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A Longitudinal Examination of Support, Self-esteem, and Mexican-origin Adolescent Mothers' Parenting Efficacy

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Abstract

Guided by a risk and resilience framework, this study used a prospective longitudinal, multiple-reporter design to examine how social support from a mother figure during pregnancy interacted with Mexican-origin adolescent mothers' self-esteem to inform their parenting efficacy when their children were 10 months old. Using reports of perceived social support by adolescent mothers (M_{age} = 16.24, *SD* =099) and their mother figures (M_{age} = 40.84, *SD* = 7.04) in 205 dyads, and controlling for demographic factors (i.e., adolescent age, adolescent nativity, family income, mothers' educational attainment, adolescent-mother coresidence) and adolescents' social support from a significant other, findings indicated that social support during pregnancy was positively associated with adolescent mothers' future parenting efficacy when adolescent mothers had relatively lower self-esteem. Findings were consistent for adolescents' and mothers' reports, and emphasize the value of social support from a mother figure among adolescent mothers with lower self-esteem. Implications for interventions are presented.

Keywords

adolescent mothers; Latino; Mexican-origin; parenting efficacy; social support

Parenting efficacy generally refers to individuals' beliefs about their competence as a parent and, specifically, their ability to positively influence the behavior and development of their children (Coleman & Karraker, 2000). It is particularly worthy of study because of its positive association with mothers' parenting competence (see Jones & Prinz, 2005, for a review) and with child adjustment (e.g., Scaramella, Sohr-Preston, Callahan, & Mirabile, 2008). As such, understanding factors that promote maternal efficacy has significant implications for prevention work. Because children of adolescent mothers are at disproportionate risk for maladjustment (Black, Papas, Hussey, Dubowitz, Kotch, & Starr, 2002), it is important to identify factors that may promote parenting efficacy among adolescent mothers. In fact, scholars suggest that parents who are unusually burdened (e.g., adolescent mothers) need to build their personal competence to be effective parents in the face of persistent stress (Coleman, Trent, Bryan, King, Rogers, & Nazir, 2002). Because (a) Mexican-origin adolescent females have the highest birthrate of all ethnic groups in the U.S. (National Vital Statistics Report, 2007), (b) Mexican-origin female adolescents are at increased risk for poorer mental health than their counterparts from other ethnic groups (Joiner et al., 2001), and (c) adolescent mothers and their children are at high risk for maladjustment (Holcombe, Peterson, & Manlove, 2009), a focus on the parenting efficacy of Mexican-origin adolescent mothers is important. Thus, the current study examined factors that promoted Mexican-origin adolescent mothers' parenting efficacy.

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The Importance of Understanding Adolescent Mothers' Parenting Efficacy

Bandura's (1977) theoretical work underscores the prominent role of cognitive processes, such as one's efficacy beliefs, in behavior patterns. Self-efficacy involves one's expectations that one can successfully execute certain behaviors (Bandura, 1977). One's expectations affect not only the initiation of a behavior, but one's persistence at the task at hand. According to Bandura, efficacy expectations determine how much effort individuals will expend and how long they will persist in a task in the face of obstacles or adverse experiences (Bandura, 1977). Thus, a focus on parenting efficacy is particularly pertinent to adolescent mothers who experience challenges and unique stressors during the early transition to parenthood (Trad, 1995).

A large body of work has documented the benefits of perceiving oneself to be an efficacious parent and the risks of low perceived parenting efficacy. For example, findings suggest that mothers who report lower parenting efficacy are at greater risk for parenting stress (Reece & Harkless, 1998), display less positive parenting (e.g., Crnic, Gaze, & Hoffman, 2005), and have children with higher levels of problem behaviors (Scaramella et al., 2008). Although most work has focused on European American adult mothers, support for these associations has emerged in studies of Latina (MacPhee, Fritz, & Miller-Heyl, 1996) and Mexican-origin adult mothers (Izzo, Weiss, Shanahan, & Rodriguez-Brown, 2000; Machida, Taylor, & Kim, 2002).

Far less research exists on the benefits of parenting efficacy for adolescent mothers (East & Felice, 1996; Knoche, Givens, & Sheridan, 2006), although a few studies have found parenting efficacy to be associated with positive outcomes among ethnically diverse samples of adolescent mothers (e.g., Knoche et al., 2007). Given the at-risk nature of children born to adolescent mothers (Holcombe et al., 2009) and that these risks could be reduced by promoting a more effective parenting context (Spieker, Larson, Lewis, Keller, & Gilchrist, 1999), it is important to uncover factors that promote parenting efficacy among Mexican-origin adolescent mothers who have the highest rate of adolescent pregnancy in the U.S.

Social Support and Parenting Efficacy

In an effort to understand factors that promote parenting efficacy among adolescent mothers, we focus on social support within the family, given that family is an important developmental context for youth (Gavazzi, 2011), and especially for adolescent mothers (Kalil & Danziger, 2000). The support that adolescent mothers receive from their mothers may contribute to their parenting efficacy because this support could be interpreted as the family's belief in the adolescent's ability to parent her young child. Social support has been identified as a unique factor that may promote positive outcomes among Latina adolescent mothers (Contreras, Narang, Ikhlas, & Teichman, 2002). Social support is a multifaceted construct that can encompass emotional support, informational assistance, and tangible or instrumental assistance such as financial support (e.g., Gee & Rhodes, 2008; Letourneau, Stewart, & Barnfather, 2004).

