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Interpersonal and Social Correlates of Depressive Symptoms among Latinas in Farmworker Families Living in North Carolina

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Abstract

Little research is available about the mental health of Latina women in farmworker families living in the South United States, where Latino immigrants are relatively recent arrivals. This study examined interpersonal correlates (family conflict, family's outward orientation, and perceived discrimination) and social correlates (residential mobility and economic insecurity) of depressive symptoms and of meeting a threshold of depressive symptoms that could be clinically significant (a cut-point of 10 or higher in a short Center for Epidemiologic Studies-Depression [CES-D] Scale) among Latinas in farmworker families living in North Carolina. Data were collected from April 19, 2011, to April 20, 2012 as part of *Niños Sanos*, a prospective study of Latino women and children ($N = 248$). Regression models showed that exposure to family conflict, perceived discrimination, and economic insecurity were associated with more depressive symptoms. Likewise, perceived discrimination and economic insecurity were associated with a threshold of depressive symptoms that could be clinically significant, above and beyond family conflict. The findings suggested that policies that lessen the discrimination of farmworkers and their families and reduce economic insecurity, as well as interventions that support positive family functioning might be beneficial for the mental health of Latinas in farmworker families living in new immigrant destinations.

Keywords

Women's Mental Health; Depressive Symptoms; Farmworkers; Immigrants; Latinos

Women figure prominently in farmworker communities, either as farmworkers—they comprise an estimated 22% of the roughly 3 million farmworkers in the United States—or as the partners of farmworkers, as most farmworkers (59%) are either married or live as married (Carroll, Georges, and Saltz 2011). The majority of U.S. farmworkers are Latino (71%) and Mexican-born (68%) (Carroll, Georges, and Saltz 2011). Farm work involves cultivating, harvesting, and processing crops, as well as animal husbandry, though such work is performed by different types of farmworkers. Though studies have suggested that elevated depressive symptoms are prevalent among farmworkers (Grzywacz 2009), more research is needed that involves women who are farmworkers or who live in farmworker families, because both groups are likely to face similar risk factors for poor health outcomes (Quandt 2009). Latino farmworkers living in new arrival communities—that is, communities where immigrants are relatively recent arrivals—may be exposed to additional risks of poor mental health, largely due to discrimination and the dearth of support services designed to facilitate their integration into the larger community (Smith and Furuseth 2006). Therefore, the present study examined interpersonal and social stressors related to the farmworker occupation, along with widely studied indicators of acculturation to isolate independent correlates of depressive symptoms among women in farmworker families that live in new arrival communities.

Among the various models of depression, two are particularly useful in the study of depressive symptoms among Latinas: the interpersonal model of depression and the social stress paradigm. On the one hand, the interpersonal model of depression posits that the nature and quality of interpersonal relationships determine the variability in exposure to stressors and are thus important correlates of depression in women (Hammen 2000). Consistent with this model, women generally report more stressors in the interpersonal domain and appear to be more sensitive to their effects than men (Leach et al. 2008). The interpersonal model of depression is relevant to the study of depressive symptoms among Latinas, given that values emphasizing interpersonal relationships (e.g., *familismo*, *personalismo*, and *simpatía*) are preeminent in Latino cultures (Cauce and Domenech-Rodríguez 2002).

On the other hand, the social stress paradigm contends that mental health outcomes, such as elevated depressive symptoms, result from the socioeconomic structure that creates structural disadvantages for some groups (Aneshensel, Rutter, and Lachenbruch 1991). This paradigm is pertinent to the study of depressive symptoms among Latinas in farmworker families because women in these families are situated at the bottom of several social strata according to gender, ethnicity, citizenship, and socioeconomic status. Indeed, several researchers have contended that the intersection of various dimensions of inequality account for the mental health outcomes marginalized women and their families experience (Viruell-Fuentes, Miranda, and Abdulrahim 2012). Acculturation—that is, the process of cultural

adaptation—likely compounds the interpersonal and social stressors experienced by Latinas in the United States (Lara et al. 2005).

