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Housing and Neighborhood Characteristics and Latino Farmworker Family Well-Being

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Abstract

Housing quality and neighborhood characteristics affect individual health and family well-being. This analysis describes characteristics of farmworker housing and neighborhoods and delineates the associations of housing and local neighborhood with indicators of family well-being. Mothers in North Carolina farmworker families (n=248) completed interviews in 2011-2012. Family well-being measures included stress, family conflict, and outward orientation. Housing measures included ownership and facilities, and neighborhood measures included heavy traffic and driving time to grocery stores. Families experienced elevated stress and conflict, and limited outward orientation. Few owned their homes, which were generally crowded. Few had enclosed play spaces for their children. For many, traffic made it difficult to walk on the street. Housing and neighborhood characteristics were related to increased stress and limited outward orientation. Housing and neighborhood characteristics are important for research on the health of families in vulnerable populations, such as farmworker families.

Keywords

Immigrant health; minority health; agricultural workers; women's health; health disparities

Introduction

Housing and neighborhood environment are associated with physical and mental health [1-6]. Those living in housing that is crowded and lacking amenities, such as kitchen equipment and play space, experience greater risk for poor health [7-9]. Similarly, those living in communities that present hazards, such as heavy traffic, and with limited access to services, such as full-service grocery stores, are at greater risk for poor health [10-13].

Migrant and seasonal farmworkers in the United States are a vulnerable population. They are overwhelmingly immigrants from Mexico and other Latin American countries. They often lack immigration documents and often do not speak English. They work in jobs that are extremely hazardous, often for minimum wage or less, that are seasonal, and that provide no benefits [14-15]. They have limited access to health care [16]. For migrant farmworkers, those who move residences at least 75 miles in order to do farm work, housing is often part of their compensation. Seasonal farmworkers, those who do not change residence to do farm work on a seasonal basis, compete for housing in the private market.

The housing available to most farmworkers is substandard, whether the farmworkers are seasonal or migrant [17-20]. This housing is generally in poor repair [21-26]. It seldom meets the standards of safety and sanitation required by federal and state regulations [9,20,23]. It does not provide residents with a sense of privacy or security [27]. It often is infested with insects and rodents [28]. The houses in which farmworkers live expose them to extreme heat [29] and poor water quality [30-31]. Pesticide exposure, including child exposure, is a documented hazard in farmworker housing [32-42]. Farmworker housing is related to the presence of skin conditions [43] and poor sleep [44].

Although the physical conditions of farmworker neighborhoods are generally described as being poor, research has not documented the characteristics of the neighborhoods in which farmworkers' families live and the associations of these neighborhood characteristics with farmworker family well-being. Some analyses of migrant farmworker housing (e.g., [20]) include information about the camp in which the housing is located; however, these camps are generally isolated on specific farms. Nelson [24] discusses how local politics in one city affected the siting and building of housing projects to provide low-income housing to farmworker families.

Particularly for low-income populations, housing quality and neighborhood characteristics affect individual health and family well-being [45-47]. Research has only begun to document how housing and neighborhood conditions affect individual health among farmworkers (e.g., [44]). Little research has considered how housing characteristics and facilities, and neighborhood characteristics affect the well-being of farmworker families, including stress, family conflict, and family community integration (outward orientation). Recognizing that a large proportion of farmworkers are accompanied by wives and children [14], understanding potential influences on family well-being is essential for protecting this vulnerable population.

This analysis expands existing research by focusing on immigrant farmworker families residing in rural neighborhoods and examining the associations of housing and

neighborhood characteristics with family well-being. The first aim of this analysis is to describe characteristics of the housing and neighborhood in which farmworker families live. Housing characteristics include house ownership, household size, availability of kitchen facilities, and use of outside space; neighborhood characteristics include factors that limit use of outside space (vehicular traffic, dogs), and access to amenities. The second aim is to delineate the associations of housing and local neighborhood with indicators of family well-being, including stress, family conflict, and family outward orientation.

