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Child & Youth Care Forum
Journal of Research and Practice in Children's Services

ISSN 1053-1890
Volume 43
Number 3

Child Youth Care Forum (2014)
43:353-371
DOI 10.1007/s10566-013-9242-x

Springer

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ORIGINAL PAPER

Promoting School Readiness in the Context of Socio-Economic Adversity: Associations with Parental Demoralization and Support for Learning

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Published online: 25 December 2013

Abstract
Background Existing research suggests that parenting stress and demoralization, as well as provision of learning activities at home, significantly affect child school readiness. However, the degree to which these dimensions of parenting uniquely influence child school readiness remains unclear.
Objective This study tested the hypothesis that parent demoralization and support for learning are distinct constructs that independently influence child school readiness. Direct and indirect (mediated) models of association were examined.
Methods 117 kindergarten children with low literacy and language skills and their parents were recruited from three Northeastern school districts serving primarily low-income families. Parents reported on their own depressive symptoms, parenting difficulties, attitudes and behaviors related to learning activities, and the frequency of parent–child conversation at home. Teachers rated child school readiness, as indicated by classroom behaviors, approaches to learning, and emergent language and literacy skills.
Results In a factor analysis, parent demoralization and support for learning emerged as distinct constructs. Structural equation models revealed that parent demoralization was negatively associated with child school readiness, whereas parent support for learning was positively associated with child school readiness. Neither parenting construct mediated the effect of the other.

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Conclusions Among low-income families with children at high risk for school difficulties, parental demoralization and support of learning opportunities at home appear to independently influence child school readiness. Thus, parent-based interventions targeting child school readiness would likely benefit from enhancing both parental self-efficacy and provision of learning activities.

Keywords Parenting · School readiness · Learning · Low-income · Literacy · Intervention

Introduction

Longitudinal research has identified a set of child readiness skills, measured at school entry, that strongly predict subsequent school adjustment and achievement (Duncan et al. 2007; Romano et al. 2010). These include the oral language and emergent literacy skills that support reading and classroom engagement (Lonigan et al. 2000), as well as self-regulatory skills that foster adaptive approaches to learning in school, such as the capacity to participate cooperatively in the classroom, follow directions, control attention, and sustain task involvement (Blair 2002; McClelland et al. 2006).

Prior research suggests that the quality of parent–child interactions during early childhood plays a particularly important role in promoting the development of these school readiness skills (Bernier et al. 2010; Eccles and Harold 1996). Correspondingly, a number of parent-focused interventions have been developed to enhance parenting skills and thereby support the school readiness of at-risk children (Welsh et al. 2014). Yet, it has proven difficult to recruit and retain parents in these school readiness interventions, with recruitment rates typically in the range of 30–50 % of the eligible population and drop-out rates as high as 50 % of those who start the intervention (Brotman et al. 2011; Kaminski et al. 2002; Webster-Stratton et al. 2001).

It is notable that most parent-focused intervention efforts focus on low-income parents because delays in child school readiness are more prevalent among children growing up in poverty (Campbell and von Stauffenberg 2008; Ryan et al. 2006). It is also the case that parents living in low-income families often face multiple stressors with limited social support to facilitate coping (Galster 2012; Klebanov et al. 1994). Rates of maternal depressive symptoms are often high, and these are associated with reduced parent responsiveness and heightened parental irritability (Kam et al. 2011; Wright et al. 2000). Moreover, maternal depression has been linked to lower scores on measures of cognitive and motor development in preschool children, even after controlling for SES and other family demographic variables (Petterson and Albers 2001).

It is possible that school readiness interventions for parents have paid insufficient attention to parental attitudes and feelings, particularly feelings of emotional distress or demoralization that may undermine parental efforts to provide learning support for their young children. The present study explored this issue by examining the degree to which child school readiness skills at kindergarten entry were associated with: (1) Low levels of parental involvement and learning support for the child, and (2) high levels of parent demoralization, including depressed mood and feelings of parental inadequacy. It further examined the possibility that parental demoralization was linked indirectly with child school readiness delays via its association with lowered levels of learning support.

Parent Support for Learning and Child School Readiness

Substantial research has linked frequent parent–child conversation, reading, and learning activities in the home with child school readiness. For example, naturalistic observations demonstrate that family language use and literacy activities have a powerful effect on young children's learning and later school adjustment (Eccles and Harold 1996; Hart and Risley 1995). Parents who frequently talk with their children, point out and explain things in the environment around them, and comment on thoughts and feelings help to shape the child's attention skills and build the child's oral language skills (Hart and Risley 1995; Nord et al. 2000; Snow et al. 1998). When parents report spending time teaching their children to identify letters or write their names, child emergent literacy skills are enhanced (Sénéchal 2006); similarly, the frequency and quality of book reading at home is related to child vocabulary growth (Lonigan and Whitehurst 1998; Scarborough 2001). Conversely, low levels of parental involvement and a failure to provide a cognitively stimulating home environment attenuate the pace of language development (Duncan et al. 1994). Parental beliefs regarding their responsibility to involve themselves in their children's learning are also linked empirically with children's learning (Drummond and Stipek 2004; Hoover-Dempsey and Sandler 1997). Cheadle (2008) identified a pattern of parental involvement that he termed "concerted cultivation," which included high rates of verbal interaction with children, a tendency to provide children with structured, extracurricular learning opportunities (e.g., music lessons), and positive school involvement. This pattern predicted children's general knowledge in kindergarten as well as math and reading achievement in first and second grades.

