

Parent characteristics, economic stress and neighborhood context as predictors of parent involvement in preschool children's education

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Abstract:

This study examines factors related to three dimensions of parent involvement in preschool: school-based involvement, home-based involvement, and the parent-teacher relationship. Participants were 154 predominantly African American parents recruited from two Head Start programs. Results of bivariate and canonical correlation analyses support the validity of a multi-dimensional, ecological conceptualization of parent involvement. Perceived context variables, including economic stress and neighborhood social disorder, related negatively to parent involvement. Parent characteristics, including sense of efficacy regarding education and level of education, related positively to parent involvement. Regression analyses detected different patterns of association between predictors and the three dimensions of parent involvement. Parent characteristics were associated with home involvement, while perceived context variables were predictive of the teacher-parent relationship. Implications of differential predictors for different domains of parent involvement and directions for future research and intervention with low-income families are discussed.

Keywords: Parent-school relationship; Project Head Start; Neighborhoods; Ecological factors; Parental attitudes; Preschool teachers

Article:

Introduction

Children's development is influenced by factors at different ecological levels, including the family, the school, the neighborhood, and society (Aber, Gephart, Brooks-Gunn, & Connell, 1997). For many years, researchers examined the separate impacts of family and school on developmental trajectories, but focus has shifted to studying the link between these two settings as a determinant of child outcomes ([Epstein, 1996] and [Grolnick and Slowiaczek, 1994]). This home-school connection is represented in the early childhood and educational literature by the construct of *parent involvement*, which refers to parents' participation in the education of their children through behaviors that range from ideological support of education to active communication with school personnel. For children from low-income families, parent involvement in education can be a key protective factor that fosters cognitive and emotional resilience in the face of multiple stressors ([Garmezy, 1991], [Myers and Taylor, 1998] and [Shumow et al., 1999]). Thorough investigation into parent involvement and the determinants of a high quality home-school connection is of considerable importance for understanding preschool children's development ([Comer and Haynes, 1991] and [Epstein and Dauber, 1991]).

Head Start, an educational program initiated in the 1960s, has developed into the largest federally funded program promoting school readiness for low-income preschool children. The enriched preschool services offered by Head Start, including formalized involvement of parents, help children enter kindergarten with better-developed cognitive and social skills (Takanishi & DeLeon, 1994). Because Head Start programs have long recognized parent involvement as a key component of school success for low-income children (U.S. Department of Health and Human Services, 2000), they provide an ideal context in which to examine the complexities of the home–school relationship during the preschool years. Using survey data obtained from over 150 minority families with children attending a Head Start program, the current paper extends the literature by using a multi-method approach to study parent characteristics and contextual variables, including neighborhood features, which may be predictive of parent involvement.

Involving parents in the educational process is particularly important for maximizing low-income children's opportunities for academic success, as it has the potential to lessen the discontinuity between the home and school environment ([Mendez and Fogle, 2002] and [Slaughter-Defoe, 1995]). By involving parents, teachers' knowledge of their students' socio-cultural context is enhanced, thereby helping them to deliver more culturally appropriate educational services. Parents are also exposed to teachers who may model age-appropriate, educational interactions with children (Haynes & Ben-Avie, 1996). Parent involvement can promote positive adaptation to school and protect against negative outcomes for low-income children, such as conduct problems or school failure (Alexander & Entwisle, 1996). In a study of resilience among elementary-aged children, parent involvement was found to offset the negative effects of living in a low-income, high-crime neighborhood on children's academic performance (Shumow et al., 1999). Unfortunately, rigorous studies of the specific benefits associated with parent involvement for low-income families during preschool are lacking (Mendez, submitted for publication).