Family is central to Latino culture. Most families socialize their children to be loyal to the family, keep strong ties with near and extended family members, and help each other throughout life (Cauce and Domenech-Rodríguez 2002). Strong family ties also play a significant role in the life of Latino immigrants, as family members provide instrumental and emotional support to each other during migration and post-migration settlement. However, family can also be a source of distress, because migration and rapid change in marital and parent–child relationships can generate conflict within families (Rumbaut 1997). Parra-Cardona et al.'s (2006) qualitative study reported that migrant farmworkers of Mexican origin received instrumental and social support from family members, and that their concern for their families' well-being enabled them to overcome adversity and adapt to life in the United States. By contrast, other studies of farmworkers have found that poor family functioning was associated with elevated depressive symptoms among Mexican migrant farmworkers (Hovey and Magaña 2002) and that women who reported suicidal ideation had worse family functioning than those who did not (Hovey and Magaña 2003). At the same time, physical characteristics such as skin color, limited English-language skills, and lack of legal status make Latino farmworkers vulnerable to discrimination, which has been linked to elevated depressive symptoms in the Latino farmworker population (Alderete et al. 1999; Hiott et al. 2008). Parra-Cardona et al.'s (2006) study reported their participants' perceptions that Mexican origin and Spanish-speaking workers experienced greater discrimination and exploitation than non-Mexican and English speaking workers.

Relocation among farmworkers is frequently directed by economic necessity, as well as typically perceived as a forced decision, which is associated with suicidal ideation among these workers (Hovey and Magaña 2002). Likewise, stressors related to migration (i.e., language barriers, unpredictable work, uprooting and housing, being away from family and friends) have been identified as stressors among farmworkers (Magaña and Hovey 2003; Parra-Cardona et al. 2006), particularly migrant farmworkers (Kim-Godwin and Bechtel 2004). Furthermore, economic insecurity is pervasive among farmworkers, as approximately two-thirds of them live in poverty (Carroll, Georges, and Saltz 2011). In fact, one study found poverty to be a primary stressor among farmworkers in North Carolina (Kim-Godwin and Bechtel 2004).

Results of epidemiologic studies have indicated that Mexican immigrants tend to show better psychiatric profiles than U.S.-born Latinos and non-Latino Whites of similar socioeconomic status (Alegría et al. 2008). This so-called “immigrant paradox” also appears in the inverse association between Latino acculturation to the United States and mental health, because Latino immigrants' mental health tends to decline commensurate with their duration of residency in the United States and English-language acquisition (Alegría et al. 2007). Because acculturation is multidimensional and non-linear (Gonzales et al. 2004), proxy measures are unlikely to capture the full scope of acculturation experiences, cognitions, and behaviors. Nonetheless, previous research has found that proxy measures (e.g., nativity status and duration of residency in the United States) are highly correlated with acculturation scales (Thomson and Hoffman-Goetz 2009) and have been associated

with mental health outcomes among Latinos (Abraído-Lanza, Chao, and Flórez 2005). At the same time, some scholars have recently stressed the need to study the role of contextual variables in acculturation. More specifically, they contend that studies should examine the role of discrimination toward immigrants and structural factors such as social class, social inequality, and immigration policies (Schwartz et al. 2010; Viruell-Fuentes, Miranda, and Abdulrahim 2012).

In the current study, we integrated interpersonal and social perspectives on depressive symptoms, along with ecological approaches to acculturation and health to examine associations between depressive symptoms and family functioning, family's outward orientation, perceived discrimination, residential mobility, and economic insecurity among Latinas in farmworker families living in North Carolina. We sought to identify interpersonal and social stressors significantly associated with depressive symptoms and identify correlates of a threshold of depressive symptoms that could be clinically significant.

Methods

Data for our analyses came from *Niños Sanos*, a prospective and broader research project involving women and children in Latino farmworker families in North Carolina. Data from the baseline interviewer-administered questionnaire were used in the analyses ($N = 248$). The Wake Forest School of Medicine Institutional Review Board approved all sampling, recruitment, and data collection procedures. A Certificate of Confidentiality was obtained from the National Institutes of Health to protect the anonymity of participants.