Methods

This analysis uses data collected as part of “Ninos Sanos,” a larger, longitudinal investigation of child health and development in farmworker families in North Carolina. The study protocol was approved by the Wake Forest School of Medicine Institutional Review Board. The study obtained a Certificate of Confidentiality from the National Institutes of Health. All participants provided signed informed consent.

Participant Recruitment and Data Collection

Participants were women in farmworker families with a child between 2.0 and 4.0 years of age at recruitment. Each farmworker family had at least one adult member employed as a migrant or seasonal farmworker in the previous year. Farmworkers constitute a “hard-to-reach” population for which no sampling frame exists and which has privacy concerns limiting their willingness to engage the authorities or to participate in research [48-49]. Therefore, a multi-pronged, site-based sample design [50-52] was used to identify and recruit farmworker families to the study [20, 53-54]. “Sites” are organizations or locations with which members of the target community are associated. Families could be associated with multiple sites. Site categories (and number of sites targeted within categories) in this study were: Head Start and Migrant Head Start Programs (7); migrant education programs (15); community health centers (4); Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) (1); community partner non-profit organizations serving Latino immigrants (2); and stores, churches, and events serving predominantly farmworkers (7). In addition, door-to-door recruiting was undertaken in Latino neighborhoods and farmworker camps. Community interviewers contacted families from previous Latino health studies and from personal networks.

Native Spanish-speaking community interviewers contacted participants. The trained interviewers introduced and explained the study, including its requirements and incentives, screened for inclusion/exclusion criterion, and asked the family to participate. Those who agreed to participate completed enrollment and initiated the data collection. Data collection included a baseline interviewer-administered questionnaire. These interviews were completed in the participants’ homes or another location determined by the participant. All interviews were completed in Spanish. Participants received \$10 for completing each interview.

A total of 248 participants (mother-child dyads) were recruited to the study over the period April 2011 through April 2012. It was not possible to obtain precise figures to calculate refusal or participation rates due to the multi-pronged nature of the site-based sampling,

organizations compiling lists of potential participants, as well as study staff conducting direct recruiting at sites. It was not possible to know if those refusing to release information were eligible. Organizations may have compiled incomplete lists from their participants, and potential participants could easily have avoided contact at events.

Measures

Three measures of farmworker family well-being are considered in this analysis: stress, family conflict, and family outward orientation. Participant stress was assessed with 25 items taken from the Farmworker Stress Inventory; this scale has been validated in Mexican Spanish [55-56]. Items asked participants to gauge how much stress each item made them feel (e.g., “not being able to buy things that I want because I make little money;” “I do not have anyone to care for my children while I am working”) with response options being “have not experienced” (0) to “extremely stressful” (4). Possible scores range from 0 to 100 ($\alpha = 0.87$); greater scores reflect more stress.

Family conflict and family outward orientation were measures based on subscales from the Family Environment Scale [57]. This scale was translated into Mexican Spanish by professional translators familiar with farmworkers; it was back-translated to ensure accuracy, and pre-tested with Mexican Spanish speakers. Response options were “true” (1) and “false” (2). Items were recoded as 0 or 1, with 1 being the response that indicates family conflict or outward orientation. The 9 items of family conflict subscale were then summed (range=0 to 9; $\alpha=0.64$), with greater scores indicating greater conflict. Eight of the 9 items for the family outward orientation subscale were summed (range=0 to 8; $\alpha=0.69$) with greater scores indicating greater outward orientation. One of the outward orientation items (spending weekends at home) was dropped from the scale due to near-zero correlation with the total score.

Housing characteristics included ownership (rented, grower provided, own home/rent land, own). Several indicators of crowding were examined: number of adults, number of children, number of persons, number of rooms used only as bedrooms, and persons per bedroom. Housing facilities included the dichotomous measures individual refrigerator, indicating that the family had a refrigerator that they did not share with other families; individual cooking surface; individual space to store food; and can cook child’s food, indicating that the family had access to the facilities to cook food for their child. Housing outdoor facilities included the four dichotomous measures: enclosed play space, raise garden for food, raise animals for food, and any food production.

