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Maternal Depressive Symptoms and Child Behavior Problems among Latina Adolescent Mothers: The Buffering Effect of Mother-reported Partner Child Care Involvement

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Abstract

We examined the relations between maternal depressive symptoms and child internalizing and externalizing problems in a sample of 125 adolescent Latina mothers (primarily Puerto Rican) and their toddlers. We also tested the influence of mother-reported partner child care involvement on child behavior problems and explored mother-reported partner characteristics that related to this involvement. Results suggested that maternal depressive symptoms related to child internalizing and externalizing problems when accounting for contextual risk factors. Importantly, these symptoms mediated the link between life stress and child behavior problems. Mother-reported partner child care interacted with maternal depressive symptoms for internalizing, not externalizing, problems. Specifically, depressive symptoms related less strongly to internalizing problems at higher levels of partner child care than at lower levels. Participants with younger partners, co-residing partners, and in longer romantic relationships reported higher partner child care involvement. Results are discussed considering implications for future research and interventions for mothers, their children, and their partners.

Keywords

maternal depression; child behavior; adolescent mothers; Latina; partner involvement

Introduction

Adolescent mothers face significant challenges, and both their own and their children's functioning are often compromised (Grau, Wilson, Weller, Castellanos, & Duran, 2011). In addition to coming from lower socio-economic backgrounds, adolescents who become mothers are more likely to have histories of stressful life events, lower cognitive attainment, and poorer school performance than their non-parenting peers (Hoffman & Maynard, 2008).

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Compared to adult mothers, adolescent mothers have a higher likelihood of being single and of raising their children in poverty (Moore, Hofferth, Wertheimer, Waite, & Caldwell, 1981).

Consistently, several studies have found relatively high rates of depressive symptoms in samples of adolescent mothers (Colletta, 1983; Leadbeater, Bishop, & Raver, 1996; Nadeem, Whaley, & Anthony, 2006). Similarly, children of adolescent mothers are at risk for emotional and behavior problems, which, when present, begin to appear in their second year of life and become more pronounced throughout development (Brooks-Gunn & Furstenberg, 1986). Following the normative parenting literature which highlights the impact of maternal depression on child development (Zahn-Waxler, Duggal, & Gruber, 2002); research on adolescent mothers has focused on this link. A few studies documented significant associations (e.g., Hubbs-Tait, Osofsky, Hann, & Culp, 1994). The adolescent literature has also linked children's emotional and behavior problems to the environmental risk factors present in the lives of young mothers (Moore & Brooks-Gunn, 2002).

However, this research has seldom included Latina adolescents, and little is known about the link between maternal depressive symptoms and children's behavior problems in this population or the factors that may protect these young families. This is of concern because Latina adolescents have the highest birthrate of any group within the United States (Martin et al., 2010) and are overrepresented among the poor (Cauce & Domenech-Rodriguez, 2002), placing them at significant risk for compromised functioning. Our first goal was to examine the association between maternal depressive symptoms and child internalizing and externalizing problems in Latina adolescent mothers and their toddlers. We used Contreras and colleagues' conceptual model of the determinants of parenting competence among Latina adolescent mothers (Contreras, Narang, Ikhlas, & Teichman, 2002) to guide our study. Following the model's emphasis on accounting for contextual stressors when examining maternal and child adjustment, we considered the role of maternal depression in conjunction with environmental risk factors that may influence the adolescents' and their children's adjustment.

We also sought to uncover protective factors for the adjustment of the adolescents' children. We focused on the potential protective role of the adolescents' partners because they have emerged as a key source of support for young Latina mothers (Contreras et al., 2002). Latina adolescent mothers are more likely to reside with and be in long-term relationships with partners than adolescent mothers from other ethnic backgrounds (Wasserman, Brunelli, Rauh, & Alvarado, 1994; de Anda & Becerra, 1984). Given their presence, examining partners' impact on child functioning and testing whether they buffer children from the risks associated with maternal depressive symptoms is important.

Maternal Depression and Child Outcomes

Research investigating the relation between maternal depression and child functioning has focused primarily on European American (EA) adult women and their children. Findings indicate that children of depressed mothers are at risk for a variety of negative outcomes throughout the lifespan. Specifically in toddlerhood, offspring of depressed mothers show poor self-regulation, tend to react poorly to stress, and are at increased risk for behavioral problems (Downey & Coyne, 1990; Zahn-Waxler et al., 2002).

Much less research has been conducted with Latina mothers of any age or adolescent mothers of any ethnic background. The majority of these studies used self-reported maternal depressive symptoms and mother-reported child behavior. A few studies uncovered a relation between depressive symptoms and child behavior among adult Latina mothers and their school-aged children (Aisenberg, Trickett, Mennen, Saltzman, & Zayas, 2007; Dennis,

Parke, Coltrane, Blacher, & Borthwick-Duffy, 2003; Pachter, Auinger, Palmer, & Weitzman, 2006). Only one study included toddlers and found that depressive symptoms related to aggression in a mixed sample with a relatively large portion of Latina adults (Malik et al., 2007); but this study only tested aggression, not externalizing problems more generally or any internalizing problems.

To date, the few studies examining this relation with adolescent mothers used primarily African American (AA) and EA mothers and their school-aged children. Studies with mixed samples of predominantly EA and AA adolescent mothers (Spieker, Larson, Lewis, Keller, & Gilchrist, 1999) and samples of primarily EA adolescent mothers (Rhule, McMahon, Spieker, & Munson, 2006) found a significant relation. Most studies did not investigate child internalizing and externalizing problems separately, but one mixed-sample study found a relation between depressive symptoms and these two child outcomes among adolescent mothers and their school-aged children (Black et al., 2002). Finally, only one study examined this relation in younger children. In a mixed sample of 44 adolescent mothers, depressive symptoms related to toddlers' internalizing, externalizing, and social skills problems (Hubbs-Tait et al., 1994).

Two studies with ethnically mixed samples including relatively large proportions of Latina adolescent mothers documented a relation between depressive symptoms and child behavior. However, results were not reported separately by ethnicity, and no distinction was made between internalizing and externalizing problems. One study found that depressive symptoms were associated with child problem behaviors in 4- to 6-year-olds in a mixed sample of mostly AA (23% Latina) adolescent mothers (Yoshikawa, Rosman, & Hsueh, 2001). The other found that depressive symptoms significantly correlated with toddlers' total behavior problems (approximately 40% Latina, 51% AA adolescent mothers; Leadbeater & Bishop, 1994; Leadbeater et al., 1996). Finally, only one study examined this relation in a sample of entirely Latina adolescent mothers and their toddlers and found that toddlers of mothers who reported more depressive symptoms displayed less positive affect and more distress when interacting with their mothers during mother-child interactions (Weller, Grau, Quattlebaum & Castellanos, 2008).

