.67† (3.23)
Call relatives (Call)	0.20 (1.93)	-0.54 (1.82)	-0.14 (1.99)	-0.46 (1.83)	3.74 (2.48)	3.08 (2.36)
MA × Call	-4.09* (2.32)	-2.67 (2.23)				
FA × Call			-3.39† (2.46)	-2.59 (2.28)		
PA × Call					-7.98** (2.76)	-6.83* (2.65)
Difficulty in the United States		0.15** (0.05)		0.17** (0.05)		0.12** (0.05)
Intercept	11.77**	-0.35	15.31**	0.39	14.46**	4.56
Adjusted R ²	12.3%	23.0%	5.0%	20.0%	17.4%	25.9%

† $p < 0.10$; * $p < 0.05$; ** $p < 0.01$ (one-tailed).

^aModels control for the effects of education and the number of years in the United States standard errors are in parentheses.

all three forms of ambivalence, 12% ($n = 7$) experienced two forms of ambivalence, while 13% ($n = 8$) and 8% ($n = 5$) experienced one form of ambivalence or none at all in their decision to migrate to the United States. Consistent with our underlying assumption, these results suggest that most Latino men have contradictory feelings about migration.

Descriptive analyses suggest that the Latino men in our sample had relatively poor mental health. On average, respondents scored 17.51 (SD = 10.08) and 14.09 (SD = 11.48) on the PAI and the CES-D assessing anxiety and depression, respectively, and 1.13 (SD = 1.25) on the CAGE assessing alcohol dependence. We used established guidelines for each instrument to identify potentially significant mental illness. Approximately 17% of participants ($n = 10$) met the threshold of 60 or more on the PAI, which represents potentially significant anxiety that may impair functioning (35). Nearly 40% of participants ($n = 23$) met or surpassed the threshold of 16 or more on the CES-D, indicating potentially significant depressive symptomatology (45). Similarly, 40% ($n = 24$) reached the criterion for potential alcohol dependence (42).

Bivariate correlations among demographic characteristics (e.g., age, education, length of time in the United States, and number of children in country of origin), indicators of family ambivalence, and the mental health outcomes were examined to identify potential covariates to include in the regression models. The prevalence of marital ambivalence was greater among men who were in the United States less than 1 year in contrast to those who were in the United States for more than 1 year ($\chi^2 = 3.93, p < 0.05$), higher education was associated with lower

CAGE scores measures alcohol dependence ($r = -0.29, p < 0.05$), and greater length of time in the United States was associated with more frequent calling of relatives ($r = 0.27, p < 0.05$). Based on the associations, we included education and length of the time in the United States in the regression models as covariates, but we did not control for other factors such as age and number of children in Mexico to avoid over-fitting our models.

Regression results provided strong support for each study hypothesis for anxiety (see Table II). As hypothesized, we found that each type of family-related ambivalence was associated with more severe anxiety while controlling for level of education and number of years in the United States. Also as hypothesized, we found significant interaction effects for both marital and parental ambivalence with frequency of calling relatives (see Figs. 1 and 2). In both cases, average anxiety levels were higher among those who were ambivalent than those who were not, and in both cases more frequent contact with relatives in Mexico was associated with a reduction in anxiety. Men with marital ambivalence who called home once each week had anxiety scores of 25.6, versus men with marital ambivalence who called home virtually every day who had anxiety scores of approximately 17.8. Among men with parental ambivalence, anxiety scores were eight points lower for those who called relatives every day in contrast to those who called once each week.

Results also support our hypothesis anticipating that ambivalence creates a lens through which migration circumstances are experienced. Pooled t -tests indicated that men with marital ambivalence reported encountering more difficulties in the United States