Social support can come from many sources (e.g., professionals, family; Letourneau et al., 2004). Our focus on social support from a mother figure is important for Mexican-origin adolescent mothers for several reasons. First, support from family is a key feature of Mexican culture (Baca Zinn & Pok, 2002; Cauce & Domenech-Rodríguez, 2002), particularly given the strong endorsement of familism values that emphasize interdependence and obligations among family members (Perez & Padilla, 2000; Rodriguez, Mira, Paez, & Myers, 2007). Furthermore, the vast majority of adolescent mothers in the U.S. are single parents (Boonstra, 2002) who rely heavily on support from their own mothers as they negotiate the transitional stresses of early parenthood (Brooks-Gunn &

Chase-Lansdale, 1995). Thus, for Mexican-origin adolescent mothers, a key feature of the environment is support from their mother figure. Because much of the prior work has focused on adult mothers, and the limited research with adolescent mothers has not been specific to Mexican-origin adolescents, the current study fills an important gap.

Empirical work with adolescent mothers suggests that the association between social support and adolescent mothers' outcomes is complex. Specifically, social support has been positively associated with adolescent mothers' well-being (e.g., Stevenson, Maton, & Teti, 1999) but has also been linked with poorer parenting outcomes (e.g., Oyserman, Radin & Saltz, 1994; Spieker & Bensley, 1994). Thus, the benefits of social support are equivocal, and scholars note that individual and contextual factors must be considered to understand how social support informs adolescent mothers' outcomes (Hans & Thullen, 2009).

Specific to parenting efficacy, some suggest that the association between social support and parenting behaviors is largely indirect via parenting efficacy. For example, in a study of Mexican-origin adult mothers, findings indicated that the association between social support and mothers' parenting behaviors was fully mediated by mothers' parenting efficacy (Izzo et al., 2000). Similarly, with a diverse ethnic sample that included adult Latina mothers, parenting efficacy mediated the association between social support and parenting behaviors (MacPhee et al., 1996). Thus, social support has emerged as an important predictor of parenting behaviors, and this association may be driven by its impact on parenting efficacy.

Though the abovementioned work is based largely on adult mothers, a few studies have demonstrated that social support is positively associated with adolescent mothers' parenting efficacy (East & Felice, 1996; Shapiro & Mangelsdorf, 1994). As such, in line with a risk and resilience perspective, which suggests that resources can promote adjustment in the face of adverse experiences (Masten & Coatsworth, 1998; Rutter, 1987), we examined social support from a mother figure during pregnancy as a resource that, when present, may positively inform adolescent mothers' parenting efficacy. In addition, as introduced below, because self-esteem has been specifically identified as a fundamental resource that fosters youth competence (Masten & Coatsworth, 1998), we also examined whether self-esteem would interact with social support to inform adolescent mothers' parenting efficacy.

The Protective Function of Self-esteem among Adolescent Mothers

Studies have documented that when social support from family is high, maternal adjustment will be better and, conversely, when social support is low, adolescent mothers may be at risk for maladjustment (e.g., Reid & Meadows-Oliver, 2007; Sieger & Renk, 2007). However, personal resources, such as high self-esteem, could minimize the negative impact of low levels of support. Consistent with a resilience framework, self-esteem may attenuate the risk that low social support may pose for adolescent mothers' parenting efficacy. Given that these young women rely heavily on their mothers for support (Brooks-Gunn & Chase-Lansdale, 1995), it is important to uncover protective mechanisms for those who may lack social support from a mother figure. We focus on self-esteem because it has been identified as a fundamental resource for optimal youth development (Masten & Coatsworth, 1998). Relative to the construct of parenting efficacy, self-esteem captures a global evaluation of the self, and global feelings of worth have been found to generalize across contexts such that high self-esteem has been associated with greater perceived parenting efficacy (Leerkes & Crockenberg, 2002).

Indeed, adolescent mothers' self-esteem has been identified as a significant predictor of their parenting competence (Hurlbut, Culp, Jambunathan, & Butler, 1997; Mercer & Ferketich, 1990). Because self-esteem has been documented to minimize the negative effects of risk factors on youth adjustment (e.g., Masten & Coatsworth, 1998), it is possible that having

high self-esteem may buffer the negative impact of low social support on adolescent mothers' parenting efficacy. Thus, adolescent mothers with high self-esteem may demonstrate high levels of parenting efficacy irrespective of the social support they receive from their mothers; those with low self-esteem, however, may rely heavily on the social support provided by their mothers to inform their parenting efficacy. As such, we hypothesized that the positive association between social support and parenting efficacy would be stronger among those with lower self-esteem.

The Current Study

Using a prospective longitudinal design, we examined how Mexican-origin adolescent mothers' social support from a mother figure during their last trimester of pregnancy interacted with adolescent mothers' self-esteem to inform their parenting efficacy when their child was 10 months of age. We hypothesized that social support would be positively associated with adolescent mothers' parenting efficacy, and that this association would be significantly stronger when adolescent mothers reported relatively lower, as compared to higher, levels of self-esteem. Further, we extended previous work by including important individual and contextual variables (Hans & Thullen, 2009) as controls in our model.