Multi-faceted nature of parent involvement

Parent involvement is frequently defined in school-centered terms, such as the frequency of parents' visits to the school to volunteer or attend a conference with a teacher (Fantuzzo, Tighe, & Childs, 2000). However, parent involvement in children's education can take a number of forms, both within the home and at school ([Grolnick and Slowiaczek, 1994] and [Parker et al., 1999]). As increasing numbers of low-income parents are experiencing significant time constraints related to work, it is important for schools to offer ways for parents to be involved at home (Marcon, 1999). Teacher and school characteristics may also be related to levels of parent involvement (Eccles & Harold, 1996). Research has shown that teachers who hold more positive attitudes toward parent involvement are more successful in involving “hard-to-reach parents,” including working parents, single parents, and parents with low levels of education (Epstein & Dauber, 1991). One study of Head Start staff practices found that when teachers received more in-service trainings and offered more academically oriented activities for children at school, parents of their students engaged in a greater variety of home-based learning activities (Barnes, Guevara, Garcia, Levin, & Connell, 1997). Assessment of parent–teacher relationships may therefore play an important role in enhancing our understanding of parent involvement.

Most recent models of parent involvement incorporate both home-based and school-based activities ([Epstein, 1996] and [Fantuzzo et al., 2000]), yet few studies include objective measures of involvement or consider the quality of the parent–teacher relationship. A major contribution of the current paper is the use of a multidimensional, ecologically based, multi-informant approach to the study of parent involvement. To this end, we obtained parent ratings of their involvement in education at home and school, teacher ratings of their relationship with each parent, and objective records of parent participation in Head Start center events and meetings. These four dimensions represent overlapping yet distinct components of our conceptual model of parent involvement during the preschool years.

Determinants of parent involvement

Eccles and Harold (1996) developed a model for examining determinants of parent involvement that takes into account the multiple ecological systems influencing children. According to this model, parent involvement is determined at the most proximal level by parents' beliefs and values, as well as teachers' beliefs and practices specific to parent involvement. At more distal levels, other child, parent, teacher, school, and neighborhood characteristics may have both direct and indirect effects on parent involvement. For a fuller understanding of the factors that lead some parents to be more involved than others, the current study considered multi-level correlates of parent involvement, including a range of proximal and more distal factors. This section reviews some prior work involving key parent characteristics and contextual variables that are included as predictors of parent involvement in our study.

Family demographics are consistently related to levels of parent involvement in education. For example, single parents tend to be less involved in educational activities with their children than married parents (Zill, 1996). Studies of the role of socioeconomic status (SES) in parent involvement suggest that lower SES parents are typically less involved in their children's schools than middle or high SES parents (Dornbusch & Ritter, 1988). Parents with higher levels of education have also been found to be more involved in their children's learning than parents with lower levels of education (Fantuzzo et al., 2000). Hoover-Dempsey and Sandler (1995) argue, however, that while demographic factors play a role, they are not the primary determinants of whether and how parents become involved in their children's schooling. Instead, it is likely that demographic variables serve as proxy variables for more complex dynamics within individuals and communities (Coulton, Korbin, & Su, 1996), such as parenting efficacy, perceived economic stress, and neighborhood context.

Parenting efficacy (i.e., a person's belief in his or her own competence to achieve a desired parenting outcome) has been identified as a key determinant of parent involvement (Hoover-Dempsey & Sandler, 1995). Downer and Mendez (2005) found significant relations between African American fathers' self-reported efficacy regarding education and frequency of home-based educational activities with their children enrolled in Head Start. Similarly, there is evidence that parents with internal locus of control are more involved in educational activities at home and at school than parents with external locus of control (Schaefer, 1991). It seems that low-income parents are more likely than middle- and upper-income parents to view teachers as the “experts” in education, which may lead to a lower rate of involvement in educational activities with their children (Crozier, 1999).