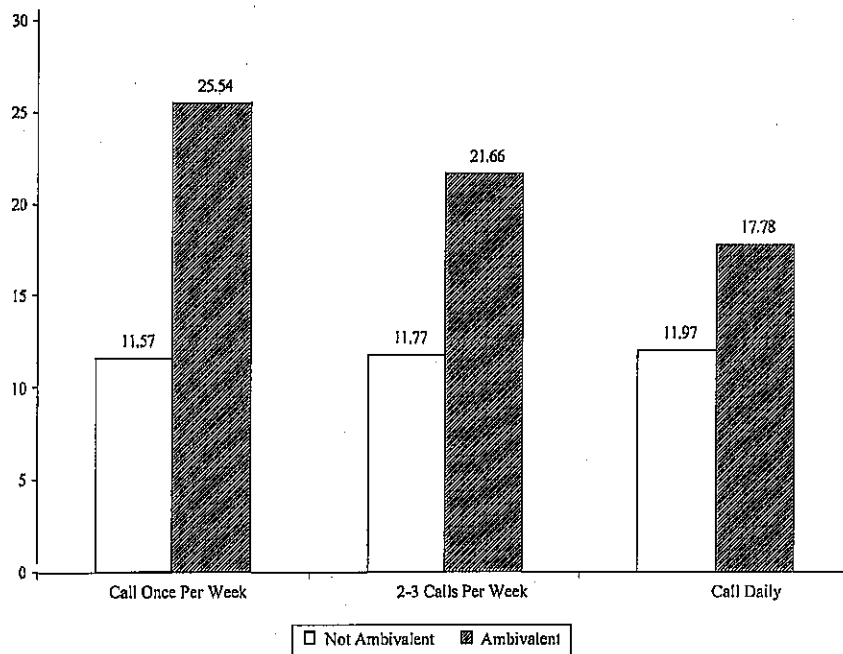


Fig. 1. Estimated anxiety scores by frequency of contact with relatives in Mexico, for presence and absence of marital ambivalence.

(79.72 ± 24.59) than those without marital ambivalence (66.91 ± 22.76; $p < 0.10$), as assessed through the MFWSI. Likewise, men with parental ambivalence reported more difficulty in the United States

(77.96 ± 24.60) than those without parental ambivalence (61.50 ± 22.53; $p < 0.10$). Thus, there was some evidence suggesting that difficulty in the United States is a viable mediator of the association of

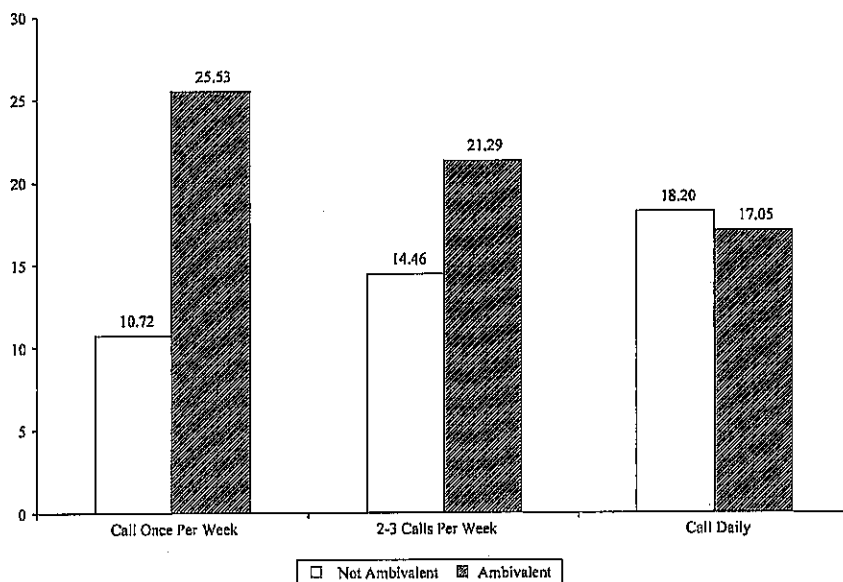


Fig. 2. Estimated anxiety scores by frequency of contact with relatives in Mexico, for presence and absence of parental ambivalence.

marital and parental ambivalence with anxiety symptoms. When difficulty in the United States is added to the regression equation, the parameter estimates for marital ambivalence and parental ambivalence are both attenuated (see Table II).

Consistent and robust evidence supporting our hypotheses with regard to depression and alcohol dependence was not found. We did find that men who experienced marital ambivalence when deciding to migrate did have greater depression scores ($b = 7.89; p < 0.05$, one-tailed). We also found a significant interaction effect between parental ambivalence and calling relatives, such that men with parental ambivalence who called relatives daily scored an average of seven points lower on the depression scale than those who called relatives 2–3 times per week. Both of these are strong effects because they essentially distinguish between those at risk of clinically significant depression. There was also little evidence that difficulties in the United States were independently associated with depressive symptoms or alcohol dependence.

