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# Maternal Predictors of Behavioral Problems Among Mexican Migrant Farmworker Children

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**Mary Lou de Leon Siantz, PhD, RN, FAAN<sup>1</sup>**  
**Nora Coronado, MSW<sup>2</sup> and**  
**Tiffany Dovydaitis, RN, WHCNP<sup>1</sup>**

## Abstract

This study investigated the impact of maternal parenting factors on the emotional and behavioral health of Mexican Migrant Head Start children. Although the majority of children sampled in this study did not exhibit problematic behaviors, the findings concluded that children who demonstrated emotional and behavioral problems experienced a more rejecting maternal parenting style, greater parenting stress, and mothers reporting feelings of depression. Gender differences were found between the behavioral and emotional problems of sons and daughters. Surprisingly, years in the United States, maternal birthplace, income, education, and language spoken in the home were not associated with child behavioral problems.

## Keywords

Hispanic families, preschool children, parenting, behavioral problems, farmworker

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<sup>1</sup>University of Pennsylvania, Philadelphia, PA, USA

<sup>2</sup>University of Washington, Seattle, WA, USA

## Corresponding Author:

Mary Lou de Leon Siantz, Office of Diversity and Cultural Affairs, University of Pennsylvania School of Nursing, 418 Curie Blvd., Philadelphia, PA 19104-4217, USA

Email: [siantz@nursing.upenn.edu](mailto:siantz@nursing.upenn.edu)

## Introduction

Hispanic children are one of the fastest growing ethnic minority populations of the United States. Projections suggest that by 2050, one child in three will be the son or daughter of a Hispanic immigrant (Passel & Cohn, 2008). Concern is growing about their health risks, especially with the high incidence of environmental stress and poverty they endure, along with immigration status, limited English-speaking ability, and acculturation challenges that many of their parents experience (Corona, Lefkowitz, Sigman, & Romo, 2005). These factors may not only decrease family cohesion but also the coping ability of children over time (Roosa, Morgan-Lopez, Cree, & Specter, 2002). Research on the influence of maternal stress, depression, and parenting style on behavior of Hispanic children is inconclusive. More work is needed to delineate risk and protective factors and understand their effect on the behavior of children, especially during the early childhood period (Flores et al., 2002; Maldonado-Molina, Reyes, & Espinosa-Hernandez, 2006; Rodriguez & Morrobel, 2004). This study was part of a larger project that investigated risk and resilience in Mexican migrant preschool children. The present investigation addressed two related aims: (a) identification of maternal factors associated with risk for behavioral and emotional problems of Mexican Migrant preschool children and (b) identification of the frequency and gender differences of child behavioral problems in this population. Little is known about the frequency of behavioral problems among Mexican migrant children, and few studies have investigated the frequency of behavioral problems or factors associated with them (Barrera et al., 2002; Dinh, Roosa, Tein, & Lopez, 2002; Lequerica & Hermosa, 1995).

## Background

The importance of family functioning to the cognitive, psychosocial, and physical development of infants and preschool children has been well established (Garcia Coll, 1990; McCarty & McMahan, 2003). Classic studies of parenting (Baumrind, 1966, 1967; Baumrind & Black, 1967) have identified parenting styles and their association with child competence of preschool children. Baumrind observed that parent-child relationships varied with the sex of parent and child.

Much of the parent-child interaction that occurs during this period and the family environment that surrounds the child set the stage for a successful or unsuccessful developmental trajectory (Kane & Garber, 2004; Petterson & Albers, 2001). Harsh, overly severe, or predominant physical punishment and poor quality parenting has been implicated in later child aggression and conduct

problems (Ateah, Secco, & Woodgate, 2003; Deater-Decker & Dodge, 1997; Larzelere & Kuhn, 2005; Patterson & Sanson, 1999). Parenting that is warm and accepting has been associated with the development of trust and a sense of security in preschool children (Hipwell et al., 2008; National Institute of Child Health and Human Development, Early Childcare Research Network, 1999; Pettit, Bates, & Dodge, 1993).