Background factors included as control variables included: adolescent nativity to account for variability in parenting beliefs as a function of Mexican-origin mothers' cultural exposure (e.g., Gutierrez & Sameroff, 1990); adolescent age to control for the considerable cognitive changes that take place during the developmental period of adolescence (Keating, 2004); family income and mothers' educational attainment to account for prior work noting a negative association between economic strain and parenting efficacy (Scaramella et al., 2008); and mother-adolescent coresidence because prior work shows that coresidence introduced variability into the association between social support and adolescents' parenting behaviors (Contreras, 2004). We also controlled for social support from the adolescent's significant other, given that work with adolescent mothers has noted the important role that a partner can play in adolescents' functioning (Contreras, 2004). Finally, we controlled for expected parenting self-efficacy during pregnancy, which captures how competent mothers think they will be in the role of parent with the newborn. Although this construct represents mothers' generalized feelings of self-efficacy informed by experiences that do not involve the newborn, prior work (e.g., Porter & Hsu, 2003) has found it to be strongly associated with postpartum parenting self-efficacy. As such, controlling for expected parenting efficacy enabled us to examine how social support and self-esteem are associated with perceived self-efficacy based exclusively on experiences with the newborn.

The current study makes a significant contribution by focusing on risk and protective mechanisms among the largest ethnic population of adolescent mothers in the U.S. Further, by including multiple reporters we are able to examine this process from both adolescent mothers' and mother figures' perspectives, which is a strength given that associations in prior studies have sometimes varied when different reporters' accounts (i.e., child/adolescent versus parent report) are examined (e.g., Pasch, Deardorff, Tschann, Flores, Penilla, & Pantoja, 2006).

Method

Participants

Data for the current study came from an ongoing longitudinal study of 205 Mexican-origin adolescent mothers, their mother figures, and their infants (Umaña-Taylor, Updegraff, White, Herzog, Pflieger, & Madden-Derdich, 2011). Of 305 adolescent mothers who we recruited for participation, 15% (n = 45) were ineligible. Of those who were ineligible, 51%

were not pregnant (n = 23); 27% were not between 15–18 years of age (n = 12); 8% did not have a mother figure willing to participate (n = 4); 7% were not of Mexican origin (n = 3); and 7% were married (n = 3). Of those eligible to participate (n = 260), 15% declined (n = 39) and 5% (n = 14) were not reachable for scheduling or interviews after multiple attempts. Mother figures included adult female family members such as adolescents' biological mothers (87.4%), grandmothers (3.4%), aunts (1.9%), older sisters (.5%), and other kin (6.7%). Among participating dyads, 87% coresided at the inception of the study.

The current study included data from Waves 1 (W1) and 2 (W2) of the larger study, gathered between the years 2007 and 2009. At W1, adolescents were 16.24 years old (SD = .99), on average, and 64.4% reported being born in the U.S. Among the 35.6% born in Mexico, years living in the U.S. ranged from less than 1 year to 18 years (M = 7.79, SD = 4.60). More than half (i.e., 58.5%) of adolescents were enrolled in school at W1. In W2, 38.0% of adolescents were enrolled in school, 17.4% had graduated from high school or earned a GED, 40.5% had dropped out of school, and 4.9% had missing data. For adolescents who reported being financially supported by their parent(s), mean household income (including mother's annual income, monetary support from any other household member, as well as financial public assistance and/or food stamps) was $27,857 ($SD$ = $20,723; range = $94 – $114,000). For those who reported that they were not supported by their parent(s), mean hourly wages ranged from $5.25 to $10 ($M$ = $7.29, SD = 1.47).

At W1, mother figures were 40.84 years old (SD = 7.04) on average, and reported an average education level of 9th grade (i.e., 9 years of formal schooling; SD = 3.32 years), with a range from one year of formal education to 18 years (i.e., a master's degree). Most mother figures were born outside of the United States (68.3%), and years living in the United States ranged from less than 1 year to more than 66 years (M = 23.32, SD = 14.78).

Procedure

To participate, adolescents had to be of Mexican-origin, between the ages of 15 and 18 years, and unmarried; in addition, adolescents had to have a mother figure that was willing to participate with them in the study. For ease of discussion, mother figures are referred to as mothers. Adolescents were recruited during their third trimester of pregnancy (W1) from high schools, health centers, and community resource centers in a Southwestern metropolitan area. Parental consent and youth assent were obtained for participants who were younger than 18 years old, and informed consent was obtained for those 18 years and older. W2 data were collected from adolescents and mothers when the adolescent's child was 10 months old (M = 10.13 months; SD = .22 months). Of the 205 dyads who participated in W1, for 197 dyads, at least one member of the dyad participated in W2, reflecting a family-level retention rate of 96%. At the individual level, 196 adolescents and 184 mothers were retained at W2, reflecting retention rates of 96% and 90%, respectively. Independent samples t-tests (equal variances not assumed) for continuous variables and chi-square analyses for dichotomous variables indicated no significant differences between dyads who participated at W2 and those who did not on all study variables (all ps > .05).

In-home semi-structured interviews were conducted by a female interviewer and lasted approximately 2.5 hours. Each participant received $25 for participation in W1, and $30 for W2. Interviews were conducted in participants' language of preference (e.g., English or Spanish); 61.5% of adolescents and 30.7% of mothers completed interviews in English. Following translation procedures outlined in Knight, Roosa, and Umaña-Taylor (2009), all measures were translated, back translated, and discrepancies reviewed by a bilingual team of translators that included an individual of Mexican origin. Independent samples t-tests indicated no significant differences between those who completed measures in English

versus Spanish on any of the independent or dependent variables in the study (*p*-values all > .05).