Sampling Procedure

The researchers' goal was to create a sample representative of farmworker families with young children in North Carolina. Because no sampling frame of Latino farmworker families exists and because the narrow age range of children would require contacting a substantial fraction of the eligible population, a site-based sampling plan (Arcury and Quandt 1999) was developed to provide as large a contact base as possible. Such a plan is appropriate in studies with hard-to-reach populations and has been used by the research team during the last 18 years in studies involving Latino immigrants. In this study, *sites* were organizations or locations with which members of the target community were associated. All families were associated with a site and most with multiple sites. In this study, *site categories* (and the number of sites targeted within the category) were: migrant and regular Head Start programs (7); Migrant Education programs (15); community health centers (4); Women, Infants, and Children (1); community-partner non-profit organizations serving Latino immigrants (2); and stores, churches, and events serving predominantly farmworkers (7). In addition, door-to-door recruitment was conducted in Latino neighborhoods and farmworker camps, and families from current or recently completed Latino farmworker studies and from personal networks were also contacted. Our sampling strategy did not track, and therefore we could not quantify individuals with unknown eligibility or non-respondents. However, we had personal (via word of mouth, referrals, and visits to Latino businesses) or administrative contact (e.g., Migrant Education, Migrant Head Start) with 336 potential participants.

Participant Screening and Enrollment

For organizations subject to privacy regulations (e.g., Head Start), a staff member contacted families that were likely to meet eligibility criteria, introduced the study, and obtained their authorization to release their contact information to the *Niños Sanos* project coordinator, for screening. The inclusion criteria were: 1) self-identification as Latina; 2) a 3-year-old child (aged from 2 years, 6 months to 3 years, 6 months); and 3) being from a household in which at least one member had performed farm work during the past year. Any woman whose potential participant child had a special health care need that limited normal physical activity was excluded. A native Spanish speaker data collector attempted contact with families for which contact information was available. Upon contacting the family, the data collector explained the study and screened possible participants according to the eligibility criteria. Thirty-three contacts met inclusion criteria after screening but refused to participate and 38 contacts were determined to be ineligible after screening. Information about final disposition was not definitive for 17 contacts.

Data Collection

Each woman who agreed to enroll in the study signed a written informed consent form. Upon enrollment, an appointment was scheduled for baseline data collection; however, in most cases, data were collected at the time of enrollment. Data were collected using an interviewer-administered survey questionnaire. Interviews were conducted in Spanish in the participant's homes or another location determined by the participant. Each woman received \$10 for completing the interview. Interviews were conducted from April 19, 2011, to April 20, 2012, by nine native Spanish-speaking interviewers from the Latino community who had completed both training on ethical research with humans and 16 hours of project-specific training led by native Spanish-speaking field staff with master's degrees. All staff trainers had been trained by the study's principal investigators, who were three doctoral researchers with extensive experience working with Latino communities in North Carolina in community-based participatory research projects (Grzywacz et al. 2014).

Measures

Standard instruments were used in the study. Existing Spanish versions of instruments were employed, except for the family conflict, family's outward orientation, and discrimination scales, which were translated into Mexican Spanish by professional translators familiar with farmworkers, then back-translated to ensure accuracy, and pre-tested with Mexican Spanish speakers. *Depressive symptoms* were assessed with short version of the Center for Epidemiologic Studies-Depression (CESD) scale (10 items, Cronbach's $\alpha = 0.84$) developed by Kohout et al. (1993), which asked participants to indicate how they felt during the last week. Items included, for example, "I felt depressed" and "I felt happy." Possible answers gauged frequency of feeling and ranged from 1 (Rarely or none of the time, <1 day) to 4 (Most or all of the time, 5–7 days). Responses to positively worded items were reversed. Each participant's level of depressive symptoms was determined by totaling her responses to all 10 items (possible range of 0–30), for which higher values indicated greater depressive symptoms. A cut-point of 10 or higher indicated a threshold of depressive symptoms that could be clinically significant (Grzywacz et al. 2006). Previous research has found that the

short-form CES-D Scale had a factor structure comparable to that of the full 20-item instrument (Radloff 1977) and performed well in farmworker and non-farmworker immigrant Latino samples (Grzywacz et al. 2010). Though the CES-D Scale is not a clinical tool for diagnosing depression, both the full and short-form CES-D scales have shown good to excellent concordance with clinical measures of depression in various populations (Santor et al. 1995; Zich, Attkisson, and Greenfield 1990).