Poverty is associated with psychological distress among mothers and ensuing behavioral problems in their children (Chang, Halpern, & Kaufman, 2007; Evans, 2004; Evans & English, 2002; Raikes & Thompson, 2005). Children in families undergoing economic decline suffer a variety of socioemotional problems as a result of negative changes in parenting behavior (Kiernan & Huerta, 2008). Long-term stress associated with poverty has been found to affect the behavior of parents and their children negatively (Scaramella, Neppl, Ontai, & Conger, 2008). Some studies have demonstrated that financial stress may contribute to decreased maternal sensitivity to children (Connell & Goodman, 2002) while increasing risk for maternal depression, especially among poor parents (Pettersen & Albers, 2001). Many Hispanics are economically disadvantaged, with Mexican Americans among the poorest (Hill, Bush, & Roosa, 2003; Kandel & Kao, 2001). The stressfulness of lower socioeconomic position is compounded by pressures stemming from fluctuations in the economy, such as changes in the inflation and employment rates, which disproportionately affect those of lower socioeconomic status.

A large body of research has identified parental depressed mood as a risk factor for internalizing and externalizing problems in European American children (Hammen & Brennan, 2003; Marmorstein & Iacono, 2004). There is some evidence to suggest that mothers who are not as satisfied with their social support network are more likely to have children with more internalizing disorders (McCarty & McMahan, 2003). Likewise, children in noncohesive families are more likely to have an increase in externalizing behaviors (Johnson, 2003).

Dennis, Parke, Coltrane, Blancher, and Borthwick-Duffy (2003) also found this link between economic pressure and depression in Mexican American mothers. Maternal depression has been associated with later problematic behaviors in children that include both internalizing (depression) and externalizing (aggression) behavioral problems (McCarthy & McMahan, 2003; Weissman, Warner, Wickramaratne, Moreau, & Olfson, 1997). Others have found that mothers with symptoms of depression had both poorer communication and worse relationships with their children over time (McCarty & McMahan, 2003). As a result of these poorer relationships, children exhibited more disruptive behaviors.

Because Hispanics have higher rates of depression than the general U.S. population, their children may be at greater risk of behavioral problems

related to parental depression (Bischoff, 2006; Mossakowski, 2008). There is some evidence of a cumulative effect of depression on child behavior problems. The combination of stress and depression in particular, has been found to predict behavioral problems in children and problems in peer relationships (Connell & Goodman, 2002; Jacob & Johnson, 1997; Kane & Garber, 2004; McCarty & McMahan, 2003). Consensus exists on the negative effect of depressed mood on psychosocial development of the child.

The literature clearly shows that use of physical punishment, poverty, poor social support and maternal depression all contribute both individually and in concert to produce poor child behavioral outcomes. With the added stressors of migration, acculturation, and environmental risks inherent in Hispanic farmworker life, children in these families face multiple threats to healthy and appropriate development (Aguilera-Guzman, de Snyder, Romero, & Medina-Mora, 2004; Garcia Coll, 1990; Hill et al., 2003; Kandel & Kao, 2001; Weiss, Goebel, Page, Wilson, & Warda, 1999; Zhou, 1997).

## Theoretical Framework

This study was guided by Resilience Theory (Masten, 2001, 2007). Although Resilience Theory is complex, its core concepts include risk factors, protective factors, and resilience. According to Masten (2001), "Resilience refers to a class of phenomena characterized by good outcomes in spite of serious threats to adaptation and development" (p. 227). Resilience is common in children and part of normal human adaptation. Researchers have recognized that some children and adults transcend difficult life circumstances to lead successful lives whereas others are susceptible to poor life outcomes (Berdan, Keane, & Calkins, 2008; W. Campbell, 2008; Efrati-Virtzer & Margalit, 2009; Garmezy, 1991; Jensen, 2007; Rutter et al., 1995; Simmel, 2007; Werner, 1995).