DISCUSSION AND CONCLUSIONS

Migration is a context within which normative expectations about family responsibilities come into direct competition with each other: leaving family simultaneously places it at risk, yet leaving family is virtually essential for securing its future. This situation is common and familiar to migrant farmworkers from Mexico. Exacerbating this situation is the fact that farmworkers are often isolated in remote locales without ready access to transportation or even telephones. In this study, we conceptualized the diametrically opposed family responsibilities as forms of ambivalence, and we hypothesized that ambivalence would undermine mental health because it would create a lens through which the experience and circumstances of migration would be negatively viewed. We tested this conceptualization in a sample of migrant Latino farmworker men in rural North Carolina, a region of the country with a distinctive and new Latino population. Our results have four main conclusions.

Migration requires grappling with competing family responsibilities. The majority of our participants were simultaneously pushed to the United States to fulfill their family responsibilities while being held to Mexico by concerns of leaving spouses, parents, or children behind. We did not explore

the specific nature of these concerns, but comments made by men during our interviews provide some insight into their concerns. Specifically, we asked them "What is the most difficult thing for you in being away from your family and community?" Although the emotional disconnection between men and their family was the most commonly reported response, men made comments such as "not being with his family when they get sick" ("no estar con su familia cuando se enferman") or "the safety of wife and children" ("la seguridad de la esposa y hijos"), indicating that the inability to care for or protect their families in Mexico while also taking care of their families by coming to the United States is difficult for some Latino men. These comments also parallel results from other studies suggesting that Latinos' "bodies" may be in the United States but their minds and hearts remain in Mexico (25). Our sample was limited to Latino immigrants from Mexico and Central America. However, it is reasonable to assume that members of other ethnic groups, particularly those with strong familial obligations, will also experience ambivalence if migrating requires leaving family members behind.

Family ambivalence inherent in migration is associated with poorer mental health among Latino men. Like other researchers, we found that family-related ambivalence is associated with elevated anxiety symptoms. Hovey and Magaña (46) found high levels of anxiety among migrant farmworkers in the Midwest who reported a lack of control over or choice in the decision to migrate to the United States, a measure that might also be considered an indicator of ambivalence. Hovey and Magaña (23) found such ambivalence associated with depression; however, we found little evidence indicating that family-related ambivalence was associated with depression or substance abuse. The diverging results between these studies could reflect differences in study design, as well as in the farmworker populations in the Midwest and Southeast. Hovey and Magaña included both male and female farmworkers in their study. The North Carolina farmworker population includes relatively few women, in part because significant numbers of workers migrate as part of the H2A visa program, which recruits only men. The North Carolina farmworker population is also different in that it has more "point-to-point" migrants coming directly from Mexico, rather than the "follow-the-crop" migrants that characterize the Midwest migrant stream, which has traditionally been made up of Latino workers from Texas and the Mexican

border area. The North Carolina workers are also relatively recent migrants. Two-thirds had been in the United States less than 1 year, in contrast to Hovey and Magaña's more heterogeneous sample that included up to third generation immigrants.

Immigrant Latinos without options for resolving family ambivalence may be at elevated risk for poor mental health. We found that the increase in anxiety symptoms attributable to marital and parental ambivalence can be exacerbated when they are unable to call relatives in Mexico frequently. These results have both theoretical and practical implications. They are consistent with theoretical discussions that ambivalence, in itself, is neither positive nor negative. It is the absence of resources for resolving the ambivalence that undermines psychological function (47). The results suggest that agencies and professionals could focus on means to enhance communication between migrants and their families as one way to meet the mental health needs of Latinos. Provision of public telephones in migrant camps might assist workers living in rural areas, away from the public telephones, with contacting families. In a separate survey completed in 2004, we found that 42.8% of the 187 respondents who lived in Latino farmworker homes did not have a telephone in their residence. These dwellings are also frequently located in remote locations that are miles from paved roads and public telephones.