Measures

Social Support from Mother (W1)—Adolescents' and mothers' reports of social support were measured using the Global Support from Mother Figure during Pregnancy Scale (GSMF-P; Umaña-Taylor et al., 2011). The GSMF-P is a 6-item measure that assesses perceptions of how much social support is received by the adolescent from her mother (i.e., adolescent report) and how much social support mothers provide to their adolescent (i.e., mother report). The GSMF-P taps into three key dimensions of social support: emotional, tangible/instrumental, and informational/cognitive guidance. Participants are asked to think about the last six months and respond to questions (e.g., adolescent report- "My mom provides helpful information about pregnancy," and mother report- "I give [Adolescent name] helpful information about pregnancy") using a five-point Likert-type scale with responses ranging from 1 (*not at all*) to 5 (*very much*). Four of the six items are specific to pregnancy, and scores are averaged across the six items with higher scores indicating higher levels of support for adolescents. The GSMF-P has shown evidence of measurement equivalence across reporters (i.e., mothers and adolescents) and across Spanish and English versions of the scale; furthermore, initial support for its construct validity emerged via its positive association with the family subscale of Zimet and colleagues' (1988) Multidimensional Scale of Perceived Social Support (Umaña-Taylor et al., 2011). In the current study, Cronbach's alphas for adolescents' perceptions of social support at W1 were .91 (English) and .93 (Spanish); and alphas for mothers' perceptions were .84 (English) and .85 (Spanish).

Adolescent Self-Esteem (W1)—Adolescents' self-esteem was assessed with Rosenberg's (1979) Self-Esteem Scale. The ten items (e.g., "I take a positive attitude toward myself") were scored on a 4-point scale (1 = *strongly disagree,* 4 = *strongly agree*). Validity and reliability of this scale has been demonstrated with Latino adolescents in prior work (e.g., Umaña-Taylor, Gonzales-Backen, & Guimond, 2009). Alphas were .83 (English) and .71 (Spanish).

Adolescent Parenting Efficacy (W1, W2)—The 25-item Prenatal Parental Expectations Survey (Reece, 1993; Reece & Harkless, 1998) was used to assess adolescents' and mothers' perceptions of adolescents' parenting self-efficacy at W1 when adolescents were in their third trimester (i.e., expected efficacy), and at W2 when the adolescent's child was approximately 10 months old (i.e., perceived efficacy). Respondents were asked to think about the past year and respond on a five-point Likert-type scale with responses ranging from 1 (*not at all sure*) to 5 (*very sure*). Items included statements modified for either pregnancy (W1) or parenthood (W2); for example, adolescents responded to statements such as "I will be able to manage the feeding of my baby" (W1) or "I can manage the feeding of my baby" (W2). Mothers responded to items phrased in reference to their beliefs about adolescents (e.g., "[Adolescent name] will be able to manage the feeding of her baby" - W1, or "[Adolescent name] can manage the feeding of her baby" - W2). Higher scores reflected higher levels of expected (W1) or perceived (W2) parenting efficacy. In prior work, alpha coefficients of .92 and .97 have been reported for prenatal and postpartum versions of the measure, respectively (Reece & Harkless, 1998). Cronbach's alphas in the current study for adolescents' reports at W1 were .91 (English) and.94 (Spanish); and for adolescents' reports at W2 alphas were .86 (English) and .91 (Spanish). For mothers' reports at W1, alphas were .92 (English) and .96 (Spanish); and at W2 alphas for mothers' reports were .93 (English) and .95 (Spanish).

Adolescent Support from Significant Other (W1)—The significant other subscale of the Multidimensional Scale of Perceived Social Support (MSPSS; Zimet, Dahlem, Zimet, & Farley, 1988) assessed adolescent mothers' perceptions of social support from a significant other. The 4 items (e.g., "There is a special person in my life who cares about my feelings") were scored on a 7-point Likert scale ranging from *Strongly Disagree* (1) to *Strongly Agree* (7). Evidence of reliability and validity has been documented in previous work with Mexican-origin adolescents (e.g., Edwards, 2004). In this study Cronbach's alpha was .96 (English) and .91 (Spanish) at W1.

Results

Descriptive Statistics

Means, standard deviations, and correlations among study variables are presented in Table 1. Correlations between adolescent nativity (0 = Mexico born, 1 = U.S. born) and key study variables suggested that being born in the U.S. was associated with higher levels of adolescent-reported expected parenting efficacy (W1) and perceived parenting efficacy (W2), as well as mother-reported expected parenting efficacy (W1). These correlations represented small to medium effect sizes according to Cohen's (1992) conventions (r) of 0.10, .30, and .50 or greater, for small, medium, and large effect sizes, respectively.

Within-reporter correlations on key study variables suggested a positive relation between adolescents' expected parenting efficacy at W1 and perceived parenting efficacy at W2 for both adolescents' and mothers' reports, with all representing large effect sizes. Positive correlations also emerged between adolescent- and mother-reported social support and their reports of expected (W1) and perceived (W2) parenting efficacy, and between adolescent-reported social support and self-esteem at W1; these represented small effect sizes. Self-esteem at W1 was also positively related to adolescent-reported expected (W1) and perceived (W2) parenting efficacy, representing moderate effect sizes.

Across reporters and within waves, mothers' and adolescents' reports of expected (W1) and perceived (W2) parenting efficacy were positively related to one another, representing small to moderate effect sizes. There was also evidence of consistency across reporters, with adolescent reports of support being positively associated with mother reports of support, representing a moderate effect size.