Risk factors are conditions or circumstances that are associated with greater likelihood of negative or undesirable outcomes, such as family stress. Within this context, risk factors might include poverty, limited maternal education, living in a one-parent family or in large families with many siblings, exposure to ethnic or racial discrimination, residential mobility, and poor neighborhood resources. Protective factors, in contrast, have been associated with a reduced likelihood of negative outcomes, because of their own direct effects or because they moderate the relationship between risk factors and negative outcomes. Family protective factors include parenting styles that are warm and accepting and maternal mental health.

In addition to the conceptualization of family risk and protective factors involved in resilience, we also used Systems Theory to emphasize the interconnectedness and reciprocal nature of family relationships in this study. Because

mothers, fathers, and children influence each other directly and indirectly (Corona et al., 2005; Minuchin, 2002), it stands to reason that increased parental difficulties are likely to affect other parts of the family system including children (Cox & Paley, 1997; Hill et al., 2003).

## **Method**

### *Design*

A cross-sectional prospective design was used to explore the association between maternal functioning (maternal stress, parenting style, and depression) and the presence of child behavioral problems.

### *Sample*

After receiving permission from the Texas Migrant Council and the institutional review board at Indiana University, participants were recruited from four Migrant Head Start programs near the South Texas border between Mexico and the United States. Letters were sent home to parents and the center directors advertised the study at parent meetings. By virtue of their enrollment in Migrant Head Start programs, all parents were migrant workers for at least 9 months a year with children between 3 and 6 years of age. Convenience sampling resulted in the enrollment of the mothers of 106 girls and 99 boys ( $n = 205$ ).

### *Procedure*

All instruments were translated into Spanish and back-translated into English by a trained translator. Instruments were then pilot tested with a small group to ensure that the questions were understandable. Research assistants, who were also Mexican American and bilingual, conducted interviews. Some were former farmworkers themselves, others included students from a local university. Interviews were conducted at the local Head Start center or in the home, depending on the choice of the participant. All participants gave informed consent and received \$50 for their participation in the study.

### *Measures*

Measures included a demographic questionnaire, three maternal functioning scales, and a child behavior scale. All measures were offered in both English and Spanish.

**Demographic questionnaire.** The demographic questionnaire included the following variables: maternal date of birth, place of birth, ethnic identification, years in the United States, occupation, income, and language spoken at home.

**Acculturation.** The Hispanic Health and Nutrition Examination Survey (HHANES) scale was used to measure acculturation (Hazuda, Stern, & Haffner, 1988; Solis, Marks, Garcia, & Shelton, 1990). Acculturation level was assessed using the combination of three variables: Hispanic ancestry, generation, and language spoken. Those who were deemed less acculturated primarily spoke Spanish, were born in Mexico, and described their ethnic identity as, for example, Mexicano. Hispanic ancestry codes were replicated from the HHANES (Delgado, Johnson, Roy, & Trevino, 1990). The HHANES determined not only Hispanic origin (Mexican, Cuban, Puerto Rican) but also the specific subgroup labels such as Mexican, Mexican American, Chicano, and Hispano.

The HHANES Southwest data demonstrated that the respondents' generation was closely associated with their Hispanic ancestry. Generation was measured by asking if they were born in Mexico (first generation) or in the United States (second generation). Establishing the type of generation of Hispanic respondents has been found to clarify some relationships in research, because it is possible that the first generation may behave differently from the second generation (Delgado et al., 1990).

Respondents were also asked their language preference to help confirm their level of acculturation. Language use and preference has been a frequently used measure of acculturation.

**Maternal functioning.** Maternal functioning was measured on three levels: maternal stress, depression, and parenting style. First, we measured maternal stress with the Family Inventory of Life Events and Changes Scale (FILE; McCubbin & Thompson, 1987). FILE is a self-report inventory that assesses stressors that have occurred in the past 12 months. The questionnaire consists of 71 items that are grouped into nine subscales. The included subscales are intrafamily strains, pregnancy and childbearing strains, finance and business strains, work-family transitions, illness and family "care" strains, losses, transitions "in and out," and family legal violations. Participants answer yes/no to each of the items. Total scores can range from 0 to 71 with a higher number representing greater stress. In this study, Cronbach's  $\alpha$  for the total FILE scale was .80.