Thus, no studies of Latina adolescent mothers have related depressive symptoms to child internalizing and externalizing symptoms. In addition, research documenting associations between maternal depression and child behavior in adolescent samples has rarely examined internalizing and externalizing problems separately and has tended to disregard the role of contextual risk factors. The current study examined the role of depression vis-à-vis risk factors that contribute to both maternal symptoms and children behavior problems and tested these relations separately for internalizing and externalizing problems.

Role of Partner Involvement in Child Care

Given the detrimental effects of maternal depressive symptoms, it is important to identify factors that may protect young families. Although the literature on adolescent mothers has tended to disregard the role of partners, the small literature on Latina adolescent mothers suggests that partners are a key source of support for these young mothers (Contreras et al., 2002). In fact, research with Latina adolescent mothers has found high rates of participants reporting relatively long-term relationships with partners during the years following the birth of their children (Contreras, López, Rivera-Mosquera, Raymond-Smith, & Rothstein, 1999; Moore, Florsheim, & Butner, 2007; Wasserman et al., 1994). As such, these men are likely to be present and possibly involved in the care of the child. However, although studies have documented effects of partner involvement on maternal well-being (Castellanos, Grau, Weller, & Quattlebaum, 2008; Contreras, Lopez et al, 1999), no studies have examined the relations between partner involvement and child functioning in young Latino families.

Research with adolescent mothers of primarily AA descent indicates that contact with mothers' partners can positively impact children. The Baltimore Study of Teenage Motherhood found that children who reported strong relationships with their fathers or their mother's partners showed better employment and educational outcomes and lower depression levels than those who did not (Furstenberg & Harris, 1993). Cooley & Unger (1991) reported that the number of years a partner lived in the household related to mother-reported child outcomes in 6- to 7- year old children. Lastly, another study found that children who had high levels of mother-reported contact (composite of father's pre-natal romantic involvement with mother, post-natal contact with child, residential status, financial and child care support) with their fathers from birth to age 8 had fewer internalizing and externalizing problems at ages 8 and 10 (Howard, Lefever, Borkowski, & Whitman, 2006).

Given this positive effect, it is reasonable to expect that partner child care involvement could act as a buffer for children of adolescent mothers in the face of maternal depressive symptoms. Parenting theories suggest that the presence of a healthy co-parent in the context of having a depressed mother may be protective for children (Belsky, 1984). Despite theoretical support for the buffering effect, few studies with adult parents have actually tested this effect; and they have found mixed results. One of these studies with adult families only found moderating effects of the quantity of father involvement for internalizing, not externalizing, behavior problems (Mezulis, Hyde, & Clark, 2004). Another study indicated a protective effect of child-reported positive father involvement on both internalizing and externalizing problems for children with depressed and non-depressed mothers, but with stronger effects for non-depressed mothers (Chang, Halpern, & Kaufman, 2007).

One study provides evidence of a buffering effect among families of adolescent mothers. In a study of mainly AA adolescent mothers, Howard and colleagues (2006) tested the interaction of father contact and maternal risk on child outcomes. Findings indicated that father contact related to lower internalizing problems in children with a high risk mother (e.g., low intelligence, low cognitive readiness, and high internalizing and externalizing problems), whereas father contact showed no relation to internalizing problems for children with low-risk mothers. This effect was not significant for child externalizing problems.

Thus, although findings are mixed, some empirical evidence suggests that partners of adolescent mothers could serve a protective role for the young children's behavior. In addition, studies have used different indicators of paternal involvement, and most used maternal report on global indicators of involvement. Therefore, research has not identified which specific aspects of involvement are related to child functioning across domains. Given the relatively larger presence of partners in young Latino families, it is especially important to examine this potential protective factor in this population. In order to better inform intervention efforts, we focused specifically on one aspect of partner involvement: the care provided directly to the child.

The Current Study

The current study examined the concurrent relation of maternal depressive symptoms to child behavior in a sample of adolescent Latina mothers and their toddlers. Given research relating environmental risk factors to both maternal and child adjustment (Moore & Brooks-Gunn, 2002; Umaña-Taylor, Updegraff, & Gonzales-Backen, 2011), we tested this relation controlling for these factors. We expected that maternal depressive symptoms would have a unique relation to children's behavior problems. Based on theory and empirical findings demonstrating that contextual risk factors affect children's adjustment through their effect on parents (Conger et al., 2002; Parke et al., 2004), we also hypothesized that maternal symptoms would mediate the relations between risk factors and children's behavior

problems. We focused on demographic risk factors found to be related to child functioning in prior studies and examined relationships separately for internalizing and externalizing problems.

We also examined the potential protective role of the mothers' partners for children's behavioral adjustment. Specifically, we tested the buffering effect of mother-reported partner child care involvement on children's behavior in the face of maternal depressive symptoms. In contrast to prior studies that used global indices of partner involvement, we focused on care provided directly to the child using a rich, multi-item measure of mother-reported partner involvement in three key aspects of child care (i.e., didactic interactions, physical play, care giving; Cabrera et al., 2004; Lamb, Pleck, Charnov, & Levine, 1987). To better capture the unique influence of child care, we examined the role of mother-reported partner child care while controlling for mothers' perceptions of social support from partners. Research indicates that perceived partner social support relates to psychological adjustment in young Latina mothers (Contreras, López et al, 1999; Castellanos et al., 2008) and, thus, may influence child behavior indirectly through its effects on maternal adjustment. Partner-provided resources may also influence child behavior by affecting the childrearing context (Cabrera et al., 2004). As such, our measure of perceived partner social support included five different types of support provided by partners (e.g., emotional, tangible). Based on the evidence reviewed above, we predicted that mother-reported partner child care would act as a buffer for child internalizing problems in the face of maternal depressive symptoms. The evidence for the buffering effect for externalizing problems is more mixed; therefore, we had no specific prediction regarding this child variable.

Finally, given that little is known about the characteristics and involvement level of partners of Latina adolescent mothers, we provide a description of the partners in our sample and examined partner and maternal characteristics related to level of mother-reported partner child care involvement. For these and all other study variables, we relied on maternal report (partners did not participate in the study). Although most prior studies also used maternal report, the present results should be interpreted in light of this methodology.

Method

Participants

Participants for the current study (N=125) were drawn from a larger sample (N=170) of young Latina mothers and their children. The current sample of 125 participants is comprised of all mothers from the larger sample who reported having a romantic partner at the time of interview (73.5%). Chi-Square and t-tests indicated that mothers with partners did not differ significantly from those without on key demographic indicators and the main study variables (Grau, 2011).

The mean age of the 125 mothers in the current study was 17.94 years (SD = 1.34; range: 14.25 – 19.92) at the target child's birth. Mothers resided in a low-income neighborhood of a Midwestern city, and they were predominantly of Puerto Rican heritage (82.4%). Approximately 45% of participants were born outside of the mainland US. Children's (54.1% male) mean age was 18.2 months (SD = .95). The majority were the first child (84%), and 71.2% were the only child. Most mothers described their children (70%) as being purely Latino; the others were reported as mixed. Ninety-five participants (76%) reported that their partners were the biological father of the target child.