High levels of parent support for learning are more likely to occur in families with higher SES than in low-income families (Cooper et al. 2010; Guo and Harris 2000; Sénéchal 2006). Indeed, low levels of parental support for learning explain and mediate much of the impact that contextual risk associated with low SES (e.g., single parenthood, life stress) has on child reading and mathematics skills in early elementary school (Burchinal et al. 2006).

Parent Demoralization and Child School Readiness

One of the factors that may reduce the learning support that low-income mothers offer their children is their level of life stress. Mothers in low-income families are particularly likely to experience an accumulation of risk factors, including financial strain, poor living conditions, single-parent status, and social isolation that increase the stress of daily life and reduce psychosocial support (Brooks-Gunn and Markman 2005). Together, these factors can undermine parenting efficacy and contribute to a developmental context that is more unpredictable, less stimulating, and less responsive than that experienced by socioeconomically advantaged children (Foster et al. 2005; Lengua et al. 2007; McLoyd 1998).

Low-income mothers of young children are also at heightened risk for depression, with prevalence rates estimated at 40–60 %, compared to prevalence rate of 5–25 % among mothers in the general population (Knitzer et al. 2008). Children of depressed mothers are at elevated risk for the development of behavioral problems, including both internalizing and externalizing disorders (see Cummings and Davies 1994, for a review). The negative impact of maternal depression on child development appears mediated, at least in part, by its impact on parent–child interactions. Depressed parents are more withdrawn, more inconsistent and unresponsive, and more negative and critical in their interactions with their children than are healthy parents (Kam et al. 2011; Lovejoy et al. 2000).

In addition to experiencing depressive symptoms, low-income parents are more likely to feel inadequate in the parenting role than more advantaged parents (Stormshak et al. 2000).

General feelings of helplessness associated with depressed mood and the specific feelings of low self-efficacy in the parenting role are likely inter-related, as each reflects a sense of being overwhelmed by one's life situation. Both have been associated with parenting difficulties such as inconsistent and lax parenting (Jones and Prinz 2005). Inconsistent parenting, in turn, may exacerbate oppositional-defiant behaviors in children (Campbell and von Stauffenberg 2008; Stormshak et al. 2000). Whereas sensitive and contingent parenting fosters the development of sustained attention and self-regulation skills (Landry et al. 2000; Lengua et al. 2007), inconsistent parenting and chaotic family environment impede the development of self-regulatory skills and thereby undermine child school readiness (Burchinal et al. 2008). Thus, parent demoralization may negatively affect child school readiness by diminishing the quality of parent–child interactions and decreasing parental warm involvement, consistency, and responsiveness.

The Association Between Parent Demoralization and Support for Learning

Most of the existing research on parent contributions to child school readiness has focused on either parent demoralization (e.g., parental depression, parenting difficulties) or on parent support for learning (e.g., reading beliefs and activities, learning activities at home)—but not both. The few existing studies that have examined both dimensions suggest that they jointly support the development of academic and social–emotional skills related to child school readiness. For example, within normative samples, based on data from the Early Childhood Longitudinal Study, Kindergarten Class of 1998–1999 (ECLS-K), Baker et al. (2012) found that providing books at home, reading to children, playing with children, and setting a bedtime predicted child reading achievement and approaches to learning. In another study, drawing from the NICHD Study of Early Child Care and Youth Development (SECCYD), Martin et al. (2010) found that maternal supportiveness (e.g., emotional sensitivity and cognitive scaffolding) when the child was 54 months of age predicted teacher-rated academic and social competence and child academic achievement at school entry. Paternal supportiveness also predicted the child's social competence in kindergarten and moderated the effect of maternal supportiveness, increasing academic competence among children whose mothers scored low on supportiveness at age 54 months.

The few studies that have examined aspects of parental demoralization and support for learning specifically in the context of socio-economic risk have also suggested that both dimensions of parenting significantly influence the child's school readiness. For instance, Dotterer et al. (2012) found that sensitive parenting, a construct reflecting affectively sensitive and supportive behaviors as well as cognitively stimulating behaviors, positively mediated the relationship between SES and child pre-academic knowledge among European American children, whereas negative and intrusive parenting behaviors mediated the link between SES and lower pre-academic knowledge for both European-American and African-American children. Similarly, Mistry et al. (2010) found that language stimulation and maternal warmth improved child school readiness (as indicated by cognitive and academic achievement, attention and behavioral regulation, and social behaviors) among families living in poverty, even after accounting for cumulative risk found in the child's ecology. A longitudinal study by Chazan-Cohen et al. (2009) examined parental depressive symptoms, stress, home learning environment, and supportive behaviors among Early Head Start program participants and found that initial levels and changes in these parenting factors between child age 14 months and 5 years influenced the child's pre-kindergarten school readiness, as indicated by behavior problems, approaches toward learning, emotion regulation, vocabulary, and letter-word identification abilities, in expected directions.