To measure depression, we used the Center for Epidemiological Study of Depression Scale (CES-D; Radloff, 1977). The CES-D is a 20-item self-report inventory that measures the presence and severity of depression on a 4-point Likert-type scale during the prior week. Values can range from 0 (*rarely*) to 3 (*all of the time*) with a total score range of 0 to 60. A score of 16 and higher is used to identify risk for depression. Examples of questions include "Subject felt that everything was an effort" and "Subject felt that people were unfriendly."

This questionnaire has been used frequently with Hispanic samples with reported high internal consistency (Golding & Burnam, 1990; Kail, Zayas, & Malgady, 2000). Cronbach's  $\alpha$  for the CES-D scale was .79 in this study.

Finally, the Parental Acceptance/Rejection Questionnaire (PARQ) was used to assess parenting style (Rohner, 1990, 2002). The PARQ consists of 60 items that assess four areas of parenting: warmth, aggression, neglect, and rejection. Items are rated on a 4-point Likert-type scale from 1 (*almost never true*) to 4 (*almost always true*). For a total score, a higher score represents a poorer parenting style. Examples of inventory items include "subject ignores target child" and "target child is a burden to subject." Cronbach's  $\alpha$  coefficient for the PARQ scale was .59 for the present study.

**Child behavior scale.** The Child Behavior Checklist (CBCL; Achenbach, 1991) is a tool used to assess emotional and behavioral problems in 4 to 18 year olds. (The CBCL was adapted and tested for use with 3-year-olds with the original author's assistance.) The CBCL is composed of 99 items that describe specific behaviors ("avoids looking others in the eye," "refuses to eat"). These items are rated by the mothers on a 3-point scale (0 = *not true*, 1 = *somewhat true*, and 2 = *very true*) for their congruence with their child's behavior during the previous 2 months. Based on maternal responses, a total score for behavioral emotional problems is determined as well as scores for six problem syndromes: (a) depression and anxiety, (b) social withdrawal, (c) sleep problems, (d) somatic complaints, (e) aggression, and (f) destruction. Scores for externalizing behavior (aggression and destruction) and internalizing (depression, anxiety, and withdrawal) are also totaled. Externalization indicates an inability to control impulses and emotions. Conversely, internalizing behavior demonstrates an overcontrol of emotions that leads to inhibition, anxiety, and sadness.

The CBCL has been used throughout the world in cross-cultural settings and previously tested in English and Spanish with strong evidence of its construct validity, predictive validity, internal consistency, and test-retest reliability (Gross et al., 2006; Leiner, Balcazar, Straus, Shirsat, & Handal, 2007). Psychometric testing of the Spanish version of the CBCL with the current sample demonstrated an internal consistency of .79, as well as for the externalizing scores .71, and the internalizing scores .65.

## Results

### Sample

The sample included mothers of 106 girls who ranged from 3 to 6 years of age (mean age = 4.25 years,  $SD = 0.52$ ). Ninety-nine boys participated with ages from 3 to 5 years (mean age = 4.19 years,  $SD = 0.44$ ). Maternal age ranged

**Table 1.** Child Behavioral Checklist Scores of Preschool Migrant Mexican Preschool Children Enrolled in Migrant Head Start: Number of Mexican Migrant Children in the Range of Normal, At Risk, or Clinical Concern as Measured by CBCL

	Normal, % (n)	At Risk, % (n)	Clinical, % (n)
Total problems	88 (182)	5.5 (11)	6.0 (12)
Boys		6.1 (6)	4.0 (4)
Girls		5.7 (5)	9.4 (8)
Externalizing	87 (179)	5.4 (11)	7.3 (15)
Boys		5.1 (5)	5.1 (5)
Girls		5.7 (6)	9.4 (10)
Internalizing	93.6(192)	4.9 (9)	2.0 (4)
Boys		6.1 (6)	4.0 (4)
Girls		2.8 (3)	0

Note: CBCL = Child Behavior Checklist.

from 19 to 67 years (mean age = 32.0,  $SD = 7.43$ ). This wide age range was most likely because of the inclusion of grandmothers, when they were the child's primary guardians. All participants were of Mexican origin, with 61.4% of mothers having been born in Mexico ( $n = 135$ ). Maternal years in the United States ranged from less than 1 year to 56 years with a mean of 19.07 (11.43) years. Only 35.9% ( $n = 79$ ) reported being born in the United States.