The majority of the participants reported living with their partner, either alone with him (48.8%), or with her own (10.4%), or his parents (11.2%); 20% lived with at least one of her parents (without partner); and 9.6 % had other living arrangements. Regarding education,

15.2% had earned some post-high school education; 15.2% had a high school diploma or GED; 58.4% had completed 9th through 11th grade; and 11.2% had completed 8th grade or lower. At time of interview, 26.4% of the mothers were attending school, just over 43% were employed, and 88.8% received some form of government assistance.

Procedure

Institutional Review Board approval was obtained for the study. Most participants (78.2%) were recruited in waiting rooms of pediatric clinics serving Latino neighborhoods in a Midwestern city. The remaining participants were either referred by friends/relatives or self (15.3%) or by service-providers (6.5%). Mothers were contacted to participate in the study regardless of child's age. At this point, we established eligibility (i.e. mother 19 years or younger at child's birth, child under 20 months, child had no major physical/medical problems at birth) and obtained contact information from mothers who agreed to be contacted for participation when their children reached eligible age. In all, 253 eligible individuals were contacted; 12 of these did not agree to be considered for the study (4.7%). The remaining 241 mothers were then followed until their child met age criteria (18 ± 2 months). Of these, 170 participated (70.5%). Seventy-one families were lost because they moved away before the children reached eligible age (18.5%), could not be located (28%), refused to participate when contacted again (8.5%), or had scheduling problems preventing participation while their children met the age criteria (45%).

Two female researchers conducted home visits in either English or Spanish (3 hours on average). Informed consent was obtained from participants (and a parent/guardian if a minor) prior to data collection. Mothers were videotaped interacting with their children and interviewed in their preferred language (70.6% English; 29.4% Spanish). Interviews were conducted using a computer assisted procedure in which each question was presented on the screen and read aloud by the researcher to control for reading level. Participants were given response cards from which they could choose numbered answers, and the researcher recorded responses. Families were compensated with \$70, a small gift for the child and received a copy of the videotaped mother-child interactions. Only questionnaire data were available for this study.

Measures

All measures were available in English and Spanish. We tested the internal consistency of each scale separately for English and Spanish respondents, and all scales showed adequate internal consistency. Table 1 contains means and standard deviations for the main study variables.

Maternal depressive symptoms—Depressive symptoms were measured using the Depression scale of the Symptom Checklist-90-R (SCL-90-R; Derogatis, 1994), a 13-item, self-report scale assessing symptoms in the past two weeks (e.g., 'in the past two weeks, how much were you distressed by feeling hopeless about the future?'). Responses range from 0 – 'not at all' to 4 – 'extremely'. Adequate reliability coefficients ($\alpha = .90$) for this scale were found in the normative sample (Derogatis, 1994) and in studies with young Latina mothers (Contreras, López et al., 1999; López & Contreras, 2005). In our sample, the internal consistency reliability of this scale was .89; and .86 and .91 for English and Spanish respondents, respectively.

Child behavior—Child internalizing and externalizing problems were measured using the Internalizing and Externalizing scales of the Child Behavior Checklist 1½ – 5 (CBCL 1½ – 5; Achenbach & Rescorla, 2000), a 99-item, parent-report measure assessing child behavior problems. Responses range from 0 – 'not true' to 2 – 'very true or often true'. Excellent

validity, internal consistency, and test-retest reliability are reported for these scales (Achenbach & Rescorla, 2000). In samples of Latino parents, the Spanish and English versions of the scales have demonstrated adequate internal consistency, test-retest reliability and concurrent validity between language versions (Gross et al., 2006; Weiss, Goebel, Page, Wilson, & Warda, 1999). In our sample, adequate reliabilities were found for both internalizing problems ($\alpha = .86$) and externalizing problems ($\alpha = .86$), and for English (internalizing $\alpha = .85$; externalizing $\alpha = .87$) and Spanish (internalizing $\alpha = .86$; externalizing $\alpha = .84$) versions. Sample means were substantially higher than those of the normative sample, and 15.3% and 20.6% of the children fell in the clinically significant range for internalizing and externalizing problems, respectively. Consistent with age norms, no gender differences were found for either scale. To maximize variability, raw scores were used in analyses.

Mother-reported partner child care involvement—Partner child care involvement during the past month was reported by mothers. Eleven items were adapted from measures of father involvement used in the ECLS-B study with samples of adult parents including Latinos (Cabrera, et al., 2004; Cabrera, Shannon, West, & Brooks-Gunn, 2006). Items assessed frequency of didactic child care (e.g., sing songs, read stories); physical play (e.g., play with toys, tease child to get him/her to laugh); and care giving (e.g., help with bath, feeding). Responses ranged from ‘0’-never to ‘6’-several times a day’. Scores from all items were averaged, providing an overall score of mother-reported partner child care involvement. Adequate internal consistency was found for the scale ($\alpha = .87$, whole sample; $\alpha = .88$, English and $\alpha = .84$, Spanish).

Perceived partner social support—Partner social support was measured using the Social Support Network Questionnaire (SSNQ; Gee & Rhodes, 2007). Participants nominated persons they perceived as available to provide emotional, tangible, cognitive guidance, positive feedback, and socializing support. An index of perceived partner support was obtained by totaling the number of support types for which mother’s perceived partners to be available. Scores on this index ranged from 0 – ‘partner perceived as unavailable to provide any type of support’ to 5 – ‘partner perceived as available to provide every type of support’. This scale showed adequate internal consistency ($\alpha = .87$, whole sample; $\alpha = .89$, English and $\alpha = .83$, Spanish). Previous studies of Latina adolescent mothers found similar reliabilities and adequate validity for this measure (Contreras, Mangelsdorf, Rhodes, Diener, & Brunson, 1999; Contreras, López, et al., 1999).

Negative life events—Negative life events were measured using a modified version of the Life Events Survey (Sarason, Johnson, & Siegel, 1978) adapted for young minority mothers (Rhodes, Ebert, & Fisher, 1992). Mothers responded to questions regarding stressful events in the last year. Responses ranged from 1 – ‘extremely negative’ to 5 – ‘extremely positive’ or 6 – ‘did not occur in the past year’. Negative event ratings were totaled and weighted such that events perceived as extremely negative carried more weight than those that were perceived as merely negative. Sarason et al. (1978) found adequate test-retest reliability for this measure, and it has also shown relations to psychological adjustment among Latina adolescent mothers (Contreras, Lopez et al., 1999).