Neighborhood characteristics included dichotomous measures indicating whether traffic on the street on which their house was located made it difficult to walk, traffic on nearby streets made it difficult to walk, and whether dogs ran loose in the neighborhood. Other neighborhood characteristics included the drive time in minutes to the closest grocery store, convenience store, tienda, restaurant, and park. Drive time is important because of the scattered locations and distances of amenities in rural North Carolina, and the lack of any public transportation.

Personal characteristics include the participant's age (18 to 25 years, 26 to 35 years, 36 to 45 years); education (0 to 6 years, 7 to 9 years, 10 or more years); whether married or living as married; whether the participant or the participant's partner had documents to be in the US; years in the US (less than 5, 5 to 9, 10 or more); participant's current employment (farm work, other work, not working); participant having been employed in farm work in the past 12 months; participant partner's current employment (farm work, other work, not working); and whether the family was a migrant farmworker family. We created an additional documentation measure by indicating if either the participant or her partner had documents to be in the US.

Analysis

Personal characteristics, family environment measures, and health outcomes were summarized with descriptive statistics. Bivariate associations were computed between the outcomes (farmworker stress, family conflict, family outward orientation) and covariates reflecting household, neighborhood, and personal characteristics. For all categorical covariates, like participant employment status, bivariate associations were assessed using ANOVA. Associations between continuous covariates and the primary outcomes were analyzed with correlational analysis. Covariates with a bivariate p-value of 0.25 or less were included in the multivariate analysis [58-59], which involved constructing a generalized linear model for each outcome. All statistical analyses were performed using SAS version 9.3.

Results

Participant Personal and Family Well-being Characteristics

Participants were all women who ranged in age from 18 to 45 years (Table 1). Most (55.7%) were aged 26 to 35, with 29.0% aged 18 to 25, and 15.3% aged 36 to 45. The plurality (43.6%) had 6 or fewer years of education, with 25.8% having 10 or more years. Most (90.3%) were married or living as married. Few (10.1%) had documents or had a partner with documents; for 15.5% of the families, either the participant or her partner had documents. A plurality (47.6%) had lived in the US for 10 or more years, with 43.9% having lived in the US for 5 to 9 years and 8.5% having lived in the US for less than 5 years. Many (38.7%) of the participants were employed doing only farm work, with 18.6% having non-farm employment and 42.7% not currently employed. Almost two-thirds (63.7%) had done farm work in the past 12 months. The majority of the participants' partners (55.1%) were employed as farmworkers, 39.7% had non-farm jobs, and 5.3% were not currently employed. A quarter of the families (27.4%) were migrant farmworker families.

The mean score for farmworker stress was 38.5 (Standard Deviation (SD) = 16.2), with the mean score for family conflict being 1.4 (SD = 1.6) and for family outward orientation being 1.7 (SD = 1.8). People using drugs and alcohol were reported to be moderately or extremely stressful by about two-thirds of the participants (Table 2). Potentially being deported was moderately or extremely stressful for almost three-quarters of the participants, and being away from family was moderately or extremely stressful for almost two-thirds of the participants. Issues related to children, such as children's education, values that children

were being exposed to, and with whom children were spending time, were moderately or extremely stressful for 25% to 45% of the participants. Job-related issues, such as difficulty finding a job and working long hours, were moderately or extremely stressful for 25% to 45% of the participants. Not feeling at home and inadequate housing were moderately or extremely stressful for about 25% of the participants.

One-fifth to one-third of the participants indicated that family members became openly angry, lost tempers, and raised their voices. They also reported criticizing each other (18.8%) and fighting a lot (10.9%) (Table 3). About one-third indicated that family members were involved in recreational activities, including sports and hobbies. About one-fifth indicated that they socialized regularly by having friends visit for dinner or going out. About one-tenth indicated not staying home regularly and going out for courses and entertainment.