Only recently have models of parent involvement acknowledged the influence of more distal factors, including neighborhood context, on parent involvement in education ([Eccles and Harold, 1993] and [Smith et al., 1997]). Neighborhood structural factors such as residential mobility, family disruption, housing and population density, and resource deprivation all contribute to weakened community processes in low-income neighborhoods (Sampson, 1997). Parents from higher-risk, lower resource neighborhoods may focus more on protecting children from dangers than on fostering children's skill development ([Eccles and Harold, 1993], [Furstenberg, 1993] and [O'Neil et al., 2001]). In one of the few identified empirical studies of the issue, Smith et al. (1997) found that neighborhood climate was significantly associated with parent involvement at school and at home for elementary school students. Given the growing evidence for neighborhood effects on other family processes, further examination of the relationship between perceived neighborhood context and parent involvement is warranted, particularly among parents of younger children (Mendez, Stillman, LaForett, Wandersman, & Flaspohler, 2004).

Research questions and hypotheses

The present study examines parent characteristics and perceived context in relation to the multidimensional construct of parent involvement. It is hypothesized that parent involvement in Head Start programs is best conceptualized as a set of interrelated dimensions involving home activities, school-related contact, and the relationships between teachers and parents. We intended to test whether parent involvement could be predicted by parents' perceptions of their neighborhood context, parents' perceived economic stress, and parents' self-concept-specifically, their sense of efficacy regarding their children's education. Thus, we investigated differential patterns of prediction for the three specific dimensions of parent involvement (home-based involvement, school-based involvement, and parent-teacher relationships). Analyses addressed the following questions: (1) How are parent-report, teacher-report, and an objective record of parent involvement activities associated? (2) How do parent characteristics (education, efficacy) and perceptions of context (street crime, neighborhood disorder, local social networks, economic stress) relate to parent involvement in Head Start? (3) What are the relative contributions of parent characteristics and perceived context to different dimensions of parent involvement?

Method

Sample

Participants in the study were 154 caregivers or parents and 12 classroom teachers from two Head Start centers in a medium-sized metropolitan area in the southeastern United States. The children of these caregivers ranged in age from three to five and boys and girls were equally represented. Ninety-five percent of the participating caregivers identified themselves as African American, 5% reported they were European American, and 1% identified as Bi-racial. Sixty-two percent of the participants were single, 22% percent were married, 6% were divorced, 7% were separated, and 4% were widowed. A majority of the participants were mothers (87%), but the sample also contained other primary caregivers, including fathers (9%), grandmothers (3%), and aunts (1%). Most participants (67%) lived in rented homes, 20% percent were homeowners, and another 9% were staying with friends. Twenty-eight percent of the participants had not moved at all in the past 3 years, whereas 72% of the families had moved one or more times during the same period. The majority of participants (56%) were employed full-time, while 16% percent were employed part-time, 14% were unemployed and looking for work, 8% identified

themselves as homemakers, and 5% indicated that they were supported by disability benefits. All participants had at least some high school education, and almost 80% had earned a high school degree or reached a higher level of education. Center One had five classrooms, with a total of 96 children enrolled. Center Two had eight classrooms, with 158 children enrolled. Participation rates were acceptable at both centers (64% and 63%, respectively). All participating teachers were African American women.

Measures

Demographics

Caregivers completed a brief demographic survey regarding their relationship to the Head Start student, their ethnicity, marital status, employment status, education level, living situation, ratio of adults to children in the household, and number of residential moves in the past five years.

Economic stress

To assess parents' perceptions of economic stress, we administered two items developed and validated by Conger and colleagues (1992). These items are rated on a 4-point Likert scale, assessing the degree to which parents' income is sufficient to meet their expenses. Prior studies found these items to correlate with each other at .65 (Conger et al., 1992), and to have a Cronbach's alpha of .81 (Whitbeck et al., 1997). In the current study, the *economic stress* scale had a Cronbach's alpha of .84.