Economic strain—Economic strain was measured using the Economic Strain Questionnaire (ESQ; Pearlin, Menaghan, Lieberman, & Mullan, 1981), a seven item, self-report measure of financial difficulties. Participants rated the usual situation in their household by responding to questions like ‘Do you feel your household is able to afford decent housing?’ with responses from ‘never’ (1) to ‘always’ (5). Items were re-coded such that higher scores reflected more strain and then averaged to create a mean score. In a study

with young AA adolescent mothers, economic strain related to psychological distress (Rhodes, Ebert, & Meyers, 1994). Adequate reliability was found in our sample ($\alpha = .81$), and English and Spanish respondents ($\alpha = .82$ and $\alpha = .82$, respectively).

Results

Overview of Analyses

Prior to running analyses, all variables were standardized to reduce collinearity. We first present analyses designed to select demographic and risk variables to include as controls in subsequent multivariate analyses. Two hierarchical multiple regressions are then described examining the link between maternal depressive symptoms and child internalizing and externalizing problems. Regressions were computed by entering control variables in the first step and depressive symptoms in the last step. Finally, mediation analyses were computed to test whether depressive symptoms mediated the relation between risk variables and child behavior problems.

We then examined partner characteristics and their associations with maternal and child functioning. First, we present a description of the partners along with analyses investigating relations between mother-reported partner, maternal, and relationship characteristics, and child care involvement. Finally, hierarchical multiple regressions examined the moderating role of partner child care. Regressions were computed by entering control variables in the first step, depressive symptoms and partner childcare in the second step, and the multiplicative interaction term for depressive symptoms and child care in the final step. Examination of Tolerance and VIF values indicated that multicollinearity was not a problem in any of the regressions.

Selection of Control Variables

Bivariate correlations examined the relations between child age, child gender, parity, mother age, education, school and work status, receipt of public assistance, negative life events, economic strain, and the two child behavior variables. Only economic strain and life events were associated with child behavior (Table 1). Based on the results, negative life events were controlled for in all analyses; and economic strain was controlled for in analyses with child internalizing problems.

Maternal Depression and Child Outcomes

Two hierarchical linear regressions tested the relations between depressive symptoms and child internalizing and externalizing problems, respectively (Table 2). In the first regression, depressive symptoms significantly related to more child internalizing problems. The addition of depressive symptoms accounted for 13.4% of the variance in the model, and neither negative life events nor economic strain remained significantly related to child internalizing problems with depressive symptoms in the model. Mediation analyses (Figure 1) indicated that depressive symptoms mediated the relation between life events and child internalizing problems. When including both negative life events and maternal symptoms in the model, the β -value for negative life events dropped from .22 to .05. Results of the Sobel Test produced a z-score of 3.26 which is greater than the critical z-value of 1.96, indicating that this drop was statistically significant. The results suggest that maternal depressive symptoms explain the statistical relation between negative life events and child internalizing problems.

In the second regression, depressive symptoms significantly related to more child externalizing problems and accounted for 9% of the variance in the model. Negative life events remained significantly related to externalizing problems when depressive symptoms

were included in the regression. Nonetheless, mediation analyses indicated that the strength of the association was significantly reduced by the presence of maternal symptoms in the model (Sobel test: $z = 3.06, p = .002$; Figure 2), suggesting that maternal depressive symptoms partially mediated the association between life events and child externalizing problems.

Role of Partner Child Care Involvement

Description of partners and partner relationships—Based on maternal report, partners mean age was 22.5 years ($SD = 4.3$; range 17 – 47). Most partners were Latino (70.4%; 18.4% AA; 6.4% EA; 4.8% other); and 54.4% were born in the mainland US (32.8% Puerto Rico; 12.8% another country). Approximately 76% were also the child's father; 19.2% of the partners were married, and most (70%) co-resided with the participants. At time of interview, partners had reached just above 11th grade on average (range: < 7th grade – partial college). Eighty-nine percent of partners were not in school; and 53.6% had full-time employment (16.8% part-time). The majority of relationships were relatively long term, with 72.8% having lasted for at least 2 years. Most partners (85.6%) were reported to engage in child care several times a week or more (range: never – 6 or more times per day), and a majority (84%) were also perceived as available to provide at least one of the types of social support.

Correlates of perceived partner child care involvement—Bivariate correlations and t-tests investigated which mother-reported partner, relationship, and maternal characteristics (described above) were related to mother-reported partner child care involvement. Partner age was significantly negatively related to partner child care involvement, such that younger partner age ($r = -.20, p = .03$) related to higher levels of mother-reported child care involvement. Longer length of relationship was significantly related to higher levels of partner child care involvement ($r = .27, p = .002$), and partners who co-resided with the participants had significantly higher mean levels of mother-reported child care involvement than those who did not ($t(123, 2) = -6.42, p < .001$). Finally, mothers who reported higher life events stress and more depressive symptoms reported less partner child care involvement ($r = -.23, p = .01$ and $r = -.23, p < .01$, respectively). No other maternal characteristics were significantly associated with partner child care involvement.

Moderating effect of mother-reported partner child care—Hierarchical linear regressions tested whether perceived partner child care involvement moderated the relations between maternal depressive symptoms and child internalizing and externalizing problems (Table 3). Regressions were computed controlling for the same risk factors as above. To better capture the unique influence of the care provided to the child, we also controlled for perceived partner social support in the first step of the regressions. We entered depressive symptoms and mother-reported partner child care in the second step followed by their multiplicative interaction term in the last step. Results of both regressions indicated that mother-reported partner child care involvement did not have a direct effect on child behavior, whereas maternal symptoms remained a significant predictor of both types of behavior problems.

Specific results for child internalizing problems indicated that the interaction term for mother-reported partner child care and depressive symptoms was significant. To interpret the interaction, we plotted the results such that child internalizing problems is on the y-axis, depressive symptoms on the x-axis, and three levels of perceived partner child care involvement are represented by three different lines (Figure 3). Following Jaccard and Turrisi (2003), the regression equation was used to calculate y-values at three levels of

depressive symptoms (−1 standard deviation (low), 0 (medium), and +1 standard deviation (high)) and three levels of partner child care (−1 SD (low), 0 (medium), and +1 SD (high)). The slopes indicate that depressive symptoms were more strongly related to child internalizing problems at lower levels of partner child care than at higher levels of partner child care involvement, indicating that mother-reported partner child care moderated the relation between maternal depressive symptoms and child internalizing problems.

Specific results for externalizing problems indicated that negative life events remained significantly related to child externalizing problems in the final step of the regression, consistent with the analyses described above. The interaction term of maternal depressive symptoms and partner child care was not significant, suggesting that mother-reported partner child care involvement did not moderate the relation between maternal depressive symptoms and child externalizing problems.

Discussion

The current study examined the relation between maternal depressive symptoms and child internalizing and externalizing problems in a sample of young Latina mothers and their toddlers. Following Contreras and collaborators' (2002) model, we considered the role of maternal symptoms in conjunction with contextual risks present in the lives of these young mothers. We found unique associations between depressive symptoms and both child internalizing and externalizing problems. Additionally, maternal depressive symptoms mediated the relations between the contextual risk factor of negative life event stress and each of the child behavior variables. Further, we sought to uncover a protective factor for the toddlers' behavioral adjustment and found that mother-reported partner child care moderated the relation between depressive symptoms and child internalizing problems, although not externalizing problems.