Finally, means for key study variables generally mirrored those in other studies. For example, the mean for adolescents' self-esteem (i.e., $M = 3.23$, $SD = .45$) was comparable, though slightly higher, to the mean in a similarly-aged sample of Latina adolescents ($M = 3.00$, $SD = .53$; Umaña-Taylor, Gonzales-Backen, & Guimond, 2009). In addition, adolescent mothers in the current study scored on the upper end of the scale of expected and perceived parenting efficacy (coefficient of variation = .12 and .09, respectively), similar to a sample of adult new mothers (coefficient of variation = .08; Reece & Harkless, 1998). Further, mean-level comparisons of expected (W1) and perceived (W2) parenting efficacy indicated that reports of expected efficacy (W1) were significantly higher than reports of perceived efficacy (W2) for both adolescents [$t(192) = 5.70$, $p < .001$] and mothers [$t(184) = 6.39$, $p < .001$], resonating with prior work in which adolescents' expectations about caring for themselves and their infants exceeded their actual experiences across the transition to parenthood (Ford, Hoyer, Weglicki, Kershaw, Shram, & Jacobson, 2001).

Examining Self-esteem as a Moderator of Social Support and Parent Efficacy

Our hypothesized model (Figure 1) was tested via path analysis within a structural equation modeling framework using Mplus 6.1 (Muthén & Muthén, 2010). Exogenous variables were

allowed to covary, and criteria for acceptable model fit included a non-significant chi square and values greater than .90 for the comparative fit index (CFI) and at or below .08 for the standardized root mean square residual (SRMR; Hu & Bentler, 1999). Missing data were handled using full information maximum likelihood (FIML), which estimates missing data using observations with complete and incomplete data. Control variables included: adolescent age, adolescent nativity (0 = Mexico born, 1 = U.S. born), adolescent-reported support from a significant other, coresidence status of the dyad (0 = did not coreside, 1 = coresided), mother-reported annual family income (with square root transformation to address significant kurtosis), mother educational attainment, and adolescent and mother reports of expected efficacy (W1).

Results indicated that adolescents' and mothers' reports of social support at W1 interacted with adolescents' reports of self-esteem in similar ways to predict adolescents' and mothers' reports of perceived parenting efficacy at W2. Fit indices [$\chi^2(2) = 5.59$, $p = .06$, CFI = .98, SRMR = .01] indicated acceptable model fit. Results are presented below, along with effect sizes represented by the standardized beta (b) statistic using Cohen's (1992) standards.

In terms of control variables, adolescent and mother reports of expected parenting efficacy were significant predictors of their respective reports of perceived parenting efficacy at W2 (bs = .35 and .51, respectively), representing medium and large effect sizes, respectively. Mothers' reports of family income at W1 predicted higher levels of mother reported adolescent perceived parenting efficacy at W2 ($b = .15$), representing a small effect size. For adolescents, being born in the U.S. ($b = .13$), reporting higher support from a significant other ($b = .16$), and having higher self-esteem at W1 ($b = .16$) predicted higher perceived parenting efficacy at W2 and represented small effect sizes.

Consistent with our primary hypothesis, significant interactions emerged across reporters with adolescent self-esteem moderating the relation between both adolescents' ($b = -.15$) and mothers' ($b = -.14$) reports of social support at W1 and their respective reports of adolescents' parenting efficacy at W2. These represented small effect sizes on adolescents' and mothers' reports of parenting efficacy. We conducted an analysis of simple slopes to probe the association between social support and parenting efficacy at high (1 SD above the mean) and low (1 SD below the mean) levels of adolescent self-esteem (Aiken & West, 1991) and report the unstandardized beta (B) statistics below. Results indicated that adolescents' and mothers' reports of social support at W1 were positively associated with their own reports of perceived parenting efficacy at W2, but only when adolescents had low self-esteem (Figure 2), $B = .24$ ($p < .01$) and $B = .42$ ($p < .01$) for adolescent and mother reports, respectively. Among adolescents reporting high self-esteem, adolescent-reported social support was not related to adolescent-reported perceived parenting efficacy, $B = -.05$ ($p > .05$), whereas mother-reported social support was negatively associated with mother-reported perceived parenting efficacy, $B = -.37$ ($p < .05$). In sum, findings suggest that the promotive benefits of social support were strong when adolescent mothers reported low self-esteem, and these findings were consistent regardless of who was reporting on social support or parenting efficacy (i.e., adolescents' and mothers' reports).

Discussion

A large and growing body of work has documented that adolescent pregnancy and parenting carry significant costs for adolescent mothers and their children (Holcombe et al., 2009). The current study drew on a risk and resilience framework (Masten & Coatsworth, 1998; Rutter, 1987) to understand the mechanisms by which Mexican-origin adolescent mothers' resources may promote positive adjustment among this high-risk sample of mothers. Findings indicated that social support from a mother figure informed adolescent mothers'

future parenting efficacy when adolescent mothers had relatively lower self-esteem. These findings were consistent regardless of whether adolescents' or mothers' reports were examined, highlighting the robust nature of this association. Because the extant literature has established that mothers' parenting efficacy has important implications for parenting behaviors and child outcomes (Jones & Prinz, 2005), knowing the contexts under which social support from a mother figure can promote higher parenting efficacy among a high risk population such as Mexican-origin adolescent mothers has significant practical implications.