### Frequency of Behavioral Problems

The mean score for total behavioral problems in this group of children fell within the normal range with a mean score of 48.49 ( $SD = 8.79$ ) and below the range suggestive of clinical concern (64-100). However, 5.5% ( $n = 11$ ) of the children had scores indicating risk for mental health problems with 6.0% ( $n = 12$ ) showing enough symptoms to warrant significant clinical concern. Table 1 describes total, externalizing, and internalizing scores for children. The data show that externalizing behaviors involving aggressive or destructive behaviors were the major source of the problems rather than internalizing behaviors involving depression and withdrawal. Approximately 7.3% of the children received scores for externalizing behavior that fell within the range of clinical concern, whereas 9.4% of children fell within the range of clinical concern for internalizing behaviors.

To determine if differences existed between boys and girls in their emotional and behavioral problems,  $t$  tests were performed. No significant differences



**Table 2.** Means and Standard Deviations (in Parentheses) of Children's Scores on CBCL

	All	Boys	Girls
CBCL—Total	48.49 (8.79)	47.59 (8.75)	49.34 (8.79)
CBCL—Internalizing	46.30 (8.68)	46.88 (9.16)	45.76 (8.21)
CBCL—Externalizing	49.06 (9.70)	47.26 (9.62)	50.75 (9.52)

Note: CBCL = Child Behavior Checklist.

were found between boys and girls in total mean scores ( $t = -1.43, p < .154$ ) or internalizing mean scores ( $t = 6.92, p < .359$ ). However, there was a significant difference in the mean score of externalizing behaviors with girls showing a higher mean ( $t = -2.61, p < .010$ ).

As noted in Table 1, most of the children exhibiting an overall clinical concern for total problems were girls. More girls than boys warranted clinical concern for behaviors involving aggression or destruction. However, more boys than girls were at risk for internalizing behaviors involving depression and withdrawal. Table 2 depicts the means and standard deviations for total, externalizing and internalizing scores of the CBCL.

Examination of the individual syndromes showed that boys had more difficulty with being withdrawn ( $x = 54.14$ ) than girls ( $x = 52.69$ ),  $t = 2.26, p < .025$ . Alternatively, girls showed more problems with attention ( $x = 52.73$ ) than boys ( $x = 51.17$ ),  $t = -3.00, p < .003$ . No other differences were noted in individual problem scores for boys and girls.

### Maternal Functioning

In this study, maternal stress ranged from 45 to 60 with a mean of 49.26 ( $SD = 3.62$ ). The total scores for depression ranged from 0 to 45 with a mean of 13.31 ( $SD = 9.24$ ). The parenting style scores ranged from 117 to 169 with a mean of 134.21 ( $SD = 9.11$ ).

### Predictors of Child behavioral and Emotional Problems

The first goal of the study was to assess the degree to which behavioral and emotional problems may be related to maternal factors. Results were derived through a two-step process. In the first step, correlations and  $t$  tests were performed that included maternal years in the United States, language spoken, and

**Table 3.** Stepwise Regression Models Showing Contribution of Maternal Factors to CBCL for Both Genders

Source	$\beta$	$R^2$	$df$	$F$	$p$
Total problems					
Overall model (FILE, PARQ, CES-D)	.194	.269	1, 145	17.42	.000
Externalizing problems					
Overall model (FILE, PARQ)	.296	.220	3, 145	19.58	.000
Internalizing problems					
Overall model (FILE, CES-D)	.295	.164	2, 145	15.99	.000

Note: CBCL = Child Behavior Checklist; FILE = Family Inventory of Life Events and Changes Scale; PARQ = Parental Acceptance/Rejection Questionnaire; CES-D = Center for Epidemiological Study of Depression Scale.

country of birth, as well as maternal depression, stress, and parenting style. Results revealed that a relationship existed among maternal years in the United States, depression, parenting style, stress, and child problem behaviors.