Regarding the first hypothesis, we replicated and extended results from the only previous study of entirely Latina adolescent mothers which found that depressive symptoms related to toddlers' display of less positive affect and more distress during mother-child interactions (Weller, et al., 2008). Although we used a maternal report measure of child behavior, it presumably reflects mothers' observations of child behavior in a range of circumstances and while interacting with others. Thus, our results suggest that maternal symptomatology is reflected in child behavior more generally, rather than solely in the context of mother-child interactions. The results also add to the existent literature documenting relations between maternal depressive symptoms and mother-reported child behavior problems in young mothers from other ethnic groups (Leadbeater & Bishop, 1994; Yoshikawa et al., 2001; Black et al., 2002). Moreover, our findings suggest that this relation emerges quite early in development – during the second year of life – and that depressive symptoms are related to both internalizing and externalizing problems in young children.

Importantly, our findings also indicate that this relation exists above and beyond contextual risk factors faced by these young families. Specifically, maternal life event stress was related to maternal depressive symptoms and child internalizing and externalizing problems. Nonetheless, maternal symptoms contributed uniquely to the prediction of both types of problems. Our analyses also indicated that maternal symptomatology mediated the link between life stress and child problems, supporting our second hypothesis. Regarding child internalizing problems specifically, mediation analyses indicated that maternal depressive symptoms fully mediated the relation between negative life events and child internalizing problems. For externalizing problems, maternal depressive symptoms served as a partial mediator of the link between negative life events and child externalizing problems, and the influence of negative life events remained significant when accounting for the effects of

maternal depressive symptoms. Although cross-sectional in nature, these findings are consistent with theories and empirical findings highlighting the role of parental functioning as a mechanism through which environmental stress impacts child functioning (Conger et al., 2002; Parke et al., 2004). The finding that life events also directly related to externalizing problems suggests that children may be directly impacted by their mothers' negative life events. This is consistent with models of parenting and child development in ethnic minority families (Contreras et al., 2002; Garcia Coll et al., 1996) that highlight the direct influence of contextual factors on children's characteristics and developmental outcomes.

In contrast to results for life events stress, mothers reported relatively low levels of economic strain, and this variable only marginally related to maternal depressive symptoms and child internalizing problems. This is surprising given the socio-economic conditions of our participants, most of which relied on public assistance and resided in low-income neighborhoods. Given that the economic strain measure we used partly reflects the subjective experience of the mothers' economic situation, it may be that mothers perceived themselves as able to cope with economic stress; and, therefore, they did not experience high levels of economic pressure.

Despite a lack of research investigating their influence, partners are commonly present in the lives of adolescent Latina mothers and their young children (Contreras, López, et al., 1999; Moore, et al., 2007; Wasserman, et al., 1994). The results from the current study are consistent with these findings as a substantial majority (73.5%) of the mothers in the larger sample reported being in a romantic relationship. In addition, our participants reported that most of the relationships (72.8%) had lasted longer than two years and the majority (70.4%) of mothers lived with their partners, indicating high levels of partner presence in the lives of our participants' children.

Due to a lack of prior research, we had no hypotheses about which partner demographic variables would relate to level of child care involvement. Consistent with findings for adult minority fathers (Cabrera et al., 2004), we found that mothers who co-resided and/or maintained longer relationships with their partners reported greater partner involvement in the care of the child. This finding makes sense as these men are likely to have more frequent and more enduring contact with the children. The finding that younger partners were reported to be more highly involved in child care is surprising. A possible explanation could be that younger partners may be less likely to have consistent employment, placing them in the home more often. Thus, they may be relied upon more often by young mothers to provide child care. Post-hoc analyses indicated that younger partners were less likely to be employed ($r = .21, p = .02$), providing some support for this explanation. Maternal demographic variables were not related to their report of partner child care, but mothers with more depressive symptoms and more life event stress reported that their partners provided less child care. Given the high-risk faced by this population and the potential for partners to impact child development, future research should continue to investigate factors associated with partners' involvement. Such factors could include relationship quality, culturally-derived notions of fathering and gender roles, relationships with family of origin, and partner characteristics such as access to resources or income.

Regarding the buffering effect, the current study results are consistent with parenting theories suggesting a protective influence of a male caregiver in the face of maternal depression (Belsky, 1984; Goodman & Gotlib, 1999), as well as with findings from the only previous study of adolescent mothers in this area (Howard et al., 2006). Using a global composite of father involvement in the family during the first several years of life, Howard and collaborators found a significant buffering effect of father involvement on child

internalizing (but not externalizing) problems among 8- to 10-year-old children of mainly AA adolescent mothers. The current study added to the literature by investigating the protective impact of partners on toddlers of Latina adolescent mothers and by providing evidence for the buffering effect even at an early age.

Consistent with the study by Howard and colleagues (2006), partner involvement did not act as a buffer for externalizing problems in our sample. Although the reasons for this are unclear, the lack of a significant moderation could be attributed to the somewhat small sample size of our study limiting the statistical power available to detect the effect for children's externalizing problems. Nonetheless, results for internalizing problems clearly suggest that at relatively higher levels of maternal depressive symptoms, mother-reported partner child care involvement appears to play a protective role for children.

Our study also attempted to isolate one of the mechanisms through which partners may have an influence. Our measure of involvement assessed specifically the partners' child care behaviors, as reported by mothers. Moreover, by controlling for a composite of partner social support, we were able to better capture the role played by the child care interactions of partners. Interestingly, mother-reported partner child care did not relate directly to child behavior, indicating that its protective influence only occurs in the context of higher depressive symptoms. Given the cross-sectional nature of our analyses, it is not clear how the buffering effect occurs. Nonetheless, the results are consistent with the view that higher levels of depressive symptoms may prompt partners to get more involved in child care. At the same time, as depressive symptoms increase, mothers may interact less with their children, in turn, increasing the level of influence of partners' interactions with the children.

Limitations and Future Directions

Despite adding to the literature in many ways, the current study also has limitations. First, since our sample included primarily Latina mothers of Puerto Rican heritage, our results cannot be generalized to other groups of Latina adolescent mothers or to those of other ethnic backgrounds. Second, we relied solely on maternal report for all variables. Although previous research has often used maternal report, reliance on one reporter may have affected the results and is a limitation of the current study. It is important to note that we controlled for maternal perceptions of partner social support in all analyses with partner child care involvement, mitigating the potential effect of bias in maternal reports. In addition, the interaction effect that we obtained suggests that our findings are not due solely to shared method variance or to participants displaying response biases. Nonetheless, future studies using observational measures or multiple reporters are needed to replicate our findings.