Overall, studies with both representative and low-SES samples indicate that parent demoralization and support for learning simultaneously influence child school readiness. However, in order to better inform intervention efforts targeting child school readiness in low-SES households, it is important to study the extent to which they uniquely and differentially affect child school readiness among children at greatest risk for academic maladjustment. Additionally, it is yet unclear from existing research whether these parenting dimensions mediate the effect of the other. For instance, parent demoralization may have a negative effect on child school readiness because it lowers parent involvement in learning activities. Parental depression and self-efficacy are inversely correlated (Fox and Gelfand 1994), and parents with low self-efficacy are less likely to persist when confronted with challenges and are thus less likely to remain involved in their children's education than parents who feel more efficacious and effective (Hoover-Dempsey and Sandler 1997). Thus, parents who feel depressed and challenged by their children's behavior may be less likely than other parents to engage actively in home-based learning activities such as book reading, because they lack the energy or confidence to do so (Jones and Prinz 2005). However, this link has not yet been demonstrated, and it is not yet known whether the association between parent demoralization and child school readiness remains robust after accounting for levels of parent support for learning. This is a particularly important issue to examine among families that are predominantly low in SES, where risk for child learning difficulties is heightened.

The Present Study

The current study aimed to fill these gaps and examine the effects of both parent demoralization and parent support for learning on the teacher-rated school readiness skills of kindergarten children at schools serving primarily low-income families. These children were screened for low reading readiness at school entry. Their parents completed ratings describing depressive symptoms and parenting difficulties. Parents also described their attitudes and the frequency with which they engaged in activities supporting child learning at home (e.g., parent–child reading, teaching activities, conversations). Child school readiness was assessed by kindergarten teachers and included emergent literacy and self-regulation skills. We hypothesized that the parenting measures would reflect two distinct domains of parenting (e.g., demoralization and support for learning), which would be inversely correlated. In addition, we anticipated that these two dimensions of parenting would differentially impact children's school adjustment, with parental demoralization linked with lower levels of child school readiness, and parent support for learning linked with higher levels of child school readiness.

Method

Participants

One hundred and seventeen kindergarten children and their parents were recruited from three Pennsylvanian school districts that primarily served low-income families. The mean child age at time of testing was 5.71 years (SD = .31), and the sample contained roughly equivalent numbers of females ($n = 57$) and males ($n = 61$) and was racially diverse (36 % White; 36 % Black; 12 % Hispanic; 11 % Mixed; 5 % "Other"). A majority ($n = 114$) of the parents in the study were biological parents (108 females and 6 males), two were step-parents, and one was a grand-parent. Most of these parental figures had high school education or less (72 %) and were working (63 %). Roughly a third of the

participating parents were married (37 %) and the rest were single (40 %) or living with a partner (23 %). English was typically the only language spoken at home ($n = 103$; 88 % of the sample), although ten (9 %) families were bilingual in both English and Spanish, and four families spoke another language (3 %). Eighteen teachers provided reports of child school readiness.

Procedures

All data were collected by project research assistants. Following a 2-day training workshop, research assistants conducted three pilot assessments under the supervision of the research coordinator. They were required to meet performance criteria on each assessment procedure before they collected independent data. Data were collected on forms created by the Survey Research Center at Penn State University, and these forms were scanned to create data files with minimal errors.

To recruit the sample, flyers describing the study were sent home to all kindergarten students at the start of the school year. Unless parents declined, they were contacted by telephone, and permission was obtained for their children to receive a brief individual developmental assessment at school to determine eligibility. Project research assistants conducted these brief assessments at school during the months of September and October. Children who scored more than one standard deviation below the national mean on the brief forms of standardized tests of literacy and language skills were considered eligible for the study. Their parents were visited at home in October–November by trained research assistants who attained full informed consent and collected the parent report measures used in this study. Research assistants followed a standard script and read through all parent interview measures in the same order as parents provided their responses. To collect teacher data, research assistants attained informed consent from teachers and then provided teachers with a packet of measures. After explaining the rating forms, they were left with classroom teachers to complete on their own. Distribution of the teacher rating forms began 6 weeks after the start of Kindergarten (mid-October) and the forms were all completed by the end of November. This time frame assured that teachers were familiar with the children they were rating. Parents received $20 and teachers received $10 per child in compensation for completing the measures. Three of the recruited children were excluded from the study due to a significant hearing impairment ($n = 1$), low English proficiency that prevented a valid assessment ($n = 1$), and an unresolved temporary custody situation ($n = 1$). All research procedures followed the ethical guidelines of the American Psychological Association and were approved by the university's IRB.

Measures

Parent Demoralization

Parent demoralization was assessed using two self-report measures. Parenting difficulties, reflecting feelings of low efficacy, were assessed using seven items drawn from Strayhorn and Weidman's (1988) *Parent Practices Scale,* a 34-item measure with adequate internal consistency ($\alpha = .78$) and convergent validity. On these items, parents described the frequency with which they felt overwhelmed, inconsistent, and ineffective in the parenting role (e.g., "How often are you just too tired or worn out to make your child behave the way she/he should?"; "How often do you give into your child's demands because you don't want to be embarrassed in public?"; "How often do you change your mind about a

punishment after you have given it?"). Items were rated on a five-point Likert scale ranging from *1 = almost never* to *5 = fairly often,* and averaged to create a total score ($\alpha = .83$). Possible total scores thus ranged from 1 to 5, with higher scores indicating difficulty providing consistent and effective parenting.

Parental dysphoria and other depressive symptoms were assessed using the *Center for Epidemiologic Studies Depression Scale* (CES-D; Radloff 1977), a well-validated 20-item self-report measure with good internal consistency (estimated $\alpha = .85$) and discriminant as well as convergent validity (Radloff 1977). Parents reported the frequency with which they experienced depressive symptoms in the past week using a four-point scale (ranging from *1 = rarely, less than one day during the week* to *4 = almost all the time, 5–7 days of the week*). Items were averaged to create an overall score ($\alpha = .88$). Scores had a possible range of 1–4, with higher scores indicating more symptoms of depression.