Housing and Neighborhood Characteristics

Most (51.6%) of the participants lived in rented housing, with 12.9% living in grower-provided housing. More than one in five owned their home, but it was located on rented land; and 13.7% owned their home and land (Table 4). The average number of residents in each house was 2.5 adults and about 3 children. With an average of 2.61 rooms used only as bedrooms, the average number of persons per bedroom was 2.28. About one in five lacked an individual refrigerator (17.4%) or cooking surface (19.8%). Almost all had an individual space to store food, but 5.2% could not cook their child's food. Few (9.8%) had an enclosed outdoor play space for their child. Forty percent had the facilities to produce any food; 35.6% raised a garden, and 14.6% raised animals for food.

Almost a third (31.3%) of the participants lived in neighborhoods in which the traffic on their street made it difficult to walk; and, for a similar number (29.8%), the traffic on nearby streets made it difficult to walk. Over half (51.7%) lived in neighborhoods in which dogs ran free. The average drive to a grocery store was 15.66 minutes, while the average time to a convenience store was 8.90 minutes and to a tienda was 13.39 minutes. Restaurants and parks required an average 16-minute drive.

Association of Housing and Neighborhood Characteristics with Family Well-being

In the bivariate analysis (Table 5), stress had a significant association with housing ownership; renters had the greatest average stress (40.9), followed by those in grower-provided housing (38.7), those who owned a home on rented land (36.5) and those who owned a home (32.4). Those lacking an individual refrigerator had significantly greater stress (46.0) than those with an individual refrigerator (36.9), and those lacking individual cooking surface had significantly greater stress (43.8) than those with an individual cooking surface (37.2). Stress trended toward being greater for those who could not cook their children's food (46.3) compared to those who could (38.1). Those living on a street on which the traffic made it difficult to walk had greater stress (41.8) than those not living on such streets (36.6). Driving time to grocery store ($r = 0.171$), convenience store ($r=0.214$), tienda ($r=0.163$), restaurant ($r=0.143$), and park ($r=0.211$) were each significantly associated with stress level. Family conflict was not associated with any of the housing or neighborhood characteristics, and, therefore, it was not included in multivariate analysis.

Family outward orientation had a significant association with housing ownership, with those in grower-provided housing having the lowest level (1.1), followed by renters (1.6), those who owned a home on rented land (1.9), and those who owned a home (2.4). Those living on a street on which the traffic made it difficult to walk reported lower family outward orientation (1.1) than those not living on such streets (2.0). Driving time to grocery store ($r = -0.199$) was inversely associated with family outward orientation. Bivariate correlations among grocery, convenience store, tienda, park, and restaurant driving times ranged from 0.39 to 0.60; therefore, only one measure of driving time (to grocery store) was included in the multivariate model.

In multivariate analysis (Table 6), street traffic making it difficult to walk remained significantly associated with stress, with drive time to the grocery store trending to an association with stress. Any food production had a significant positive association with family outward orientation, street traffic making it difficult to walk and drive time to the grocery store had significant negative associations with family outward orientations.

Discussion

Similar to existing research [17-26], this study finds that farmworker housing characteristics are often substandard. This study also finds that the neighborhoods in which farmworkers live are often deficient. The meager housing and neighborhood conditions include limited housing ownership, with most of those who are “home owners” owning the house but not the land on which it is located; over one-in-ten live in housing provided by an employer. These farmworkers seldom have enclosed play spaces for their children. For many, traffic makes it difficult for them to walk on the street, and, for most, dogs run loose in their neighborhoods. The families are isolated; most have to drive at least 15 minutes to reach a grocery store, restaurant, or park.

Farmworker family housing and neighborhood characteristics are related to stress and outward orientation. Family conflict is present but not related to housing and neighborhood characteristics. Elevated stress is commonly reported for farmworkers [55-56, 60-61]. This analysis documents that stress is also common for women in farmworker families, and that it results from exposure to individuals using drugs, separation from family, concerns for children, and work pressures.