Perceived discrimination due to race and ethnicity was measured with 6 items (Cronbach's $\alpha = 0.80$) from the Day-to-Day Unfair Treatment subscale of the Experiences of Discrimination Scale (Krieger et al. 2005). A sample item reads, "During your day-to-day life over the past year, how often have you been treated with less respect, because you are Latino?" Responses ranged from 1 (Four or more times) to 4 (Never). Responses were reverse coded so that higher scores reflected greater perceptions of discrimination, then totaled to obtain each total score. Two aspects of family functioning were assessed—*family conflict* and *family's outward orientation*—the latter of which refers to the extent that the family participates in social and recreational activities. These dimensions were measured with two subscales of the Family Environment Scale (Moos and Moos 1994). A sample item from the Family Conflict subscale (9 items, Cronbach's $\alpha = 0.64$) read, "We fight a lot in our family." Response options were 1 (True) or 2 (False). Responses to each item were recoded to 1 or 0, in which 1 (true) represented presence of conflict or outward orientation. The recoded items were summed to obtain the total score. Reliability analysis of the Family Outward Orientation Subscale showed that one item (i.e., "We spend most weekends and evenings at home") had a correlation with the total score of only 0.02 and was thus removed from the final analysis (8 items, Cronbach's $\alpha = 0.69$). *Economic insecurity* was measured with a scale (4 items, Cronbach's $\alpha = 0.67$) used by Conger et al. (2002) as part of a larger measure of economic pressure. A sample item asks, "During the past year, how much difficulty have you had paying your bills?" Responses ranged from 1 (Extremely difficult) to 5 (Not at all difficult). The items were recoded so that higher scores reflected greater economic insecurity and then summed. *Residential mobility* was operationalized as the number of moves by the participant in the past 12 months. Participants were asked, "In the past year, how many times have you and your child/ren changed houses?" The distribution of the variable was skewed and thus categorized as 0 moves, 1 move, and 2 or more moves (mean of the original variable = 0.44, median = 0, minimum value = 0, and maximum value = 6).

Lastly, two proxy measures of *acculturation* were used in the analyses: country of birth (i.e., "In what country were you born?") and years lived in the United States (i.e., "How long have you lived in the United States during your current stay?"). Participants were also asked their age, marital status, highest level of education attained, and family farmworker status (i.e., seasonal or migrant). Seasonal farmworkers stay in one place, where they engage in agricultural work year-round or during part of the year, migrant farmworkers (about 25% of U.S. farmworkers) migrate throughout the year in search of crops to harvest.

Data Analysis

The percentage of missing values for each scale was negligible. Complete responses to the scales included in the analyses were: family conflict (98.8%), family's outward orientation (97.6%), perceived discrimination (99.6%), depressive symptoms (98.4%), and economic insecurity (98.8%). Besides descriptive parametric statistics, a correlational analysis was conducted among depressive symptoms and stressors of interest, after which four regression models with subsets of different covariates were fitted. Place of nativity and years of U.S. residency were controlled for in each of the models. In the first model, family conflict and family's outward orientation (i.e., interpersonal stressors in the family domain) were entered. In the second model, perceived discrimination (i.e., an interpersonal stressor outside the family domain) was added to the previous two variables. In the third model, the two social stressors of residential mobility and economic insecurity were entered together with the three variables mentioned above. In the fourth model, all five covariates were entered simultaneously. Model fit was assessed by constructing residual plots, and p values for each variable in the models were computed. To identify stressors associated with a threshold of depressive symptoms that could be clinically significant, a logistic regression model was fitted and adjusted for family's outward orientation, residential mobility, place of nativity, and years of residency in the United States, none of which were significant. Adjusted odds ratios (OR) and 95% confidence intervals (CI) were calculated for each covariate in the logistic regression model.