Parent Support for Learning

Parents also completed four measures describing their attitudes and behaviors related to the use of learning activities at home. On the 40-item *Parent Reading Belief Inventory* (PRBI; DeBaryshe 1995; DeBaryshe and Binder 1994), parents described their role in teaching their child to read, noting how much they agreed with such statements as "I am my child's most important teacher"; "I read with my child so he/she will learn the letters and how to read simple words"; "I feel warm and close to my child when we read." Items were rated on a four-point scale ranging from *1 = strongly disagree* to *4 = strongly agree*, and averaged to obtain a total score that could range from 1 to 4, reflecting positive parental beliefs and attitudes about supporting literacy at home ($\alpha = .95$). The PRBI has adequate internal consistency ($\alpha = .88$), test–retest reliability ($\alpha = .79$), and has been validated against measures of home reading activities (DeBaryshe and Binder 1994).

Parent beliefs about their role in supporting their child's education and schooling were measured using the *Role Activity Beliefs* scale (Walker et al. 2005). On this 10-item scale, parents used a four-point Likert scale to indicate their agreement (ranging from *1 = strongly disagree* to *4 = strongly agree*) with statements such as, "I believe it is my responsibility to help my child with homework" and "I believe it is my responsibility to explain tough assignments to my child." The measure has adequate reliability ($\alpha = .83$) and has shown divergent validity compared to parental liking of the school (Walker et al. 2005). Ratings were averaged to create a total score ($\alpha = .83$), which could range from 1 to 4, with higher scores reflecting greater parental beliefs that they have an active role to play in their child's education.

In addition, eight questions developed for this study (*Home Activities Questionnaire*) assessed the regularity with which the parent engaged in specific learning activities with their child at home (e.g., "When was the last time you tried to teach your child the names of letters?"; "When was the last time you counted out something with your child?"). Responses reflected the number of days since the activity had taken place and were averaged to obtain a mean score ($\alpha = .89$). They were reverse-scored so that higher scores reflected more recent parent involvement in learning activities.

Finally, the frequency and length of parent–child conversations was assessed using four items developed for this study (e.g., "How many times in a typical week do you and your child have a conversation that lasts at least 10 minutes or more?"; "In general, how easy is it to get your child to talk about what's on his/her mind?"). Responses were scaled to range from 0 to 5 and averaged to create a score indicating the availability of the parent for parent–child conversation ($\alpha = .41$).

Child School Readiness

Four teacher-rating measures were used to assess child school readiness. Attention skills, including concentration and ability to follow directions, were measured using the *ADHD Rating Scale* (DuPaul 1991). Teachers rated eight items related to inattention (e.g., "Has trouble staying focused"; "Is easily distracted"; "Has trouble following directions") using a four-point Likert scale ranging from *0 = not at all* to *3 = very much*. The measure has good internal consistency ($\alpha = .95$) and test–retest reliability ($\alpha = .95$) and has been validated with other parent and teacher reports of ADHD symptoms, coded observations of on-task child behaviors in the classroom, and standardized academic test scores (DuPaul 1991). Items were reverse-scored so that higher scores indicated fewer inattention symptoms and then averaged to create an overall indicator of attention, with a possible range of 0–3 ($\alpha = .95$).

Eight items from the Competence Motivation subscale of the *Learning Behaviors Scale* (LBS; McDermott 1999) were used to assess child motivation, engagement, and goal-oriented learning at school (e.g., "Sticks to a task with no more than minor distractions"; "Is reluctant to tackle a new task"; "Says task is too hard without making much effort to attempt it"). Items were rated using a three-point scale (*0 = does not apply, 1 = sometimes applies, 2 = most often applies*) to describe the student's typical classroom behavior in the past 2 months. The scale shows good internal consistency ($\alpha = .85$), test–retest reliability (minimum $\alpha = .91$), as well as convergent, divergent, and incremental validity based on measures of cognitive abilities and academic achievement (McDermott 1999). Ratings were scored such that higher scores reflected more positive learning behaviors and averaged to create a summary score ($\alpha = .87$) with a possible range of 0–2.

Classroom engagement was measured using eight items describing positive classroom participation ("This child is able to sit at a table and do work"; "This child seems enthusiastic about learning new things"; $\alpha = .95$) and six items describing disengagement or withdrawal (e.g., "Low energy, lethargic, or inactive"; "Keeps to him or herself, tends to withdraw"; $\alpha = .86$) drawn from a prior study of school readiness (Bierman et al. 2008). All items were rated using a six-point Likert scale (ranging from *1 = strongly disagree* to *6 = strongly agree)* and averaged to create an overall score with potential range of 1–6, with higher scores reflecting greater positive classroom engagement ($\alpha = .95$).