Outward orientation is limited among these families; less than one-third engage in activities that involve them in the community. This reflects the isolation noted for many immigrant Latino families in new settlement areas [62]. Neighborhood characteristics are important to the isolation of these farmworker families. The distance to amenities, as indicated by drive time, limits outward orientation and increases stress. The amount of traffic for the streets on which they limit also limits outward orientation and increases stress. It also reflects the almost universal lack of documentation among the families participating in this study; in only 15% of the families does any adult have legal documents. Research is just beginning to consider isolation, integration, and outward orientation of Latino immigrant families in the rural context [63]. The inward orientation and isolation of Latino farmworker families in rural neighborhoods is associated with other characteristics of poor well-being. For example,

Raffaelli and colleagues [64] report that poor community climate among Latina mothers is associated with decreased life satisfaction, financial well-being, and food security. Balderrama and Molina [65] show how lack of outward orientation reduces Latino farmworkers' ability to use social networks to find and share resources.

The results of this analysis should be assessed in light of the study's limitations. Although a representative sample was recruited, participants were not randomly selected. Participants were all resident of a single state at the time they were recruited. Finally, participants had to have a young child. Generalizations should be made with caution. Although attention was paid to the translations of the family conflict and outward orientation scales, they have not been validated for Mexican Spanish speakers, and the Cronbach alphas for each are rather low. The measures of housing, neighborhood, and family well-being were limited; a broader set of measures could provide a deeper understanding of family well-being. Finally, only women were interviewed; therefore, the results may not reflect the perceptions of their male partners. However, the analysis is based on a relatively large sample of mothers in farmworker families and it uses established measures of family well-being.

Documenting the housing and neighborhood environment of farmworker families adds to research documenting the circumstances experienced by farmworkers in the United States. Farmworker housing conditions are appalling [9, 20-25, 28]. This analysis indicates that housing characteristics and the characteristics of the neighborhoods in which housing is located are associated with farmworker family well-being. It suggests that housing and neighborhood characteristics are important for research on the psychosocial health of individuals, particularly women, in farmworker families. It also suggests that those providing health care to farmworker family members need to understand the housing and neighborhood situations in which they live. Service agencies can address social aspects of housing and neighborhood to improve the well-being of farmworker families. For example, Ornelas and colleagues [66] report that, although Latina immigrant mothers in North Carolina experience family separation and social isolation, social networks help women adapt to these stressors. Outreach workers who visit farmworker families might help improve the outward orientation of these families by establishing linkages among them.

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Table 1

Personal and Family Characteristics, Mothers in Farmworker Families, North Carolina (2011-2012).

Personal and Family Characteristics	n	%
Age		
18 to 25 years	72	29.0
26 to 35 years	138	55.7
36 to 45 years	38	15.3
Education		
0 to 6 years	108	43.6
7 to 9 years	76	30.7
10 or more years	64	25.8
Married or Living as Married	224	90.3
Participant has Documents to be the US	25	10.1
Participant's Partner has Documents to be the US	22	10.1
Either Participant or Partner has Documents to be in the US	38	15.5
Years in US		
Less than 5	21	8.5
5 to 9	108	43.9
10 or more	117	47.6
Current Employment		
Farm work	96	38.7
Other work	46	18.6
Not working	106	42.7
Farm Work in Past 12 Months	158	63.7
Current Employment Partner		
Farm work	125	55.1
Other work	90	39.7
Not working	12	5.3
Migrant Farmworker Family	68	27.4

Table 2

Farmworker Stress Inventory Items [56], Farmworker Families, North Carolina (2011-2012).