Social Support and Self-Esteem Promote Parenting Efficacy

Existing literature has consistently noted that low self-esteem is associated with lower parenting efficacy (Cutrona & Troutman, 1986; Gondoli & Silverberg, 1997). Our findings suggest that low self-esteem may not always be linked with lower parenting efficacy if other resources (i.e., high social support, in the current study) are present. The current findings highlighted the interactive nature of self-esteem and social support in informing adolescent mothers' parenting efficacy, which nicely illustrates a major tenet of ecological theory (Bronfenbrenner, 1989): Individuals' development and adjustment cannot be understood without a focus on how individual characteristics (in this case, self-esteem) interact with contextual factors (in this case, social support from a mother figure). Furthermore, this finding resonates with existing work that has noted that adolescent mothers rely heavily on their own mothers during the transition to parenthood (Brooks-Gunn & Chase-Lansdale, 1995); our findings underscore the significance of such support with respect to adolescent mothers' adaptation when infants are ten months of age. Given the importance that is placed on family support within Mexican culture (e.g., Cauce & Domenech-Rodriguez, 2002), it is not surprising that support from a mother figure would play an important role in Mexican-origin adolescent mothers' efficacy. Thus, the current findings support ecological theory and implicate social support from a mother figure as a resource that can promote positive adjustment among Mexican-origin adolescent mothers who have lower self-esteem. Findings also provide an important direction for future preventive intervention work with Mexican-origin adolescent mothers and their families.

Another important conclusion from our findings is that high self-esteem may buffer the negative impact of perceiving a weak support system. Existing work with adolescent mothers has noted that those who perceive lower social support also tend to fare worse in terms of parenting efficacy and adjustment (East & Felice, 1996). However, our current findings indicated that adolescent mothers' perceptions of social support during pregnancy did not predict their perceptions of parenting efficacy approximately one year later when they reported relatively *high* self-esteem, which suggests that having a high self-esteem can protect adolescent mothers from the risks of a less-than-optimal support network. These findings are consistent with conceptual notions regarding the protective nature of self-esteem for youth (Cicchetti & Toth, 1998; Rutter, 1987), with the idea being that high self-esteem captures a positive view of oneself that endures overtime and across situations and, importantly, protects youth from making negative attributions or responding in maladaptive ways to stress. These findings also suggest that preventive intervention programs with the goal of promoting adjustment among Mexican-origin adolescents undergoing the transition to parenthood would benefit from including program components that address self-esteem building exercises for these young mothers.

Consistency Across Multiple Reporters

It is important not to overstate the current findings, given that they are based on a modest sample size; however, it is noteworthy that the longitudinal association between social support from a mother figure and adolescent mothers' future parenting efficacy, and its moderation by self-esteem, was consistent across reporters, suggesting that regardless of

who is reporting on social support or parenting efficacy, higher levels of social support during pregnancy are predictive of higher parenting efficacy approximately one year later among adolescent mothers who report lower levels of self-esteem, after accounting for expected parenting efficacy. The consistency across reporters for this finding provides confidence in the conclusion that social support and self-esteem are important resources for Mexican-origin adolescent mothers. Nevertheless, it is important to note that the findings were specific to within-reporter associations (e.g., adolescents' reports of support did not predict mother figures' perceptions of efficacy). Although it is well-documented that cross-reporter associations are more difficult to detect than within-reporter effects (Ackerman, Donnellan, & Kashy, 2011), it is important to consider the single-reporter bias inherent in the current findings.

Limitations and Directions for Future Research

The current study has a number of strengths including its focus on an important high risk population, and its longitudinal design; however, there are number of limitations to consider. First, as noted above, the modest sample size limited our ability to test additional research questions such as whether the processes of interest varied by adolescent mothers' nativity or generational status. We controlled for nativity status, but future studies should examine whether perceptions of social support are similarly associated with perceptions of parenting efficacy across nativity groups. For instance, adolescent mothers who were born in Mexico and are more recent immigrants to the U.S. may rely more on social support from a mother figure due to a less-established social network given their relatively more recent immigration, while U.S.-born adolescent mothers may have a broader network of support and, thus, their parenting efficacy may be relatively more informed by other sources of support. Although we controlled for nativity, a larger sample size that was more equally balanced across nativity groups would allow a direct examination of the variability introduced into these processes by nativity status.

Somewhat related, the current study was limited to Mexican-origin adolescent mothers and, thus, the findings should not be broadly generalized to all adolescent mothers. Although a focus on Mexican origin adolescent mothers is important, given their relatively higher birthrates (National Vital Statistics Report, 2007), it is important to note that the risks associated with adolescent pregnancy and parenting exist across racial and ethnic groups and it will be useful for future studies to examine whether the resources and strengths that were identified in the current study are consistent for adolescent mothers from other ethnic and racial backgrounds.

Finally, the current study focused on perceptions of adolescents' parental efficacy, which captures adolescents' and mothers' confidence in the adolescents' parental competence. An important direction for future research will be to examine whether the processes identified in the current study generalize to adolescents' actual parenting competence as measured by objective measures of parenting competence such as observations of adolescents interacting with their children. In addition to incorporating other methods of assessment, given the correlational and non-experimental nature of the design, we cannot take the observed associations as evidence of effects; thus, future studies with a more controlled design would help provide more conclusive evidence regarding the associations identified in the current study. Given the lack of prior research on adolescent mothers' parenting efficacy and its links to parenting and child outcomes, there is a need to examine these associations and determine if parenting efficacy positively informs adolescent mothers' outcomes.