Finally, teachers used 23 items to describe children's language and emergent literacy skills. Twelve items were drawn from the *Academic Rating Scale* (ARS) created for the Early Childhood Longitudinal Study—Kindergarten Class of 1998–1999 (ECLS-K) (Rock and Pollack 2002) and required teachers to rate skill attainment (e.g., "This child uses complex sentence structures"; "This child writes simple word from memory"; $\alpha = .96$) using a five-point scale that ranged from *0 = not yet* to *4 = proficient*. The ARS has shown good reliability and has been validated against measures of reading and academic achievement (Rock and Pollack 2002). In addition, 11 items developed for this study required teachers to make relative judgments about the child's skill level (e.g., "The complexity and length of the sentences this child typically uses"; "The child's ability to pronounce words correctly"; $\alpha = .97$) relative to same-age peers, rated on a five-point scale ranging from *(−2) = "More than 1 year behind other children his or her age"* to *(+2) = "More than 1 year ahead of other children his or her age."* Ratings were averaged to create an overall score representing the child's language and emergent literacy skills ($\alpha = .97$), with higher scores reflecting greater emergent literacy skills.

Analytic Plan

The analyses included five steps. First, descriptive analyses were conducted, including bivariate correlations to examine associations among measures of parental demoralization, parental support for learning, and child school readiness. Second, a factor analysis was undertaken to confirm the two hypothesized domains of parenting. Third, a measurement model was fit using structural equation modeling with robust weighted least squares estimator (WLSMV), in order to assure that the observed variables were satisfactory indicators of the latent constructs. The WLSMV estimator uses a diagonal weight matrix to estimate parameters and is appropriate for use with small to moderate sample sizes that contain censored and continuous variables (Byrne 2012). Additionally, appropriateness of "parceling," or the practice of combining multiple items for each observed indicator of latent constructs in structural equation modeling, was examined to ensure adequate unidimensionality of each measure and the appropriateness of each item (Little et al. 2002). Fourth, structural equation models were estimated in order to test the hypothesized model of dual parenting influences on child school readiness. Finally, we tested for mediation (indirect) effects using structural equation modeling, to see if either parenting dimension mediated the effect of the other on child school readiness. Procedures described in Muthén (2011) were used, which estimate the indirect effect as a product of the coefficients for the pathway from the predictor to mediator and from the mediator to the outcome. Standard errors for these indirect effects were estimated using bootstrapping methods. Analyses were performed using SPSS 16.0 and Mplus 7.

Results

Descriptive Analyses

Descriptive statistics for all study variables are presented in Table 1. Distributional properties of each variable were checked for normality. The only variable showing significant departure from normality based on skewness and kurtosis was the time elapsed since parents last participated in learning activities at home ("Home Activities"). Because this variable was censored, it was treated as such in applicable analyses. ANOVAs were used to examine potential differences in parenting or school readiness associated with the child's sex, race, or the household socio-economic status (SES) assessed using the Hollingshead index (Hollingshead 1957). Compared to girls, boys experienced lower levels of parent–child conversation. Boys also exhibited lower levels of attention, engagement in learning, classroom participation, and emergent literacy skills than girls, according to teacher ratings. No differences emerged by race or SES. Mann–Whitney U and Kruskal–Wallis tests showed no significant effects of demographic variables on the Home Activities scale.

Relations among variables were examined using bivariate correlations, which are presented in Table 2. As expected, significant correlations emerged among the two measures reflecting parent demoralization (e.g., parenting difficulties and depressive symptoms). Similarly, three of the measures reflecting parental support for learning were significantly inter-correlated (e.g., beliefs about reading, parental role construction, and frequency of home learning activities). However, parent–child conversations were more strongly correlated with measures of demoralization than measures reflecting parent support for learning. The four teacher-rated measures of child school readiness formed a cohesive set, linked by significant inter-correlations (e.g., attention skills, learning behaviors, classroom

Table 1 Descriptive statistics for the study variables

Variable	*M* (SD)	Minimum	Maximum
Parenting			
Parenting difficulties	2.55 (.90)	1.00	4.29
Depression	1.14 (.50)	.40	2.60
Parent–child conversation[a]	2.94 (.73)	.80	4.50
Beliefs about reading	3.37 (.34)	2.55	4.00
Role construction	3.46 (.35)	2.60	4.00
Home activities	54.86 (7.86)	0	59.88
Child school readiness			
Attention[b]	1.95 (.85)	0	3.00
Learning behaviors[c]	1.46 (.46)	.25	2.00
Classroom engagement[d]	4.55 (.97)	1.57	6.00
Language and literacy skills[e]	1.52 (.70)	0	3.17

$n = 117$. Means for all parenting measures, except home activities, represent average item scores

[a] Parents of girls exhibited higher scores than those of boys, $F(1, 115) = 7.89$, $p = .01$

Girls also scored significantly higher than boys on the following:

[b] $F(1, 115) = 14.14$, $p < .001$

[c] $F(1, 115) = 9.02$, $p = .003$

[d] $F(1, 115) = 10.52$, $p = .002$

[e] $F(1, 115) = 7.00$, $p = .01$

engagement, and emergent literacy skills). Of the 24 correlations linking parent-reported measures of parenting with teacher-rated measures of child school readiness, 15 were statistically significant, and all were in the anticipated direction. Only parent-reported home learning activities had no significant associations with teacher-rated indices of child school readiness.

To investigate whether measures of parenting were reasonable indicators of the two hypothesized latent constructs (e.g., parent demoralization and support for learning), the six parenting measures were subjected to an exploratory factor analysis with Varimax rotation. Two factors emerged with Eigenvalues greater than one (see Table 3). The first factor had an Eigenvalue of 2.34, explained 39 % of the variance, and was defined by parental reading beliefs, role construction, and home learning activities. The second factor had an Eigenvalue of 1.34, explained 22 % of the variance, and was defined by parenting difficulties, depressive symptoms, and low levels of parent–child conversation. These two factors validated the dimensions of parent support for learning and demoralization. The only unexpected finding was that parent–child conversations loaded with parent demoralization and not with parent support for learning, and hence was included as an indicator of parent demoralization. To facilitate the interpretation of subsequent analyses, the variable for parent–child conversations was reverse-scored to be consistent with the construct of parental demoralization, such that higher scores reflected parental unavailability for parent–child conversations.