Finally, our results suggest that family-related ambivalence may create a lens through which migration is experienced and ascribed meaning. Differences in anxiety symptoms between Latino men without ambivalence and those with either marital or parental ambivalence were significantly reduced or completely explained once we accounted for differences in perceived difficulties in the United States. This suggests that family-related ambivalence may contribute to more anxiety symptoms by elevating the perceived severity of common experiences in migrant farmwork. These results are important because they highlight an alternative target for serving the mental health needs of Latinos. Clearly, it is important to reduce exposure to physical (e.g., agricultural chemicals) and social (e.g., discrimination) aspects of farmwork that undermine mental health (48, 49). However, our results suggest that helping individuals resolve family-related ambivalence, perhaps by making public telephones more available, is an equally important target for interventions because it may benefit Latinos' mental health directly as well as indirectly by minimizing the perceived

threat or difficulty of their encounters in the United States.

Implications and Recommendations

The results of this study, when placed in their broader context, are important for two reasons. First, the consequences of poor mental health among migrant Latinos are serious. Hovey (39, 50) has found depression in migrants to be associated with elevated suicidal risk. Farmworkers work in a hazardous environment where exposure to agricultural chemicals can by itself induce depression (49) and where anxiety or depression may place workers at risk for failure to take appropriate precautions to prevent occupational health injuries (51). Second, these results suggest that reducing stressors associated with migrant work might have positive effects on mental health. Items frequently rated as stressful on the MFWSI include work conditions (e.g., housing, provision of drinking water in fields) that are subject to government regulation, but not always enforced (52). Other stressors include lack of access to transportation, lack of access to stores, and inability to communicate in English. Although some local service providers address these concerns with transportation to church and medical clinics and with ESL classes, our findings suggest that expansion of such efforts that help workers resolve enduring ambivalence about leaving their families behind may beneficially affect farmworker mental health.

The results of this study need to be considered in the context of their limitations. First, we are not able to make causal inferences from the cross-sectional data. It is quite possible that individuals with heightened levels of anxiety may have distorted retrospective views of circumstances that were salient prior to migration. Second, the results of this study have limited generalizability because the sample was small and not randomly selected. One casualty of the small sample is that the estimates of association between ambivalence and mental health in our regression equations have large standard errors. Consequently, our estimates may be unreliable, and they should be interpreted as preliminary and with caution. Limitations notwithstanding, the results of this study contribute to the literature in three fundamental ways. First, our results begin to show the utility of the ambivalence concept and model in family-related processes outside of the context of intergenerational relations. Second, the study of immigrant mental health has tended to focus on experiences that occur after

migration. Our results suggest that circumstances surrounding family prior to migration set the stage for possible health declines after migration. Finally, other scholars have taken up similar issues in studies of migrant women (25), but our results suggest that migrant men also confront competing family responsibilities in their decisions to migrate. Although the results of this study cannot be over-interpreted, each of these issues is important as researchers seek to understand the experiences of migrants, particularly Latinos, in the United States.

ACKNOWLEDGMENTS

The research was supported by grants from the National Institute for Occupational Safety and Health (OH07611) and the National Institute of Alcohol Abuse and Alcoholism (AA12744).