Despite the noted limitations, the current findings make a significant contribution given the lack of existing longitudinal data and limited attention to developmental processes and adjustment in ethnic minority populations (Garcia Coll & Magnusson, 1997) and adolescent

mothers in particular (Contreras, 2004). Importantly, our research was conducted during a critical time period for adolescents and their mother figures-- the transition to adolescent motherhood. During this transition, the roles of adolescents and their mother figures are shifting and evolving, which makes this an ideal time to examine how individual and contextual factors may uniquely and interactively foster adolescent mothers' parenting efficacy. Moreover, the evolving nature of these roles also provides an opportune time period for implementing interventions that can promote adaptive parenting behaviors among adolescent mothers.

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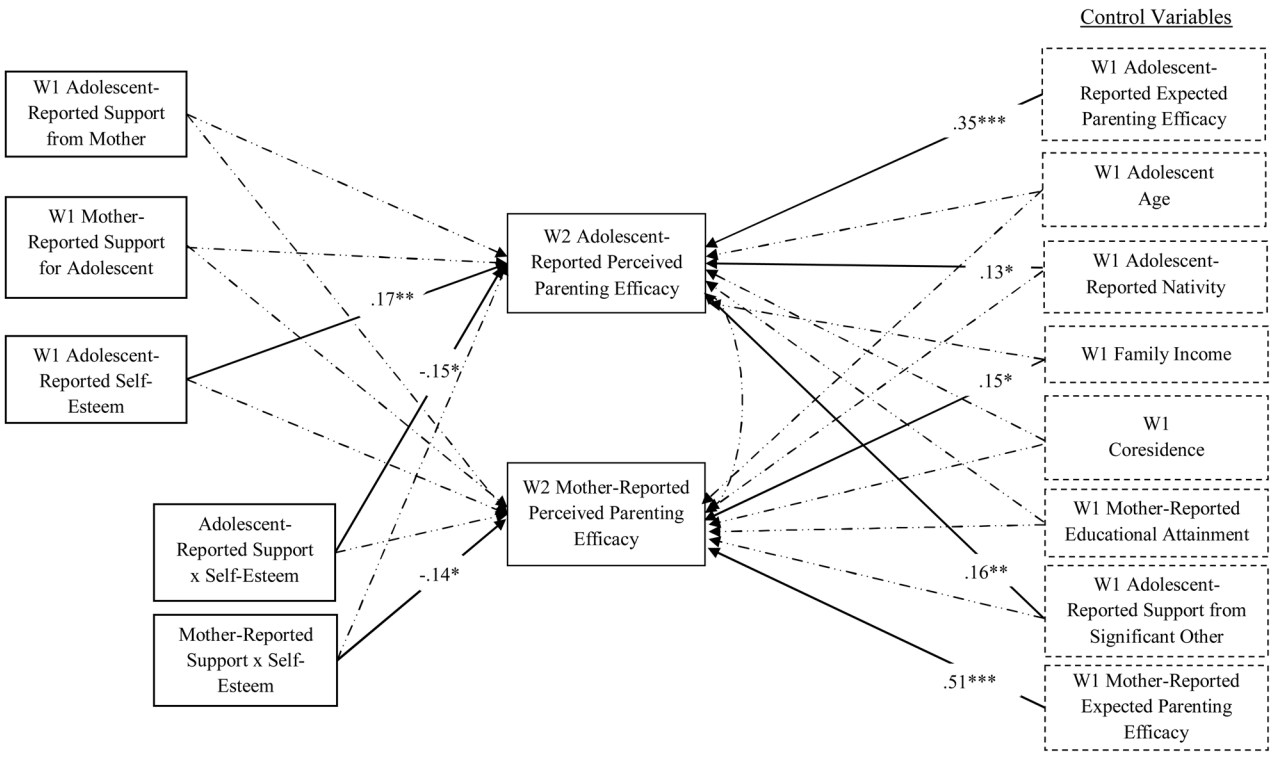

Figure 1.

Structural equation model with adolescents' and mothers' reports of social support at Wave 1 (W1), interacting with adolescents' reports of self-esteem at W1, to predict adolescents' and mothers' reports of perceived parenting efficacy at Wave 2 (W2). Control variables are enclosed in dashed rectangles. For nativity, 0 = *Mexico born*, 1 = *U.S. born*. For coresidence, 0 = *Adolescent and mother do not coreside*, 1 = *Adolescent and mother coreside*. Dashed lines represent non-significant paths. Standardized coefficients presented. All exogenous variables were allowed to covary. *$p < .05$. **$p < .01$. ***$p < .001$.