Measurement Model

Next, a measurement model was estimated to examine the relations among latent constructs and their observed indicators (see Fig. 1). A good model fit is indicated by a

Table 2 Intercorrelations among parenting and child school readiness variables

Measure	1	2	3	4	5	6	7	8	9
Parenting difficulties	–								
Depression	.49**	–							
Parent–child conversation	−.29**	−.38**	–						
Beliefs about reading	−.23*	−.15	.21*	–					
Role construction	−.12	−.10	.17	.67**	–				
Home activities	−.17	−.11	−.25**	.34**	.21*	–			
Attention	−.19*	−.17	.27**	.18	.19*	.05	–		
Learning behaviors	−.23*	−.18*	.28**	.22*	.17	.08	.80**	–	
Classroom engagement	−.20*	−.18*	.30**	.26**	.21*	.18	.76**	.81**	–
Language/literacy skills	−.26**	−.21*	.15	.25**	.15	.07	.57**	.65**	.72**

$n = 117$. Pearson's correlation coefficients are reported, except for bivariate correlations involving home activities (6), for which Spearman's correlation is reported due to violation of the normality assumption

* $p < .05$; ** $p < .01$

non-significant Chi-square test statistic, a Comparative Fit Index (CFI) of at least .95, a root mean square error of approximation (RMSEA) of less than .06, or a weighted root mean square residual (WRMR) of less than .90 (Hu and Bentler 1999; Muthén 2004; Schreiber et al. 2006). This measurement model had a satisfactory fit to the data, χ^2 (32, $n = 117$) = 30.78, $p = .53$, CFI = 1.00, RMSEA = .00, and WRMR = .43. All of the observed variables were appropriate indicators of the latent constructs, with statistically significant loadings at the $p < .001$ level. Although one of the item loadings was small (home activities, with a standardized coefficient of .46), its inclusion substantially improved the model fit, and thus it was retained in the model.

Additionally, the measurement model showed that the latent constructs were related in the hypothesized manner. Parent demoralization was negatively associated with both parent support for learning ($r = -.42$), and child school readiness ($r = -.42$), and parental support for learning was positively associated with child school readiness ($r = .31$).

Structural Equation Model

Next, a structural equation model was estimated in order to determine whether parent demoralization and parent support for learning were independently associated with child school readiness as hypothesized (see Fig. 2). The model had a satisfactory fit to the data, χ^2 (32, $n = 117$) = 34.53, $p = .35$, CFI = .99, RMSEA = .03, and WRMR = .49. Modeling of the correlation between the two parenting constructs and controlling for the effect of SES on child school readiness did not significantly improve model fit and were thus excluded from analysis. Both of the path coefficients in the model were statistically significant at the .05 level, with a standardized path estimate from parent demoralization to child school readiness of $\beta = -.35$, $t(83) = -3.92$, $p < .001$, and from parent support for learning to child school readiness of $\beta = .21$, $t(83) = 2.38$, $p = .02$.

To examine whether parent support for learning mediated the effect of parent demoralization on child school readiness, indirect effects were estimated using procedures by Muthén (2011). Support for learning did not significantly mediate the link between parent

Table 3 Factor loadings for exploratory factor analysis of parenting scales

Measure	Factor 1: Support for learning	Factor 2: Demoralization
Parenting difficulties	−.10	**.76**
Depression	−.05	**.84**
Parent–child conversation	.20	**−.65**
Beliefs about reading	**.88**	−.12
Role construction	**.89**	−.01
Home activities	**.52**	−.28

Analysis used Varimax rotation. Factor loadings above .40 are in boldface

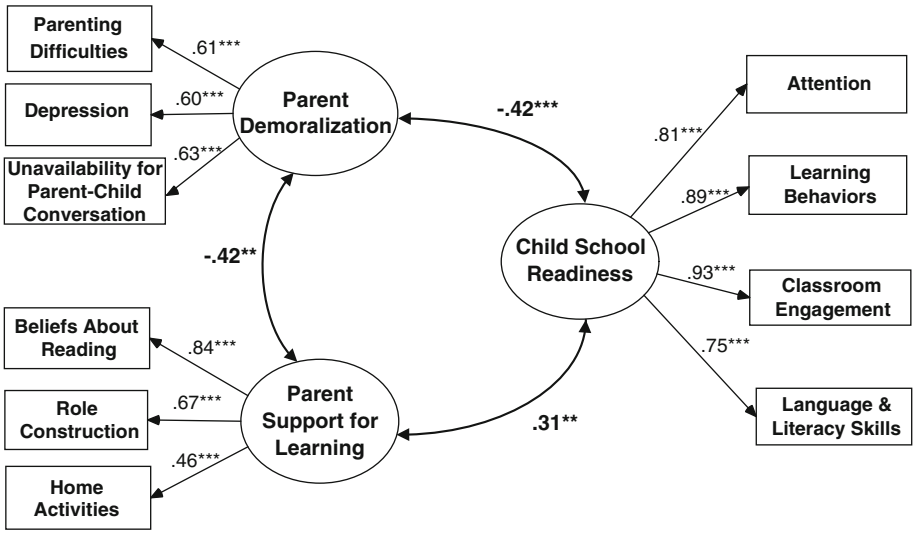

Fig. 1 Measurement model showing the relationships among latent constructs and their observed indicators ($n = 117$). Standardized coefficients are shown. * $p < .05$; ** $p < .01$; *** $p < .001$

demoralization and child school readiness. An exploratory analysis examining the indirect effect of parent demoralization also did not reveal a significant mediating effect. Thus, the two domains of parenting did not mediate the effect of the other on child school readiness and were found to have distinct and unique direct effects on child school readiness.