Next, we performed stepwise regressions for each of the three dependent variables—externalizing, internalizing, and total behavior problems. Table 3 illustrates the resultant models for each of these dependent variables. The model that included total problem behaviors revealed that maternal stress, parenting style, and depression affected child behavior. Maternal stress provided the greatest variance (18%), followed by maternal parenting style (6%) and maternal depression (2%). Acculturation, measured by mother's years of residence in the United States was removed in this model. In this sample of mothers, the more stressed, rejecting, neglectful, and depressed a mother was, the more likely her child would exhibit problem behaviors. The model examining externalizing behaviors illustrated that only maternal stress and parenting style were significant. Maternal stress contributed 13% of the variance followed by parenting style (9%).

When internalizing behaviors served as the dependent variable, both maternal stress and depression were significant predictors, with 8% and 7% of the contributing variance, respectively. Table 3 also depicts the models for boys and girls separately. For girls, maternal stress and depression were significant contributors to the variance for behavioral problems. This would suggest that mothers who are more stressed and more depressed were more likely to have girls who had behavioral problems. However, for boys, maternal stress and parenting style were important independent variables in the model. The more

stressed and harsher parenting style that the mother exhibited, the more likely her son would display behavioral problems.

## **Discussion**

### *Predictors of Behavioral Problems*

The frequency of poor child behaviors in this study was relatively low in comparison with national statistics. Some studies have shown lower CBCL scores for Hispanic children, which may be influenced by the value parents place on certain behaviors. Although outside the scope of this study, this phenomenon should be explored further. It is also possible that the positive effects of Migrant Head Start on family systems decreased the amount of poor maternal functioning and negative child behavior. It would be interesting to test migrant mothers and children not enrolled in Migrant Head Start to compare findings between the two groups. Families may perceive Head Start to be a supportive environment that may influence parental stressors and mental health. Parents may feel less stressed with the knowledge that they have a safe place for their children to stay while they are working.

### *Predictors of Externalizing Problems*

Externalizing problems reflect lack of control of impulse and external attribution of blame by the child for his or her emotional pain or suffering. The regression data for externalizing problems indicated that for girls, in particular, aggressive and destructive behavior may have been influenced by maternal stress. Others have reported the potential negative impact of maternal stress on children's behavior (Cnic, Gaze, & Hoffman, 2005; Pesonen et al., 2008). Experiencing highly stressful events is also associated with youth externalizing behaviors. Stressful life events may be predictive of the development of either internalizing or externalizing problems for youth with mothers who have elevated depressive symptoms (McCarty & McMahon, 2003).

It is noteworthy that in this sample, externalizing problems for boys were not significant. A variety of studies have shown that boys are at higher risk than girls for developing externalizing problems with rates of problematic behavior emerging during the preschool years and boys by school entry exhibiting externalizing behaviors up to 10 times the rate noted for girls (Keenan & Shaw, 1997; Spieker, Larson, Lewis, Keller, & Gilchrist, 1999). Girls have been found to more often exhibit internalizing behavior (S. Campbell, Shaw, & Gilliom, 2000; Stacks & Goff, 2006).

## *Predictors of Internalizing Problems*

Internalizing problems reflect an overcontrol of emotions and their expression in the child, leading to inhibition, shyness, and fear of the environment. In contrast to externalizing problematic behaviors among girls, maternal depression was more predictive of internalizing problems among their sons. During the school-age period, children of depressed parents, compared with children of parents who are not depressed, have been found to have a range of negative outcomes including higher levels of internalizing and externalizing symptoms (Beardslee & Podorefsky, 1988; Billings & Moos, 1983; McCarty & McMahon, 2004). Depressed mothers are less able to function adaptively with their children and tend to interact in a more negative and controlling fashion than other mothers (Burbach & Borduin, 1986; Gelfand & Teti, 1990; Silverstein, 2009).