The cross-sectional design of the current study is another limitation as we are unable to draw conclusions about the direction of the relations found. Future research using a prospective design and independent assessments of the constructs are needed to clarify the direction of the observed associations. Future research should also investigate variables that relate to child externalizing problems, specifically. Perhaps aspects of partner involvement not assessed in the current study play an important role in buffering the development of externalizing problems in children. Similarly, in addition to depression, other types of maternal symptomatology are likely to influence child behavior. In fact, research has found elevated levels of externalizing problems among Latina adolescent mothers (Umaña-Taylor et al., 2011). Lastly, given their presence and level of involvement, it would be interesting to more broadly examine the potential influence that partners may have on other aspects of child functioning and development.

Our findings have implications for treatment and prevention efforts. First, given the strong association observed between maternal depressive symptoms and young children's

emotional and behavior problems, early detection and treatment of depression is clearly indicated. In addition, interventions aimed at increasing the adolescents' resources, their ability to cope with life stress, and their parenting skills may lower their stress and negative affect, enhance their effectiveness with children and, in turn, have a positive influence on the emotional and behavioral adjustment of their children. These efforts should also include partners in order to guide them in appropriate child care behaviors and facilitate successful co-parenting.

In sum, consistent with prior literature based primarily on adult mothers and adolescent mothers from other ethnic groups, the current study documented a significant relation between maternal depressive symptoms and child emotional and behavioral problems in young Latino families. Further, maternal symptoms partially mediated the relation between the life event stress experienced by mothers and their children's functioning. Also, mother-reported partner child care involvement emerged as a protective factor for children's internalizing problems when exposed to higher levels of maternal depressive symptoms. Given the young age of the children in our study, the findings argue for the critical need for prevention and early assessment of maternal depressive symptoms and child behavior problems in this at-risk minority population.

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References

- Achenbach, TM.; Rescola, LA. Manual for the ASEBA preschool forms and profiles. Burlington, VT: University of Vermont, Department of Psychiatry; 2000.
- Aisenberg E, Trickett PK, Mennen FE, Saltzman W, Zayas LH. Maternal depression and adolescent behavior problems: An examination of mediation among immigrant Latino mothers and their adolescent children exposed to community violence. *Journal of Interpersonal Violence*. 2007; 22(10):1227–1249.10.1177/0886260507304292 [PubMed: 17766724]
- Belsky J. The determinants of parenting: A process model. *Child Development*. 1984; 55(1):83–96.10.2307/1129836 [PubMed: 6705636]
- Black MM, Papas MA, Hussey JM, Dubowitz H, Kotch JB, Starr RH. Behavior problems among preschool children born to adolescent mothers: Effects of maternal depression and perceptions of partner relationships. *Journal of Clinical Child and Adolescent Psychology*. 2002; 31(1):16–26.10.1207/153744202753441639 [PubMed: 11845646]
- Brooks-Gunn J, Furstenberg FF. The children of adolescent mothers: Physical, academic, and psychological outcomes. *Developmental Review*. 1986; 6(3):224–251.10.1016/0273-2297(86)90013-4
- Cabrera NJ, Shannon JD, Vogel C, Tamis-LeMonda C, Ryan RM, Brooks-Gunn J, Cohen R. Low-income fathers' involvement in their toddlers' lives: Biological fathers from the Early Head Start Research and Evaluation Study. *Fathering*. 2004; 2(1):5–30.10.3149/fth.0201.5
- Cabrera NJ, Shannon JD, West J, Brooks-Gunn J. Parental interactions with Latino infants: Variation by country of origin and English proficiency. *Child Development*. 2006; 77(5):1190–1207.10.1111/j.1467-8624.2006.00928.x [PubMed: 1699792]
- Castellanos, P.; Grau, JM.; Weller, EN.; Quattlebaum, JL. The Impact of Different Types of Partner Support and Partner Strain on Psychological Distress of Latina Adolescent Mothers. Poster session presented at the semi-annual meeting of the Society for Research on Adolescence; Chicago, IL. 2008 Mar.

- Cauce, AM.; Domenech-Rodriguez, M. Latino families: Myths and realities. In: Contreras, J.; Kerns, K.; Neal-Barnett, A., editors. *Latino children and families in the United States: Current research and future directions*. Westport, CT: Praeger Publishers/Greenwood Publishing Group; 2002. p. 3-25.
- Chang JJ, Halpern CT, Kaufman JS. Maternal depressive symptoms, fathers' involvement, and the trajectories of child problem behaviors in a US national sample. *Archives of Pediatrics and Adolescent Medicine*. 2007; 161(7):697-703.10.1001/archpedi.161.7.697 [PubMed: 17606834]
- Coley RL, Morris JE. Comparing Father and Mother Reports of Father Involvement Among Low-Income Minority Families. *Journal of Marriage and Family*. 2002; 64(4):982.10.1111/j.1741-3737.2002.00982.x
- Colletta N. At risk for depression: a study of young mothers. *The Journal of Genetic Psychology*. 1983; 142:301-310. Retrieved February 9, 2011, from <http://ukpmc.ac.uk/abstract/MED/6875527>. [PubMed: 6875527]
- Conger RD, Wallace LE, Sun Y, Simons RL, McLoyd VC, Brody GH. Economic pressure in African American families: A replication and extension of the family stress model. *Developmental Psychology*. 2002; 38(2):179-193.10.1037/0012-1649.38.2.179 [PubMed: 11881755]
- Contreras JM, Lopez IR, Rivera-Mosquera ET, Raymond-Smith L, Rothstein K. Social support and adjustment among Puerto Rican adolescent mothers: The moderating effect of acculturation. *Journal of Family Psychology*. 1999; 13(2):228-243.10.1037/0893-3200.13.2.228
- Contreras JM, Mangelsdorf SC, Rhodes JE, Diener ML, Brunson L. Parent-child interaction among Latina adolescent mothers: The role of family and social support. *Journal of Research on Adolescence*. 1999; 9(4):417-439.10.1207/s15327795jra0904_3
- Contreras, JM.; Narang, D.; Ikhlas, M.; Teichman, J. A conceptual model of the determinants of parenting among Latina adolescent mothers. In: Contreras, J.; Kerns, K.; Neal-Barnett, A., editors. *Latino children and families in the United States: Current research and future directions*. Westport, CT: Praeger Publishers/Greenwood Publishing Group; 2002. p. 155-177.
- Cooley ML, Unger DG. The role of family support in determining developmental outcomes in children of teen mothers. *Child Psychiatry & Human Development*. 1991; 21(3):217-234.10.1007/BF00705907 [PubMed: 2007346]
- de Anda D, Becerra R. Social networks for adolescent mothers. *Social Casework*. 1984; 65:172-181.
- Dennis JM, Parke RD, Coltrane S, Blacher J, Borthwick-Duffy SA. Economic pressure, maternal depression, and child adjustment in Latino families: An exploratory study. *Journal of Family and Economic Issues*. 2003; 24(2):183-202.10.1023/A:1023706424725
- Derogatis, L. *SCL-90-R Administration, scoring and procedures manual*. Minneapolis, MN: Author; 1994.
- Downey G, Coyne JC. Children of depressed parents: An integrative review. *Psychological Bulletin*. 1990; 108(1):50-76.10.1037/0033-2909.108.1.50 [PubMed: 2200073]
- Furstenberg, FF.; Harris, KM. When fathers matter/why fathers matter: The impact of paternal involvement on the offspring of adolescent mothers. In: Lawson, A.; Rhode, DL., editors. *The Politics of Pregnancy: Adolescent Sexuality and Public Policy*. New Haven, CT: Yale University Press; 1993. p. 189-215.
- García Coll CT, Lamberty G, Jenkins R, McAdoo HP, Crnic K, Wasik BH, Vázquez Garcia H. An integrative model for the study of developmental competencies in minority children. *Child Development*. 1996; 67(5):1891-1914.10.1111/j.1467-8624.1996.tb01834.x [PubMed: 9022222]
- Gee CB, Rhodes JE. A social support and social strain measure for minority adolescent mothers: A confirmatory factor analytic study. *Child: Care, Health, and Development*. 2007; 34(1):87-97.10.1111/j.1365-2214.2007.00754.x
- Goodman SH, Gotlib IH. Risk for psychopathology in the children of depressed mothers: A developmental model for understanding mechanisms of transmission. *Psychological Review*. 1999; 106:458-490. [PubMed: 10467895]
- Grau, JM. *Maternal Behavior among Puerto Rican Adolescent Mother: Final Progress Report*, R01HD046554. Kent State University; 2011. Unpublished Manuscript
- Grau, JM.; Wilson, KS.; Weller, EN.; Castellanos, P.; Duran, PA. Adolescent Parenting: Risk and Protective Factors in the Context of Poverty. In: Maholmes, V.; King, RB., editors. *The Oxford Handbook of Poverty and Child Development*. New York, NY: Oxford University Press; 2011.