Discussion

This study examined associations between two dimensions of parenting and the school readiness of at-risk children entering kindergarten. As hypothesized, parent demoralization and parent support for learning emerged as two distinct dimensions, each significantly associated with teacher-rated child school readiness. Parental demoralization and support for learning were negatively correlated, and each of these aspects of parenting explained unique variance in child school readiness. We found support for the hypothesis that

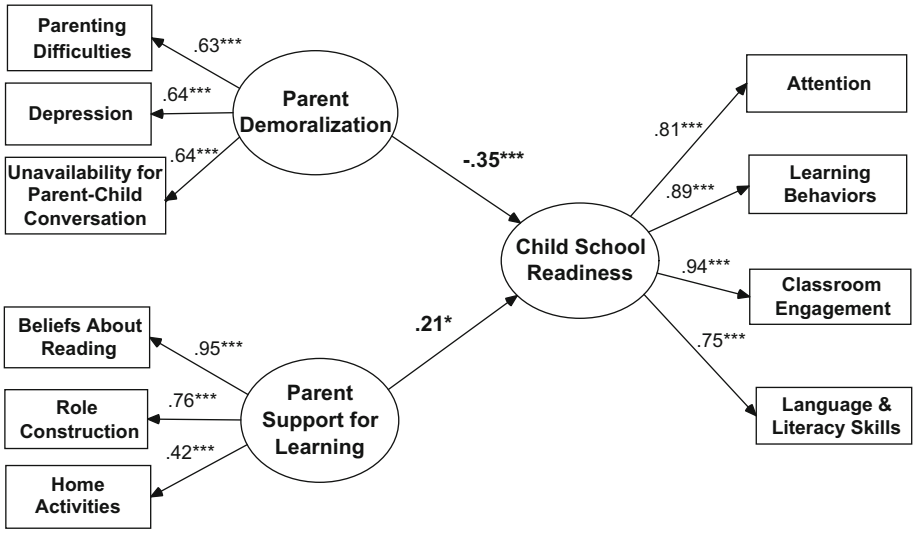

Fig. 2 Structural equation model showing the influence of parent demoralization and support for learning on child school readiness ($n = 117$). Standardized coefficients are shown. * $p < .05$; *** $p < .001$

parental demoralization is negatively associated with child school readiness, whereas parental support for learning is positively associated with school readiness. Findings were robust even after accounting for the other parenting construct. The results of this study validate the conceptualization of the two distinct domains of parenting as independent and significant influences on child school readiness among low-SES families. This was also supported by tests of mediation, which showed that neither domain of parenting accounted for the influence of the other domain on child school readiness.

These findings add to the extant literature by demonstrating the concurrent independent and complementary associations of these two parenting domains with child school readiness. Although parenting quality and support for learning have often been studied as a single dimension affecting child school readiness in previous studies (e.g., Dotterer et al. 2012; Kiernan and Mensah 2011; Lugo-Gil and Tamis-LeMonda 2008; Lunkenheimer et al. 2008; Martin et al. 2010), our findings suggest the importance of examining their impact on child school readiness separately.

The Prevalence of Parental Demoralization in Low-Income Families

Low-income parents of young children often face multiple stressors, including financial strain, low levels of social support, and challenging family and work conditions (Brooks-Gunn and Markman 2005; Lengua et al. 2007). Hence, we anticipated that many would struggle with feelings of depressed mood and feel overwhelmed by parenting challenges. Indeed, in this sample of at-risk children from low-income communities, 38 % of the parents reported a level of depressive symptoms that placed them above the clinical cut-off for depression, and 29 % reported that they lacked the energy or efficacy to follow through consistently with their parenting plans "sometimes" to "frequently." As expected, depressed mood and parenting difficulties were significantly inter-correlated in this sample, probably reflecting the impact of parenting challenges on parental mood and the impact of

depressed mood on lowered sense of parenting efficacy. In addition, depressed mood and parenting difficulties were also significantly correlated with lower levels of parent–child conversation, and these three measures loaded together in the factor analysis. Although we initially conceptualized parent–child conversation as a measure of parent support for learning, empirically it was more closely aligned with measures of parent demoralization. These findings may reflect the degree to which parents' psychological availability and responsiveness support their engagement in parent–child conversation. When parents feel depressed and overwhelmed by parenting challenges, they may be less available for and responsive to their young children, with less frequent and sustained conversations taking place within the parent–child relationship. Child effects may also contribute, such that children who are more challenging behaviorally and have less well-developed language skills increase parenting difficulties and respond less to parent conversational efforts. The prevalence of parental demoralization in this study suggests the importance of considering parental feelings and attitudes in the design of interventions seeking to enhance child school readiness by increasing parental support for learning.