These findings suggest that for the girls in particular, the life event stresses that their mothers experience may also have a negative effect on their daughters' behavior. Other studies support the notion that children are affected when their mothers undergo emotional challenges (Belsky, Fish, & Isabella, 1991; Buriel, Mercado, Rodriguez, & Chavez, 1991; Hammen & Brennan, 2003; Marmorstein & Iacono, 2004; Tronick, & Field, 1986). Children may be acting out their parents' stresses (Weiss et al., 1999). The tensions and anxieties experienced in migrant life may be contributors to childhood problems. More research is needed to investigate the association between maternal stress and the degree of aggressive behavior among daughters.

## *Mothers*

Stressful life events can be considered both a precipitant and a consequence of depression. Life event stress reported by these mothers included marital strain, work, intrafamilial stresses (conflicts with husband, children, extended family), finances, legal, loss, and transitions. Migrant farmworker mothers have reported such stress, especially during the harvest season when they are traveling with their families in the migrant stream of the United States (Siantz, 1999; Vega, 2004). See Tables 4 and 5.

## *Alternative Hypothesis*

The inherent weakness with cross-sectional design is the inability to show causation. As such, we have only been able to show the strength of relationship between maternal factors and child behavior. It is possible that child behavior may be what changes maternal factors, rather than the other way around.

**Table 4.** Stepwise Regression Models Showing Contribution of Maternal Factors to CBCL for Girls

Source	$\beta$	$R^2$	<i>df</i>	<i>F</i>	<i>p</i>
Total problems					
Overall model (FILE, CES-D)	.312	.245	2, 77	13.78	.000
Externalizing problems					
Overall Model (FILE)	.309	.095	1, 74	7.79	.007
Internalizing problems					
Overall Model (FILE, CES-D)	.372	.165	2, 77	8.40	.000

Note: CBCL = Child Behavior Checklist; FILE = Family Inventory of Life Events and Changes Scale; PARQ = Parental Acceptance/Rejection Questionnaire; CES-D = Center for Epidemiological Study of Depression Scale.

**Table 5.** Stepwise Regression Models Showing Contribution of Maternal Factors to CBCL for Boys

Source	$\beta$	$R^2$	<i>df</i>	<i>F</i>	<i>p</i>
Total problems					
Overall model (FILE, PARQ)	.314	.326	2, 69	16.21	.000
Externalizing problems					
Overall model (FILE, PARQ)	.381	.310	2, 69	15.02	.000
Internalizing problems					
Overall model (FILE)	.377	.142	1, 68	11.29	.001

Note: CBCL = Child Behavior Checklist; FILE = Family Inventory of Life Events and Changes Scale; PARQ = Parental Acceptance/Rejection Questionnaire.

Although most of the literature is based on cross-sectional studies, there is enough research to suggest that children with emotional and behavioral problems can significantly affect maternal depression and family functioning (Feske et al., 2001; Foster et al., 2008). In all likelihood, the relationship between maternal depression and child behavioral problems is bidirectional, with both parents and children having reciprocal influence on each other (Kim, Conger, Lorenz, & Elder, 2001). One study demonstrating this, Gross et al. (2009), looked at longitudinal developmental trajectories of maternal depressive symptoms among low-income mothers and their sons. The study suggested that aversive child behavior should be included in a much larger group of factors known to affect the course of maternal depression.

## Limitations

The data were from a convenience sample and those who participated in the study may have been different from those who declined. Cronbach's  $\alpha$  for the PARQ was only .59, which reflects a moderate range of reliability. Scores may reflect the adaptation of the scales from English to Spanish. When an instrument is adapted and translated, the internal structure of an instrument may change (Marin & Van Oss-Marin, 1991).