REFERENCES

- Vega WA, Kolody B, Aguilar-Gaxiola S, Alderete E, Catalano R, Caraveo-Anduaga J: Lifetime prevalence of DSM-III-R psychiatric disorders among urban and rural Mexican Americans in California. *Arch Gen Psychiatry* 1998; 55(9):771-778
- Vega WA, Sribney WM, Achara-Abrahams I: Co-occurring alcohol, drug, and other psychiatric disorders among Mexican-origin people in the United States. *Am J Public Health* 2003; 93(7):1057-1064
- Escobar JI, Hoyos Nervi C, Gara MA: Immigration and mental health: Mexican Americans in the United States. *Harv Rev Psychiatry* 2000; 8(2):64-72
- 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(4):457-471
- Magaña CG, Hovey JD: Psychosocial stressors associated with Mexican migrant farmworkers in the midwest United States. *J Immigr Health* 2003; 5(2):75-86
- Alderete E, Vega WA, Kolody B, Aguilar-Gaxiola S: Effects of time in the United States and Indian ethnicity on DSM-III-R psychiatric disorders among Mexican Americans in California. *J Nerv Ment Dis* 2000; 188(2):90-100
- Jones CP: Levels of racism: A theoretic framework and a gardener's tale. *Am J Public Health* 2000; 90(8):1212-1215
- Chavez LR: Shadowed lives: Undocumented immigrants in American Society. In: Spindler G, Spindler L, eds. *Case Studies in Cultural Anthropology*. Fort Worth, TX: Harcourt Brace College Publishers; 1992.
- Gaines SOJ, Marelich WD, Bledsoe KL, Steers WN, et al.: Links between race/ethnicity and cultural values as mediated by racial/ethnic identity and moderated by gender. *J Pers Soc Psychol* 1997; 72(6):1460-1476
- Keefe SE: Real and ideal extended familism among Mexican-Americans and Anglo-Americans: On the meaning of close family ties. *Hum Organ* 1984; 43(1):65-70
- Luescher K, Pillemer K: Intergenerational ambivalence: A new approach to the study of parent-child relations in later life. *J Marriage Fam* 1998; 60(2):413-425
- Smelser NJ: The rational and the ambivalent in the social sciences: 1997 Presidential address. *Am Sociol Rev* 1998; 63(1):1-15
- Jonas BS, Brody D, Roper M, Narrow WE: Prevalence of mood disorders in a national sample of young American adults. *Soc Psychiatry Psychiatr Epidemiol* 2003; 38(11):618-624
- Rogler LH, Cortes DE, Malgady RG: Acculturation and mental health status among Hispanics. Convergence and new directions for research. *Am Psychol* 1991; 46(6):585-597
- Vega WA, Hough RL, Miranda MR: Modeling cross-cultural research in Hispanic mental health. In: Vega WA, Miranda MR, eds. *Stress and Hispanic Mental Health*. Rockville, MD: National Institute of Mental Health; 1985:48-75
- Aneshensel CS, Phelan JC, eds.: *Handbook of the Sociology of Mental Health*. New York: Kluwer Academic/Plenum; 1999
- Escobar JI, Vega WA: Mental health and immigration's AAAs: Where are we and where do we go from here? *J Nerv Ment Dis* 2000; 188(11):736-740
- Grey MA, Woodrick AC: Unofficial sister cities: Meatpacking labor migration between Villachuato, Mexico, and Marshalltown, Iowa. *Hum Organ* 2002; 61(4):364-376
- Merton RK, Barber E: Sociological ambivalence. In: Tiryakian E, ed. *Sociological Theory: Values and Sociocultural Change*. New York: Springer; 1963:91-120
- Coser RL: Role distance, sociological ambivalence, and transitional status systems. *AJS* 1966; 72(2):173-187
- Weigert AJ: *Mixed Emotions: Certain Steps Toward Understanding Ambivalence*. Albany, NY: State University of New York Press; 1991
- Connidis IA, McMullin JA: Sociological ambivalence and family ties: A critical perspective. *J Marriage Fam* 2002; 64(3):558-567
- Hovey JD, Magaña CG: Acculturative stress, anxiety, and depression among Mexican immigrant farmworkers in the midwest United States. *J Immigr Health* 2000; 2(3):119-131
- Grzywacz JG, Quandt SA, Arcury TA, Marín A: The work-family challenge and mental health: Experiences of Mexican immigrants. *Community, Work Fam*, 2005; 8:271-279
- Hondagneu-Sotelo P, Avila E: "I'm here, but I'm there": The meanings of Latina transnational motherhood. *GenD Soc* 1997; 11(5):548-571
- Finch BK, Catalano RC, Novaco RW, Vega WA: Employment frustration and alcohol abuse/dependence among labor migrants in California. *J Immigr Health* 2003; 5(4):181-186
- Shuval Judith T: Migration and stress. In: Goldberger L, Breznitz S, eds. *Handbook of Stress: Theoretical and Clinical Aspects*, 2nd edn. New York: Free Press; 1993:641-657
- Guzmán B, McConnell ED: The Hispanic population: 1990-2000 growth and change. *Popul Res Policy Rev* 2002; 21:109-128
- Camarota SA: *Immigrants in the United States 2000: A Snapshot of America's Foreign-Born Population*. Washington, DC: Center for Immigration Studies; 2001
- Schmalzbauer L: Searching for wages and mothering from afar: The case of Honduran transnational families. *J Marriage Fam* 2004; 66:1317-1331
- Mehta K, Gabbard SM, Barrat V, et al.: Findings from the National Agricultural Workers Survey (NAWS) 1997-1998: A Demographic and Employment Profile of United States Farmworkers. U.S. Department of Labor, Office of the Assistant Secretary for Policy, Office of Program Economics. Report No. 8
- Arcury TA, Quandt SA: Participant recruitment for qualitative research: A site-based approach to community research in complex societies. *Hum Organ* 1999; 58:128-133