Results

Overwhelmingly, most participants (84.7%) were aged 18–35 years, were married or living as married (90.3%), had been born in Mexico (85.9%), and had been living in the United States for at least 5 years (91%) (Table 1). Nearly three-quarters of the women (74.3%) had at most 9 years of formal education and slightly fewer (72.6%) lived in a non-migrant (i.e., seasonal) farmworker household. Nearly two-thirds of women (63.7%) reported performing farm work in the past year (Table 1). Most women (80%) spoke only Spanish.

Participants' average depressive symptoms score was 7.2 ($SD = 5.6$), and nearly one-third of women (31%) met the threshold level of depressive symptoms that could be clinically significant. Correlational analyses demonstrated that depressive symptoms were positively associated with family conflict, perceived racial or ethnic discrimination, and economic insecurity. Depressive symptoms were not significantly associated with family's outward orientation or residential mobility. Moreover, women who reported higher residential mobility within the last year likewise reported lower family participation in social and recreational activities and lower family conflict. Perceived discrimination was associated with economic insecurity but not residential mobility, the latter of which, however, was associated with economic insecurity (Table 2). According to the statistical effect sizes delineated by Cohen (1988), all significant correlations were small to moderate in size. Acculturation variables were excluded from multivariate analyses due to their limited variability.

Results of regression analyses indicated that family conflict, which was entered in the first model together with family's outward orientation, was significantly associated with

depressive symptoms ($\beta = 1.28, p < 0.001$). Though family's outward orientation was not associated with depressive symptoms, family conflict and family's outward orientation did account for 6% of the variance in depressive symptoms. Assessed in the second model, perceived discrimination was significantly related to depressive symptoms ($\beta = 1.08, p < 0.01$) and accounted for 5% of the variance in the outcome variable. Assessed in the third model, economic insecurity, along with residential mobility, was associated with depressive symptoms ($\beta = 1.48, p < 0.001$). However, residential mobility was not significantly associated with depressive symptoms. Together, economic insecurity and residential mobility accounted for 8% of the variance in the outcome variable. When all variables were entered together in the fourth model, family conflict ($\beta = 1.26, p < 0.001$), perceived discrimination ($\beta = 0.96, p < 0.01$), and economic insecurity ($\beta = 1.36, p < 0.001$) remained significantly associated with depressive symptoms when place of nativity and years of residency in the United States were controlled. The fourth model accounted for 16% of the variance in depressive symptoms (Table 3). Results from a logistic regression model in which all variables were entered in a single step paralleled those from the fourth regression models previously described. The logistic regression model indicated a positive association between meeting a threshold level of depressive symptoms that could be clinically significant and family conflict (OR = 1.62, 95% CI = 1.21–2.18), discrimination (OR = 1.35, 95% CI = 1.04–1.76), and economic insecurity (OR = 1.55, 95% CI = 1.16–2.07). In this sense, an increase of 1 *SD* in family conflict, perceived discrimination, and economic insecurity raised the odds of women's meeting a threshold level of depressive symptoms that could be clinically significant by 62%, 35%, and 55%, respectively.

Discussion

The present study examined interpersonal and social stressors related to the farmworker occupation, along with widely studied indicators of acculturation, to isolate independent correlates of depressive symptoms among women in farmworker families living in new arrival communities in North Carolina. The study aimed to identify which interpersonal and social stressors were significantly associated with depressive symptoms and to identify significant correlates of meeting a threshold level of depressive symptoms that could be clinically significant. The average depressive symptoms score in this sample (7.22) was higher than estimates from the National Agricultural Workers Survey (Grzywacz et al. (2010). In that study, the average score in the short-form CES-D was 6.92 for women and 5.87 for men. Differences among studies could be due to variations in the prevalence of depressive symptoms found among farmworkers across regions of the United States (Grzywacz 2009). We also found that 31% of the women met a threshold level of depressive symptoms that could be clinically significant. This rate is slightly lower than previous reports of Mexican immigrants living in North Carolina (Kiang et al. 2010) wherein the rates were 35.3% for women and 24.4% for men. Lower rates in the current sample may reflect resilience processes; this is an important area for future research.