- Gross D, Fogg L, Young M, Ridge A, Cowell JM, Richardson R, Sivan A. The equivalence of the Child Behavior Checklist/1 1/2–5 across parent race/ethnicity, income level, and language. *Psychological Assessment*. 2006; 18(3):313–323.10.1037/1040-3590.18.3.313 [PubMed: 16953734]
- Hoffman, SD.; Maynard, RA. The costs of adolescent childbearing. In: Hoffman, SD.; Maynard, RA., editors. *Kids having kids: Economic costs and social consequences of teen pregnancy*. 2. Washington D.C: The Urban Institute; 2008. p. 359-402.
- Howard KS, Lefever JEB, Borkowski JG, Whitman TL. Fathers' influence in the lives of children with adolescent mothers. *Journal of Family Psychology*. 2006; 20(3):468–476.10.1037/0893-3200.20.3.468 [PubMed: 16938005]
- Hubbs-Tait L, Osofsky JD, Hann DM, Culp AM. Predicting behavior problems and social competence in children of adolescent mothers. *Family Relations*. 1994; 43(4):439–446.10.2307/585376
- Jaccard, J.; Turrisi, R. *Interaction effects in multiple regression*. 2. Thousand Oakes, CA: Sage; 2003.
- Lamb, ME.; Pleck, JH.; Charnov, EL.; Levine, JA. A biosocial perspective on paternal care and involvement. In: Lancaster, JB.; Altmann, J.; Rossi, A.; Sherrod, L., editors. *Parenting Across the Lifespan: Biosocial Perspectives*. Chicago, IL: Aldine; 1987. p. 111-142.
- Leadbeater BJ, Bishop SJ. Predictors of behavior problems in preschool children of inner-city Afro-American and Puerto Rican adolescent mothers. *Child Development*. 1994; 65(2):638–648.10.1111/j.1467-8624.1994.tb00773.x [PubMed: 8013244]
- Leadbeater BJ, Bishop SJ, Raver CC. Quality of mother–toddler interactions, maternal depressive symptoms, and behavior problems in preschoolers of adolescent mothers. *Developmental Psychology*. 1996; 32(2):280–288.10.1037/0012-1649.32.2.280
- Lopez IR, Contreras JM. The best of both worlds: Biculturalism, acculturation, and adjustment among young mainland Puerto Rican mothers. *Journal of Cross-Cultural Psychology*. 2005; 36(2):192–208.10.1177/0022022104272901
- Malik NM, Boris NW, Heller SS, Harden BJ, Squires J, Chazan-Cohen R, Kaczynski KJ. Risk for maternal depression and child aggression in Early Head Start families: A test of ecological models. *Infant Mental Health Journal*. 2007; 28(2):171–191.10.1002/imhj.20128
- Martin JA, Hamilton BE, Sutton PD, Ventura M, Mathews T, Osterman MJK. Births: Final Data for 2008. National vital statistics reports. 2010; 59(1) Retrieved February 9, 2011, from http://suprior-surrogacy.com/nchs/data/nvsr/nvsr59/nvsr59_01.pdf.
- Mezulis AH, Hyde JS, Clark R. Father involvement moderates the effect of maternal depression during a child's infancy on child behavior problems in kindergarten. *Journal of Family Psychology*. 2004; 18(4):575–588.10.1037/0893-3200.18.4.575 [PubMed: 15598163]
- Moore DR, Florsheim P, Butner J. Interpersonal behavior, psychopathology, and relationship outcomes among adolescent mothers and their partners. *Journal of Clinical Child and Adolescent Psychology*. 2007; 36(4):541–556.10.1080/15374410701662709 [PubMed: 18088213]
- Moore, KA.; Hofferth, SL.; Wertheimer, RG.; Waite, LJ.; Caldwell, SB. Teenage childbearing: Consequences of women, families, and government welfare expenditures. In: Scott, KG.; Field, T.; Robertson, EG., editors. *Teenage Parents and Their Offspring*. New York, NY: Grune and Stratton; 1981.
- Moore, MR.; Brooks-Gunn, J. Adolescent parenthood. In: Bornstein, MH., editor. *Handbook of parenting: Being and becoming a parent*. Vol. 3. Mahwah, NJ: Lawrence Earlbaum Associates, Publishers; 2002. p. 173-214.
- Nadeem E, Whaley SE, Anthony S. Characterizing low-income Latina adolescent mothers: living arrangements, psychological adjustment, and use of services. *The Journal of Adolescent Health*. 2006; 38(1):68–71.10.1016/j.jadohealth.2005.01.013 [PubMed: 16387255]
- Pachter LM, Auinger P, Palmer R, Weitzman M. Do parenting and the home environment, maternal depression, neighborhood, and chronic poverty affect child behavioral problems differently in different racial-ethnic groups? *Pediatrics*. 2006; 117(4):1329–1338.10.1542/peds.2005-1784 [PubMed: 16585331]
- Parke RD, Coltrane S, Duffy S, Buriel R, Dennis J, Powers J, Widaman KF. Economic stress, parenting, and child adjustment in Mexican American and European American families. *Child Development*. 2004; 75(6):1632–1656.10.1111/j.1467-8624.2004.00807.x [PubMed: 15566370]