Stress Items	Moderately or Extremely Stressful	
	n	%
I worry about being deported.	184	74.2
It bothers me that other people use drugs.	163	66.3
It is difficult to be away from family members.	154	62.9
It bothers me that other people drink too much alcohol.	146	59.1
I worry about my children's education.	110	44.5
Not being able to buy things that I want because I make little money.	89	36.3
Sometimes I have difficulty finding a job.	90	36.3
I worry about the values that my children are being exposed to in this country.	81	32.7
At times I have to work long hours.	69	27.9
Sometimes I don't feel at home.	64	25.8
Sometimes I feel that my housing is inadequate.	63	25.6
I worry about who my children are spending time with.	60	24.6
I do not have anyone to care for my children while I am working.	48	19.4
Because of farm work, I do not have time to get things done outside of work.	48	19.4
It is difficult to complete the paperwork necessary to receive social services.	46	18.6
I have had to adjust to the different foods in this country.	42	16.9
I do not have reliable transportation.	38	15.4
Sometimes I have difficulty finding a place to live.	36	14.6
There are no stores nearby.	36	14.6
I find it difficult to talk about my feelings to other people.	36	14.6
Due to following migrant farm work, sometimes I do not feel settled (that I am often on the move).	33	13.3
I worry about my relationship with my partner.	19	7.7
Because I feel isolated, I find it hard to meet people.	15	6.1
My life has become more difficult because my partner is no longer with me (because he or she has moved or has died).	15	6.1
I have been physically or emotionally abused by my partner.	13	5.3

Tables 3

Family Conflict and Family Outward Orientation Items [57], Farmworker Families, North Carolina (2011-2012).

Scale Items	Agree	
	n	%
Family Conflict Items		
Items indicating conflict		
Family members often criticize each other.	46	18.8
We fight a lot in our family.	27	10.9
Family members sometimes get so angry they throw things.	19	7.7
Family members often try to one-up or out-do each other.	18	7.3
Family members sometimes hit each other.	13	5.3
Items indicating a lack of conflict (reverse scored)		
Family members rarely become openly angry.	172	69.6
Family members hardly ever lose their tempers.	173	70.0
In our family, we believe you don't ever get anywhere by raising your voice.	191	77.3
If there's a disagreement in our family, we try hard to smooth things over and keep the peace.	237	96.0
Family Outward Orientation		
Items indicating outward orientation		
Everyone in our family has a hobby or two.	71	29.1
Friends often come over for dinner or to visit.	57	23.1
Family members go out a lot.	46	18.6
We often go to the movies, sports events, camping, etc.	44	17.8
Family members sometimes attend courses or take lessons for some hobby or interest (outside of school).	27	10.9
Items indicating a lack of outward orientation (reverse scored).		
Nobody in our family is active in sports, Little League, soccer, etc.	167	68.2
Family members are not very involved in recreational activities outside work or school.	171	69.2
We spend most weekends and evenings at home. *	210	85.0
Our main form of entertainment is watching TV or listening to the radio.	221	89.5

* Excluded from the Family Outward Orientation Score

Table 4

Housing and Neighborhood Characteristics, Farmworker Families, North Carolina (2011-2012).

Housing and Neighborhood Characteristics	n	%	Mean	SD
Housing				
Housing Ownership				
Rented	128	51.6		
Grower provided	32	12.9		
Own home, rent land	54	21.8		
Own	34	13.7		
Crowding				
Number of adults			2.54	0.92
Number of children			2.99	1.30
Number of persons			5.53	1.75
Number of rooms used only as bedrooms			2.61	0.82
Persons per bedroom			2.28	0.93
Facilities				
Individual refrigerator	204	82.6		
Individual cooking surface	199	80.2		
Individual space to store food	243	98.0		
Can cook child's food	235	94.8		
Outdoor Facilities				
Enclosed play space	24	9.8		
Raise garden for food	88	35.6		
Raise animals for food	36	14.6		
Any food production	99	40.1		
Neighborhood				
Traffic on street makes it difficult to walk	76	31.3		
Traffic on nearby streets make it difficult to walk	71	29.8		
Dogs run loose	125	51.7		
Drive Time (minutes)				
Grocery store			15.66	9.05
Convenience store			8.90	6.49
Tienda			13.39	8.95
Restaurant			16.14	10.41
Park			15.59	11.05

Table 5

Bivariate Associations of Housing and Neighborhood Characteristics with Family Well-Being, Farmworker Families, North Carolina (2011-2012).