Results showed that two interpersonal stressors (i.e., family conflict and perceived discrimination) and one social stressor (i.e., economic insecurity) were positively linked to depressive symptoms and meeting a threshold level of depressive symptoms that could be clinically significant, although the magnitude of association was small to moderate (Cohen,

1988). Measuring stress exposure instead of stress appraisal might have contributed to the modest associations among variables. Since stress responses and depressive symptoms can vary widely among individuals exposed to the same stressors (Caspi et al. 2003), stress appraisal might have a stronger association with depressive symptoms than stress exposure.

Findings regarding the positive association between family conflict and depressive symptoms were similar to those found in Hovey and Magaña's studies of farmworkers in the U.S. Midwest, which established that poor family functioning was associated with depressive symptoms (Hovey and Magaña 2002; Hovey and Magaña 2003). Strong associations between family conflict and depressive symptoms were expected, given the importance of close family ties and positive family relations in Latino culture (Cauce and Domenech-Rodríguez 2002). Parra-Cardona et al. (2006) have described how Latinas in migrant farmworker families, who often experience social isolation and ethnic and/or racial discrimination, relied heavily on immediate family members for emotional and instrumental support. Assistance from extended family members and goal setting to create better legacies for their children helped women to overcome challenges and to maintain positive attitudes amid the hardships they experienced as migrant farmworkers. As such, family conflict, with its potential to induce emotional and instrumental disruption, might be particularly distressing for Latinas in farmworker families and contribute to their depressive symptoms.

Previous studies reported associations between perceived discrimination and depressive symptoms in Latina farmworkers (Alderete et al. 1999; Finch, Frank, and Vega 2004). Women in farmworker families interviewed in Parra-Cardona et al. (2006) narrated their discrimination and the workplace exploitation of them and their family members. For example, employers enforced rules aimed to discourage workers from taking time off to attend to family emergencies or care for sick family members. Employers often withheld wages, did not provide enough breaks during the workday, did not offer access to health coverage, and did not take measures to protect workers from pesticides or to ensure their safety. Furthermore, Parra-Cardona et al. (2006) reported that women from Mexico and native Spanish speakers perceived the most intense forms of discrimination. Our study participants were mostly first-generation immigrants from Mexico (85.4%) who primarily spoke Spanish (80%), realities that when combined with living in a new Latino destination create a strong likelihood of experiencing discrimination.

We did not find an association between residential mobility and depressive symptoms. In general, residential mobility is characteristic of farmworkers who follow the crops (Carroll, Georges, and Saltz 2011). Previous studies have established a link between factors associated with residential mobility and depressive symptoms in farmworker and non-farmworker Latino immigrants (Crain et al. 2012; Hiott et al. 2006; Hovey and Magaña 2002; Hovey and Magaña 2003; Kim-Godwin and Bechtel 2004). Our study's sample contained a larger proportion of seasonal farmworker families (74.3%), which are more likely to have more stable living arrangements than migrant farmworkers. It is unclear whether the lack of any statistically significant association between residential mobility and depressive symptoms stemmed from low power due to the lower representation of migrant farmworker families in the sample. Nevertheless, as expected, residential mobility was positively associated with social isolation (Crain et al. 2012; Hiott et al. 2006; Hiott et al.

2008); by contrast, it was also negatively associated with family conflict—that is, women who reported more moves in the past year were less likely to report family conflict. The latter finding seems counterintuitive, as previous studies have suggested that relocations are negatively related to family functioning (Makowsky et al. 1988; Martin 1996). Numerous reasons can explain this finding. Family relocation among farmworker families is often tied to job offers (Parra-Cardona et al. 2006); having an income alleviates economic hardship and, and thus might reduce family conflict (Conger et al. 2002; Dakin and Wampler 2008). Future studies should explore both negative and positive consequences of residential relocation for families and women's mental health. Economic insecurity—a social stressor highly prevalent among farmworkers due to widespread poverty (Carroll, Georges, and Saltz 2011; Mehta et al. 2000)—might have placed women in our sample at risk for depressive symptoms, a finding also reported by Magaña and Hovey (2003). One qualitative study established that financial constraints and inability to meet economic needs were poignant stressors among non-farmworker Latinas living in new Latino destinations (Shattell et al. 2009). However, more research is needed to establish the mechanisms by which economic insecurity might be linked to depressive symptoms among Latinas in farmworker families.