- Pearlin LI, Menaghan EG, Lieberman MA, Mullan JT. The stress process. *Journal of Health and Social Behavior*. 1981; 22(4):337–356. JSTOR. Retrieved February 9, 2011, from <http://www.jstor.org/stable/2136676>. [PubMed: 7320473]
- Rhodes JE, Ebert L, Fischer K. Natural mentors: An overlooked resource in the social networks of young, African American mothers. *American Journal of Community Psychology*. 1992; 20(4): 445–461.10.1007/BF00937754
- Rhodes JE, Ebert L, Meyers AB. Social support, relationship problems and the psychological functioning of young African-American mothers. *Journal of Social and Personal Relationships*. 1994; 11(4):587–599.10.1177/0265407594114006
- Rhule DM, McMahon RJ, Spieker SJ, Munson JA. Positive adjustment and associated protective factors in children of adolescent mothers. *Journal of Child and Family Studies*. 2006; 15(2):231–251.10.1007/s10826-005-9015-8
- Sarason IG, Johnson JH, Siegel JM. Assessing the impact of life changes: Development of the Life Experiences Survey. *Journal of Consulting and Clinical Psychology*. 1978; 46(5):932–946. [PubMed: 701572]
- Spieker SJ, Larson NC, Lewis SM, Keller TE, Gilchrist L. Developmental trajectories of disruptive behavior problems in preschool children of adolescent mothers. *Child Development*. 1999; 70(2): 443–458.10.1111/1467-8624.00032 [PubMed: 10218265]
- Umaña-Taylor AJ, Updegraff KA, Gonzales-Bracken MA. Mexican-Origin Adolescent Mothers' Stressors and Psychosocial Functioning: Examining Ethnic Identity Affirmation and Familism as Moderators. *Journal of Youth and Adolescence*. 2011; 40(2):140.10.1007/s10964-010-9511-z [PubMed: 20148359]
- Wasserman, GA.; Brunelli, SA.; Rauh, VA.; Alvarado, LE. The cultural context of adolescent childrearing in three groups of urban minority mothers. In: Lamberty, G.; García Coll, CT., editors. *Puerto Rican Women and Children: Issues in Health, Growth, and Development*. New York, NY: Plenum Press; 1994. p. 137-160.
- Weiss SJ, Goebel P, Page A, Wilson P, Warda M. The impact of cultural and familial context on behavioral and emotional problems of preschool Latino children. *Child Psychiatry & Human Development*. 1999; 29(4):287–301. [PubMed: 10422353]
- Weller, EN.; Grau, JM.; Quattlebaum, JL.; Castellanos, P. Effects of child care support on the relation between Latina adolescent mothers' depressive symptoms and child outcomes. Poster session presented at the semi-annual meeting of the Society for Research on Adolescence; Chicago, IL. 2008 Mar.
- Yoshikawa H, Rosman EA, Hsueh J. Variation in teenage mothers' experiences of child care and other components of welfare reform: Selection processes and developmental consequences. *Child Development*. 2001; 72(1):299–317.10.1111/1467-8624.00280 [PubMed: 11280486]
- Zahn-Waxler, C.; Duggal, S.; Gruber, R. Parental psychopathology. *Handbook of parenting volume 4: Social Conditions and Applied Parenting*. 2. Mahwah, NJ: Lawrence Earlbaum Associates; 2002.

Figure 1.

Relation between Negative Life Events and Child Internalizing Problems Mediated by Maternal Depressive Symptoms controlling for Economic Strain.

Note. β -value in parentheses represents the relation when Maternal Depressive Symptoms was included in the regression model.

Figure 2.

Relation between Negative Life Events and Child Externalizing Problems Mediated by Maternal Depressive Symptoms.

Note. β -value in parentheses represents the relation when Maternal Depressive Symptoms was included in the regression model.

Figure 3.
 Partner Child Care Moderates Relation Between Maternal Depressive Symptoms and Child Internalizing Problems.
Note. PCC = Partner Child Care

Bivariate Correlations Among Maternal Depressive Symptoms, Child Internalizing, Child Externalizing, Perceived Child Care, and Partner Social Support.

Table 1

	Mean (SD)	1	2	3	4	5	6	7
1. Maternal Depressive Symptoms	.69 (.65)	—	.44***	.44***	-.23**	-.28**	.42***	.15†
2. Child Internalizing	11.96 (7.51)	—	—	.57***	-.06	-.19*	.22*	.17†
3. Child Externalizing	19.81 (7.82)	—	—	—	-.07	-.11	.40***	-.001
4. Partner Child Care	3.91 (1.32)	—	—	—	—	.38***	-.23**	-.08
5. Partner Social Support	3.36 (1.86)	—	—	—	—	—	-.13	-.06
6. Negative Life Events	3.78 (3.30)	—	—	—	—	—	—	.02
7. Economic Strain	1.93 (.61)	—	—	—	—	—	—	—

Note.
† *p* .10,
* *p* .05;
** *p* .01;
*** *p* .001

Hierarchical Linear Regression Analyses Predicting Child Internalizing and Child Externalizing Problems From Maternal Depressive Symptoms.

Table 2

Variable	Child Internalizing			Child Externalizing		
	R ² Δ	β	Final β	R ² Δ	β	Final β
Step 1: Control Variables	.08**			.16**		
Negative Life Events		.22*	.05		.40***	.26**
Economic Strain		.15†	.11		—	—
Step 2: Predictor Variable	.13***			.09***		
Maternal Depressive Symptoms			.41***			.33***

Note.

† $p < .10$,
* $p < .05$,
** $p < .01$,
*** $p < .001$

Table 3
Hierarchical Linear Regression Analyses Predicting Child Internalizing and Child Externalizing Problems.

Variable	Child Internalizing			Child Externalizing		
	R ² Δ	β	Final β	R ² Δ	β	Final β
Step 1: Control Variables	.10**			.16***		
Negative Life Events		.20*	.08		.39***	.27**
Economic Strain		.16 [†]	.11		—	—
Perceived Partner Social Support		-.15 [†]	-.09		-.06	-.01
Step 2: Predictor Variables	.12***			.09***		
Maternal Depressive Symptoms		.40***	.43***		.34***	.34***
Perceived Partner Child Care		.08	.11		.07	.07
Step 3: Interaction Term	.04*			.00		
MDS x PPCC			-.21*			-.01

Note. MDS = Maternal Depressive Symptoms, PPCC = Perceived Partner Child Care

[†] p .10,

* p < .05,

** p .01,

*** p .001