Implications for Practice

A number of interventions have been designed for low-income families, to encourage parents to engage actively with schools and spend more time reading, talking, or playing with their children, thereby targeting support for learning. For example, in the Parent–Child Home Program (Levenstein et al. 1998), home visitors deliver toys, books, and learning games, modeling and discussing their use with parents. The goal is to increase positive parent–child interaction and conversation as a means of improving the cognitive stimulation and language support available to preschool children growing up in disadvantaged circumstances (Madden et al. 1984). Similarly, the Home Instruction Program for Preschool Youngsters (HIPPY) uses home visits to provide parents with books and parent–child activities during the child's pre-kindergarten and kindergarten years (Baker et al. 1999). Each of these programs has shown promise in evaluation studies examining child cognitive and social–emotional school readiness outcomes, but mixed evidence of their effectiveness has emerged in rigorous randomized trials (Baker et al. 1999; Madden et al. 1984). Recruiting and retaining parents in this kind of program has proven to be quite difficult (Welsh et al. 2014). It is possible that parent demoralization may undermine these intervention efforts, as parents who feel depressed, overwhelmed, and ineffective may be unable to interact with their children in developmentally facilitative ways, even when offered suggestions regarding how to do so and provided with materials. Further research is needed to explore this possibility and to determine whether intervention effects might be strengthened if program components targeting the social–emotional needs and demoralization of parents were added.

There are school readiness programs for parents that focus primarily on parenting practices, which are designed to promote parental confidence and efficacy in managing challenging child behaviors. For example, the Incredible Years parenting program, which focuses on parent management training, was adapted for the parents of children attending Head Start (Webster-Stratton 1998; Webster-Stratton et al. 2001). This program proved effective at decreasing the disruptive behavior problems of children who showed high pretreatment rates of problem behaviors (Reid et al. 2004) but did not target support for learning, thereby potentially limiting the program's impact on child school readiness. In addition, whereas the Incredible Years program focuses primarily on managing challenging child behaviors, it does not focus on parental efficacy in or feelings about other

areas of the parent–child relationship, such as conversation and the provision of emotional support. In general, the design of parent-focused school readiness interventions for at-risk families may benefit from broader goals that take into account the importance of increasing parental support for learning as well as addressing parental feelings of depressed mood and low efficacy. Additional intervention research is needed to identify optimal approaches that address these multiple parenting needs.

Study Strengths and Limitations

This study used a multimodal assessment approach, which showed that parent ratings of their own feelings, attitudes, and behaviors were meaningfully related to teachers' views of children's cognitive and social–emotional competence. In addition, this study examined the relation between parenting and child school readiness in low-SES families and demonstrated that parental demoralization and support for learning significantly and independently affect child school readiness.

In the context of these strengths, this study also had a number of limitations that should be considered when interpreting the findings. First, the sample was relatively small and select. The children in the study were identified as low in reading readiness at school entry and attended schools that served large numbers of disadvantaged students. Such homogeneity would likely attenuate findings, rather than inflate them, but the nature of the sample limits the confidence with which the results may be generalized to other samples. Additionally, outcomes of the 117 children in the study were rated by 18 teachers, thus they are not independent of one another. Moreover, although the sample was ethnically diverse, some important demographic groups were not represented, most notably those who were learning English as a second language. Thus, it remains unclear whether the results found in this study would generalize to immigrant or other English language learning families. However, in other studies using somewhat different samples, similar patterns have been found (Feder et al. 2009; Watamura et al. 2011).

Another important limitation of our study was the concurrent nature of the data. Because parent and child data were collected simultaneously and at only one time point, we cannot make inferences regarding prediction or direction of effects. While some longitudinal research on parenting and children's school adjustment would suggest that parents' attitudes, beliefs, and behaviors predict children's achievement (Rodriguez et al. 2009; Silvén et al. 2002), other studies highlight the importance of child characteristics such as impulse control and cooperativeness in shaping parent attitudes and parent–child interactions (Anderson et al. 1986; Cunningham and Boyle 2002) and in moderating the impact of parenting on the child's psychosocial outcomes (Blandon et al. 2010). It is likely that children's outcomes are frequently the result of complex, transactional interaction patterns that influence one another over time (Sameroff and Chandler 1975). Replication of findings with longitudinal data and sample sizes large enough to examine interrelations among multiple aspects of both parent and child functioning is needed. Furthermore, parenting dimensions were assessed using parental self-report only. Assessing parenting behaviors and the home ecology (e.g., frequency of learning opportunities, access to parental support) using additional methods would allow stronger tests of this study's findings. Finally, several of our measures were designed for the study, and therefore their psychometric properties are still being tested. Although all but one (parent–child conversations) had good internal consistency, further validation of these measures with other samples is needed.

In sum, this study contributes to the growing literature illuminating the relations among dimensions of parenting and indicators of children's school readiness. The results confirm that the parenting constructs of demoralization and support for learning are both meaningfully related to children's school adjustment and suggest the importance of addressing both parental psychosocial adjustment and provision of supportive learning environments when developing parent-focused school readiness interventions. As we seek to close the persistent achievement gap that limits the potential of young children in poverty, research illuminating the role played by various aspects of parenting on child adjustment is needed, to help inform and refine school readiness interventions.

Acknowledgments Research for this project was supported by a grant from the W. K. Kellogg Foundation and by National Institute of Child Health and Human Development grant HD046064.

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