Neighborhood quality

The *Neighborhood Characteristics Questionnaire* (NCQ), consisting of four subscales, was used to assess parents' perceptions of their neighborhoods on both structural and social dimensions (Barnes McGuire, 1997). Items from three of the subscales were utilized in the current study. The Street Crime and Neighborhood Quality subscale assesses parents' perceptions of the frequency of violent crime in their neighborhoods and their general perceptions of the quality of their neighborhoods as places to live and raise children. The Neighborhood Disorder subscale assesses the presence of "incivilities" in parents' neighborhoods, including litter, graffiti, public drug and alcohol use, and abandoned buildings. The Local Social Networks subscale provides a measure of social cohesion by assessing the number of people parents know in their neighborhoods, the number of friends they have in the neighborhood and the quality of their contact with neighbors. A previous study showed that the NCQ has good internal consistency: the Street Crime and Neighborhood Quality Scale had a Cronbach's alpha of .85, the Local Social Networks Scale had a Cronbach's alpha of .82, and the Disorder Scale had a Cronbach's alpha of .77 (Barnes McGuire, 1997). This measure was designed for use with parents of young children, and has been shown to be sensitive to neighborhood variability in communities with many risk factors (Barnes McGuire, 1997). In the current study, the internal consistency of all three subscales was adequate: Cronbach's alpha for *street crime* was .86, for *neighborhood disorder* was .76, and for *local social networks* was .90.

Parent efficacy

The *About Being a Parent Scale* (ABPS; Wentzel, 1993) was adapted from a measure of teacher efficacy developed by Hoy and Woolfolk in 1993 (see Seefeldt, Denton, Galper, & Younoszai, 1998). The ABPS assesses parents' beliefs about their ability to influence their children's educational outcomes, and it includes such items as, "Even a parent with good teaching abilities

cannot teach his or her child as well as a classroom teacher,” and “Parents do not have a powerful influence on children's achievement when all factors are considered.” Parents rate their agreement with each item along a 6-point Likert scale. The scale has demonstrated good internal consistency with a Head Start population in past research (Seefeldt et al., 1998), and in the current study Cronbach's alpha for the *parent efficacy* items was .79.

Parent involvement

Parent involvement was assessed using data from three sources: parent self-report, teacher ratings, and an objective count of parent attendance at center events and meetings. The parent self-report measure was the *Family Involvement Questionnaire* (FIQ), a multidimensional measure of parent involvement in early childhood education (Fantuzzo et al., 2000). The FIQ was developed for and field-tested with low-income families of preschool children, ensuring its validity for use with the current target population. In the measurement development study, content validity was established by using focus groups of ethnic minority parents of preschool children to generate items for types of involvement. Factor analytic techniques confirmed three independent constructs of parent involvement for this measure: Home-based, School-based, and Home–School Conferencing. The Home-based Involvement subscale assesses behaviors that parents engage in at home to promote learning, including provision of learning materials and initiation of learning activities for their children at home or in the community. The School-based Involvement subscale assesses parents' participation in activities such as volunteering in the classroom and going on class trips with the children. The Home–School Conferencing subscale assesses communication between school personnel and parents regarding children's difficulties and accomplishments in the classroom. Previous research has shown the internal consistency of the FIQ subscales to be high, with alpha coefficients greater than .80 (Fantuzzo et al., 2000). In the present study, the School-based Involvement and Home–School Conferencing subscales were composited to create a single *school-based involvement* variable. For parsimony, this composite ($\alpha = .90$) and *home-based involvement* ($\alpha = .88$) were utilized in regression analyses.

The Connection Sort, a new method for obtaining teacher ratings of parent involvement, was utilized in this study to assess *teachers' relationship with parents*. Teachers were asked to place parents into one of four categories: “strongly connected,” “moderately connected,” “a little connected,” or “not connected” with the process of their children's education. First, the names of every child in each class were written on individual cards. Next, classroom teachers sorted their students into four piles based on their level of connection with each child's parent or caregiver. Teachers were provided with short definitions for the four categories, including behavioral examples generated by the authors, and were asked to consider parents' involvement and interactions with them from the start of the school year until the time of the assessment. For example, “strongly connected” parents have contact with the teacher “once a week or more,” and the teacher knows them “quite well.” Parents who are “a little connected” have contact with the teacher only “once or twice” during the year and are “usually hard to reach” (full category definitions are available from the authors). Parents were then assigned a score of 1, 2, 3, or 4, based on the teacher's rating. The advantage of the sorting technique is that it offers teachers a visual representation of the categories of involvement to help them consider the quality of each parent's involvement. Teachers are able to modify the placement of parents in a more interactive fashion than is typically possible with a Likert-type rating scale.