Housing and Neighborhood Characteristics	Family Well-Being					
	Stress		Family Conflict		Family Outward Orientation	
	Mean (SD)	Corr	Mean (SD)	Corr	Mean (SD)	Corr
Housing Ownership						
Rented	40.9 (16.2) *		1.3 (1.4)		1.6 (1.7) *	
Grower provided	38.7 (19.1)		1.2 (1.7)		1.1 (1.6)	
Own home and rent land	36.5 (15.1)		1.5 (1.8)		1.9 (2.0)	
Owned	32.4 (13.4)		1.6 (1.7)		2.4 (1.9)	
Persons per bedroom Facilities		0.015		-0.057		-0.066
Individual refrigerator						
Yes	36.9 (15.8) **		1.4 (1.6)		1.8 (1.9)	
No	46.0 (16.1)		1.4 (1.3)		1.4 (1.3)	
Individual cooking surface						
Yes	37.2 (16.0) *		1.4 (1.7)		1.8 (1.9)	
No	43.8 (15.8)		1.1 (1.1)		1.5 (1.5)	
Individual space to store food						
Yes	38.4 (16.2)		1.4 (1.6)		1.7 (1.8)	
No	41.4 (15.9)		0.8 (0.8)		1.2 (1.6)	
Can cook child's food						
Yes	38.1 (16.2) #		1.4 (1.6) #		1.8 (1.8)	
No	46.3 (14.0)		0.5 (0.9)		1.1 (1.2)	
Outdoor Facilities						
Enclosed play space						
Yes	33.6 (15.0)		1.3 (1.4)		2.1 (1.6)	
No	38.9 (16.3)		1.4 (1.6)		1.7 (1.8)	
Any food production						
Yes	37.7 (16.4)		1.6 (1.7) #		2.0 (1.9) #	
No	39.0 (16.1)		1.2 (1.5)		1.6 (1.8)	

Housing and Neighborhood Characteristics	Family Well-Being					
	Stress		Family Conflict		Family Outward Orientation	
	Mean (SD)	Corr	Mean (SD)	Corr	Mean (SD)	Corr
Neighborhood Traffic on street makes it difficult to walk						
Yes	41.8 (14.9) *		1.2 (1.7)		1.1 (1.5) **	
No	36.6 (16.5)		1.5 (1.5)		2.0 (1.9)	
Dogs run loose						
Yes	37.7 (16.2)		1.5 (1.7) #		1.7 (1.8)	
No	38.8 (16.3)		1.2 (1.4)		1.7 (1.8)	
Drive Time (minutes)						
Grocery store		0.171 **		-0.102		-0.199 **
Convenience store		0.214 **		-0.052		-0.031
Tienda		0.163 **		-0.042		-0.059
Restaurant		0.143 *		-0.021		-0.043
Park		0.211 **		-0.058		-0.044

< significant at 0.10,

* < significant at 0.05,

** < significant at 0.01

Table 6

Multivariate Associations of Housing and Neighborhood Characteristics with Family Well-Being, Farmworker Families, North Carolina (2011-2012).

Housing and Neighborhood Characteristics	Family Well-Being			
	Stress		Family Outward Orientation	
	Coefficient	SE	Coefficient	SE
Housing Ownership				
Rented	ref	ref	ref	ref
Grower provided	-3.44	3.11	-0.20	0.35
Owned	-2.35	3.02	0.38	0.34
Own home and rent land	-0.83	2.45	-0.12	0.28
Facilities				
Individual cooking surface	-2.73	2.60	-	-
Can cook child's food	-4.64	4.81	0.72	0.54
Outdoor Facilities				
Enclosed play space	-4.00	3.11	-	-
Any food production	-	-	0.50*	0.22
Neighborhood				
Traffic on street makes it difficult to walk	5.53**	2.09	-0.77**	0.24
Drive time grocery store (minutes)	0.19 [#]	0.11	-0.04**	0.01

[#] < significant at 0.10,

* < significant at 0.05,

** < significant at 0.01

Controlling for marital status, documentation, employment, farm work in the past 12 months, spouse employment, migrant status, years in US