## Conclusion and Implications

The present investigation addressed two related aims: (a) identification of maternal factors associated with risk for behavioral and emotional problems of Mexican migrant preschool children and (b) identification of the frequency and gender differences of child behavioral problems in this population. The study offers a unique perspective on the lives of migrant Mexican mothers and their children. Findings can be used to inform health and social service providers in provision of services needed to promote the mental health of both children *and* mothers. For example, brief screenings for maternal depression during well-child visits are one feasible way to address maternal mental health (Olson, Dietrich, Prazar, & Hurley, 2006). Interventions that promote social support and mediate maternal depression are well established in family-based interventions (Shaw, Connell, Dishion, Wilson, & Gardner, 2009) and home-visiting programs. Nurses are in a pivotal position to provide preventive interventions by conducting routine assessments of maternal depression and their available social support, thereby preventing or minimizing depression in these mothers.

Further research on social support would be a valuable tool in assessing the impact of programs such as Migrant Head Start on maternal and child mental health in the migrant farmworker population. The association between parental stressors, parenting styles, mental health, and child behavioral outcomes, especially child competence, in migrant families cannot be overlooked. Although the findings suggest that, as a group, Mexican migrant preschool children in this sample were well adjusted overall, a small subset demonstrated behaviors that either indicated risk or substantial clinical concern for poor mental health outcomes.

Surprisingly, girls demonstrated more risk or clinical concern for externalizing problems, whereas boys showed more risk and clinical concern for internalizing problems. Future research should examine this further to identify any important social or cultural factors that may account for this phenomenon.

Furthermore, it is critical to focus on protective factors that may serve to largely shield children from the parental stressors that stem from migrant lifestyles, because risk factors are well established. Clearly, these families are highly resilient in the face of multiple obstacles.

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## Bios

**Mary Lou de Leon Siantz**, PhD, RN, FAAN, is the assistant dean of Diversity and Cultural Affairs, University of Pennsylvania School of Nursing. She is internationally recognized for her research on risk and resilience with Hispanic migrant/immigrant children and their families, funded by the National Institutes of Health, the Department of Health and Human Services, and the Texas Migrant Council. She was named one of the top Latinas in Health and Science by *Hispanic Magazine* in 2004-2005. Her recent publications include "The International Mobility of Latin American Nurses: An Overview" in *The Online Journal in Nursing* (2008, with S. Málvares), the chapter "Adolescent Health" in *Adolescence: Development During a Global Era* (in press, with T. Dovydaitis), and "Global Issues in Mental Health: A Lifespan Approach" in *Nursing Clinics of North America* (in press, with E. Yearwood).

**Nora Coronado**, MSW, is a licensed psychiatric social work practicing in the Seattle, Washington, community. She is also a doctoral student at the University of Washington School of Social Welfare. Her research interests focus on factors associated with the mental health of Mexican migrant parents and their children; her clinical interests focus on mental health intervention to prevent depression among Mexican immigrant parents.

Her recent publications include “Determinants of Maternal Depression in Mexican Migrant Mothers” in *Hispanic Health Care International* (2002, with M. L. D. Siantz).

**Tiffany Dovydaitis**, RN, WHCNP, is a PhD candidate in the Center for Health Equity at the University of Pennsylvania School of Nursing and a women’s health nurse practitioner. Overall, her research interests lie at the intersection between women’s and immigrant health, specifically reproductive health, sexual violence, and trafficking issues. Her current work is focused on Mexican women’s stories of intimate partner sexual violence within the context of economic migration. Her future goals include a continued commitment to eliminating health disparities and seeking social justice for migrant women through a program of scholarly inquiry and community-based action research. Her recent publications include “Eliciting Behavior Change in a US Sexual Violence Prevention Program Through Utilization of Freire and Discussion Facilitation” in *Health Promotion International* (2010, with A. Nelson, R. Lewy, F. Ricardo, A. Mitchell, C. Loe, & C. Kugel) and “Human Trafficking: The Role of the Clinician” in *Journal of Midwifery and Women’s Health* (in press).