33. Quandt SA, Arcury TA, Early J, Tapia J, Davis JD: Household food security among Latino farmworkers in North Carolina. *Public Health Rep* 2004; 119:568-576
34. Faugier J, Sargeant M: Sampling hard to reach populations. *J Adv Nurs* 1997; 26(4):790-797
35. Morey LC: *Personality Assessment Inventory: Professional manual*. Odessa, TX: Psychological Assessment Resources; 1991
36. Radloff LS: The CES-D scale: A self-report depression scale for research in the general population. *Appl Psychol Meas* 1977; 1:385-1401
37. Fantoni-Salvador P, Rogers R: Spanish version of the MMPI-2 and PAI: An investigation of concurrent validity with Hispanic patients. *Assessment* 1997; 4:29-39
38. 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(2):340-348
39. Hovey JD: Acculturative stress, depression, and suicidal ideation among Central American immigrants. *Suicide Life Threat Behav* 2000; 30(2):125-139
40. Golding JM, Aneshensel CS: Factor structure of the Center for Epidemiologic Studies Depression scale among Mexican American and non-Hispanic whites. *Psychol Assess* 1989; 1:163-168
41. Golding JM, Aneshensel CS, Hough RL: Responses to depression scale items among Mexican-Americans and non-Hispanic whites. *J Clin Psychol* 1991; 47(1):61-75
42. Cherpitel CJ: Screening for alcohol problems in the U.S. general population: A comparison of the CAGE and TWEAK by gender, ethnicity, and services utilization. *J Stud Alcohol* 1999; 60(5):705-711
43. Saitz R, Lepore MF, Sullivan LM, Amaro H, Samet JH: Alcohol abuse and dependence in Latinos living in the United States: Validation of the CAGE (4M) questions. *Arch Intern Med* 1999; 159(7):718-724
44. Baron RM, Kenny DA: The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *J Pers Soc Psychol* 1986; 51:1173-1182
45. Weissman MM, Sholomskas D, Pottenger M, Prusoff BA, Locke BZ: Assessing depressive symptoms in five psychiatric populations: A validation study. *Am J Epidemiol* 1977; 106(3):203-214
46. Hovey JD, Magaña CG: Psychosocial predictors of anxiety among immigrant Mexican migrant farmworkers: Implications for prevention and treatment. *Cultur Divers Ethnic Minor Psychol* 2002; 8(3):274-289
47. Luescher K: Intergenerational ambivalence: Further steps in theory and research. *J Marriage Fam* 2002; 64(3):585-593
48. Finch BK, Kolody B, Vega WA: Perceived discrimination and depression among Mexican-origin adults in California. *J Health Soc Behav* 2000; 41(3):295-313
49. Stallones L, Beseler C: Pesticide poisoning and depressive symptoms among farm residents. *Ann Epidemiol* 2002; 12(6):389-394
50. Hovey JD: Moderating influence of social support on suicidal ideation in a sample of Mexican immigrants. *Psychol Rep* 1999; 85(1):78-79
51. Beseler C, Stallones L: Safety practices, neurological symptoms, and pesticide poisoning. *J Occup Environ Med* 2003; 45(10):1079-1086
52. Arcury TA, Quandt SA, Austin CK, Preisser J, Cabrera LF: Implementation of EPA's Worker Protection Standard training for agricultural laborers: An evaluation using North Carolina data. *Public Health Rep* 1999; 114(5):459-468