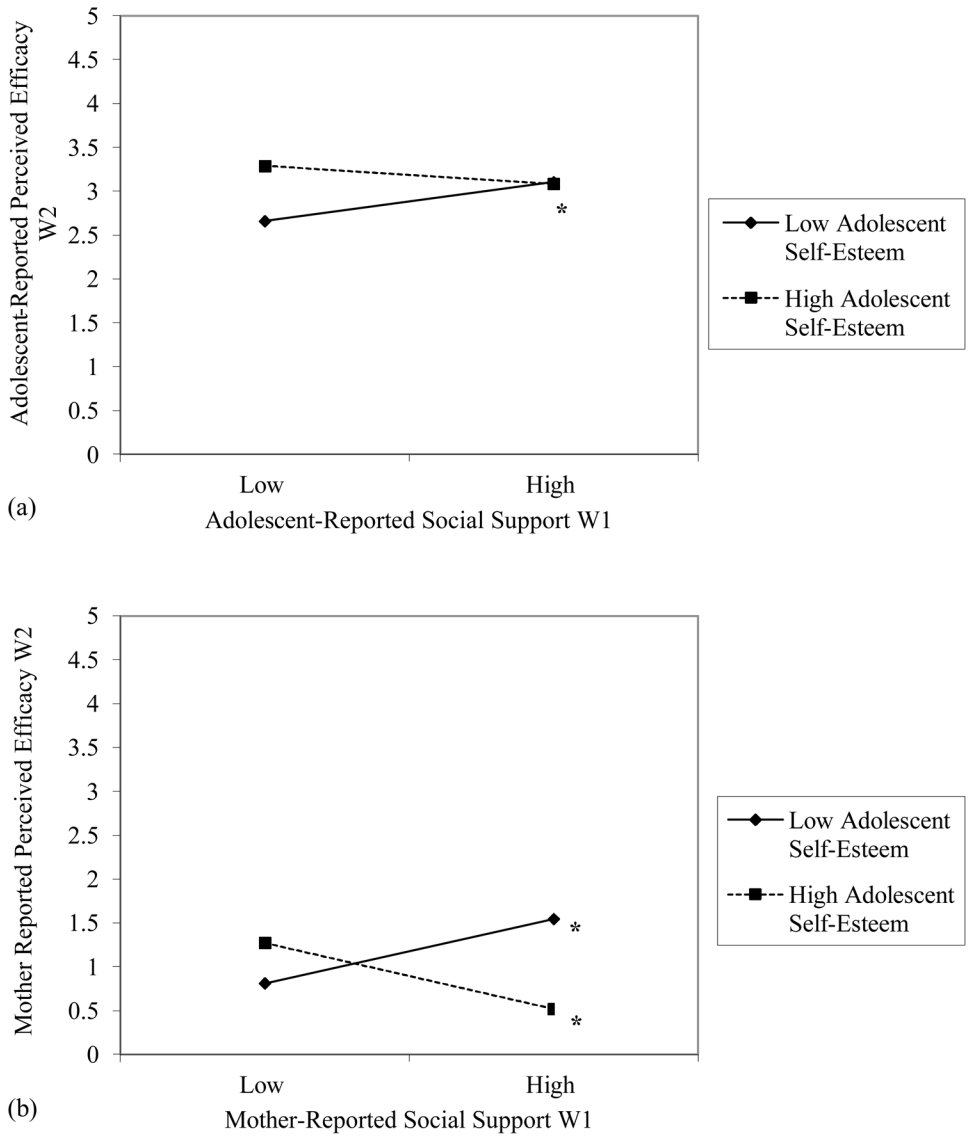

Figure 2.

Adolescent reports of self-esteem moderating the relation (a) between adolescent reports of social support at Wave 1 (W1) and perceived parenting efficacy at Wave 2 (W2), and (b) between mother reports of social support at W1 and perceived parenting efficacy at W2. *Denotes significant slope at $p < .05$. High and low scale defined as scores that were 1 SD above or below the mean, respectively.

Table 1

Correlations between Study Variables by Reporter (N = 205 [a])

	1	2	3	4	5	6	7	8	9	10	11	12	13
Adolescent Report													
1. Age W1	--												
2. Coresidence[b] W1	−.19**	--											
3. Nativity[c] W1	.06	.04	--										
4. Significant Other Support W1	.19**	−.04	−.00	--									
5. Social Support W1	−.02	.10	.03	.01	--								
6. Self-Esteem W1	.08	.09	−.05	.28***	.21**	--							
7. Expected P-E W1	−.02	−.01	.15*	.18**	.23***	.31***	--						
8. Perceived P-E W2	.02	.06	.22**	.28***	.28***	.36***	.52***	--					
Mother Report													
9. Family Income W1[d]	.09	−.01	.12	.07	.03	.05	−.11	.09	--				
10. Educ. Attainment W1	.15*	.11	.22**	.03	.16*	.15*	.09	.23***	.34***	--			
11. Social Support W1	.00	.18**	.11	.00	.30***	.10	.13	.19**	−.01	.18**	--		
12. Expected P-E W1	.23***	−.04	.22**	.21**	−.03	.07	.22**	.28***	−.03	.06	.20**	--	
13. Perceived P-E W2	.22**	−.04	.05	.22**	.05	.02	.12	.25***	.13	.08	.14*	.52***	--
Mean	16.81	.87	.64	5.97	4.38	3.23	4.33	4.52	27313.86	8.97	4.40	3.87	4.18
Standard Deviation	.99	.34	.48	1.37	.75	.45	.51	.41	19843.49	3.32	.58	.72	.65

Note.

[a] Despite missing data for adolescents (4%) and mothers (10%) at Wave 2, the full sample size of *N* = 205 is provided given the use of full information maximum likelihood methods, which makes use of complete and incomplete observations to inform parameter estimates.

[b] 0 = *Adolescent and mother do not coreside*, 1 = *Adolescent and mother coreside*.

[c] 0 = *Mexico born*, 1 = *U.S. born*. W1 = Wave 1, W2 = Wave 2.

[d] Untransformed values for yearly family income were used for ease of interpretation. P-E = Parenting Efficacy.

* $p < .05$.

** $p < .01$.

*** $p < .001$.