Results must be interpreted in light of the study's limitations. First, we measured only stress exposure, not stress appraisal, while studies that measure both can better clarify the unique contribution of stress exposure and stress appraisal to depressive symptoms. Second, the study did not include comprehensive measures of acculturation, but instead included place of nativity and duration of residency as proxies for acculturation and applied them in the models only as control variables. Third, we used interpersonal and social stress models of depression to inform the study, yet assessed depressive symptoms, not clinical depression. On this point, the CES-D scales are not intended to diagnose depression. Another limitation was that the measures of family conflict, family's outward orientation, and economic insecurity exhibited modest reliability ranging from 0.64 to 0.69, which could have resulted in misclassification of individuals for these variables and likely mitigated the true correlation between variables (Schmitt 1996). The results of this study may also have limited generalizability, because data were collected from a relatively small sample of women in farmworker families living in North Carolina, a new Latino destination. Finally, a causal association between the stressors and depressive symptoms cannot be inferred due to the cross-sectional nature of the data.

Despite these limitations, results highlight risk factors for depressive symptoms, as well as point to the resilience processes that shape mental health outcomes among Latinas in farmworker families. Potential mediators and moderators of interpersonal and social stressors on depressive symptoms at various ecological levels need to be explored in future studies of Latinas in farmworker families. Policies that improve the legal and socioeconomic status of Latino immigrants and programs that support families' resilience to interpersonal and social stressors may improve the mental health of Latinas in farmworker families.

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Table 1

Sample Characteristics (N=248)

	<i>n</i>	%
Age, years		
18–25	72	29.0
26–35	138	55.7
36	38	15.3
Marital Status		
Never married/single	11	4.4
Married/living as married	224	90.3
Divorced/separated/widowed	13	5.2
Place of Birth		
Mexico	213	85.9
US	11	4.4
Other	24	9.7
Years in the US		
< 5 years	21	8.5
5 – 9 years	108	43.9
10 or more years	117	47.6
Educational Attainment		
0 – 6 years	108	43.6
7 – 9 years	76	30.7
10 years or more	64	25.8
Farmworker Status		
Migrant	68	27.4
Seasonal	180	72.6

Table 2

Bivariate Correlations between the Variables of Interest

Variables	1	2	3	4	5	6
1. Depressive Symptoms	–					
2. Family Conflict	0.23***	–				
3. Outward Orientation	0.04	0.40***	–			
4. Discrimination	0.15*	0.02	0.12	–		
5. Residential Mobility	–0.00	–0.17**	–0.13*	0.08	–	
6. Economic Insecurity	0.28***	–0.03	–0.08	0.19**	0.13*	–
<i>M</i>	7.22	1.37	1.72	1.32	0.38	0.93
<i>SD</i>	5.63	1.58	1.82	0.49	0.68	1.31

Note:

 $p < 0.001$,**
 $p < 0.01$,*
 $p < 0.05$

Table 3

Multiple Regression Models Examining the Association of Depressive Symptoms with Interpersonal and Social Stressors among Latinas in Farmworker Families

Variables	Model 1 β	Model 2 β	Model 3 β	Model 4 β
Family Conflict	1.28***			1.26***
Outward Orientation	-0.21			-0.19
Discrimination		1.08**		0.96**
12-Month Residential Mobility – 1 Move (Ref: 0 Moves)			-0.57	-0.44
12-Month Residential Mobility – 2 Moves (Ref: 0 Moves)			-0.87	-0.52
Economic Insecurity			1.48***	1.36***
Covariates				
Mexican-born	0.35	0.11	-0.17	-0.44
Years in the US	-0.58	-0.71	-0.58	-0.61
R^2	0.06	0.05	0.08	0.16
F	4.05**	4.37**	4.28***	5.50***

Note:

 $p < 0.001$,

**
 $p < 0.01$,

*
 $p < 0.05$

β = standardized regression coefficients

Mexican-born coded 0 = *No*, 1 = *Yes*