	1	2	3	4	5	6	7	8	9	10	11	12
3-Parenting efficacy	.01	.26 * **	–									
4-Difficulty making ends meet	–.05	–.27 * **	–.13	–								
5-Street crime	.09	–.15	–.23 * **	.23 * *	–							
6-Neighborhood disorder	–.01	–.13	–.17 *	.16	.69 * **	–						
7-Local social networks	–.16 *	.01	.07	–.03	–.08	–.13	–					
8-Parent–teacher relationship (Q-sort)	–.15	.15	.07	–.19 *	–.08	–.20 *	.02	–				
9-Home-based parent involvement (FIQ)	–.04	.20 * *	.21 * *	–.11	–.10	–.14	.20 * *	.15	–			
10-School-based parent involvement (FIQ)	–.13	.05	.03	–.09	–.10	–.12	.27 * ** *	.20 * *	.44 * ** *	–		
11-Home–school conferencing (FIQ)	–.06	.14	.08	–.12	–.03	–.09	.20 * *	.15	.60 * ** *	.74 * ** *	–	
12-Parent attendance at Head Start center	–	.31 * *	.18	–.18	–.13	–.08	.14	.30 * **	.23	.41 * **	.34 * **	–
Mean	–	6.27	4.78	2.60	4.28	8.49	1.56	3.38	3.13	1.77	2.06	4.38

	1	2	3	4	5	6	7	8	9	10	11	12
Standard deviation	–	1.48	1.04	.82	4.03	5.42	1.7 7	.76	.58	.55	.59	3.7 6

FIQ = Family Involvement Questionnaire.

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

^a Mean and standard deviation not reported because this is a dichotomous variable.

Following this step, individual hierarchical linear regression analyses were used to more precisely examine the relative predictive power of each variable in explaining variance associated with the three dimensions of parent involvement: home-based involvement, school-based involvement, and parent–teacher relationship. Predictor variables were entered into each model in the following order: Center, Parent Characteristics (education and efficacy) and Perceived Context (street crime, neighborhood disorder, local social networks, and economic stress).

Results

Associations among measures of parent involvement

In examining the pattern of intercorrelations across measures, the three subscales of the Family Involvement Questionnaire (FIQ) were highly correlated with one another, though more so for School-based Involvement and Home–School Conferencing ($r = .74, p < .001$). Teachers' ratings of their relationship with parents were significantly correlated with parent reports of School-based Involvement ($r = .20, p < .05$), but were not significantly correlated with parent reports of Home-based Involvement or Home–School Conferencing. Additionally, parents' attendance at center events (for Center One only) significantly correlated with teacher ratings of their relationship with parents ($r = .30, p < .05$), School-based Involvement ($r = .41, p < .01$) and Home–School Conferencing ($r = .34, p < .01$). Attendance was not significantly correlated with Home-based Involvement ($r = .23$). Because the objective count of parent attendance was only available from parents at Center One, we did not further analyze these data. We created a composite variable due to the high degree of overlap and conceptual similarity between Home–School Conferencing and School-based Involvement.

Relations among parent characteristics, perceived context, and parent involvement

Canonical correlation analysis confirmed the association between the set of predictors and our multidimensional assessment of parent involvement. Specifically, this analysis yielded four variate pairs within the canonical structure; only the first canonical correlation (.35) accounted for a significant amount of the overlapping variance (12%) between the sets of variables. With the four canonical correlations included, the model was statistically significant ($F = 1.81, p < .01$). Without the first variate, the model was no longer significant ($F = 1.64, p < .06$). This sole significant variate, named “global parent involvement,” reveals a significant association between several parent characteristics/perceived context variables and the set of parent involvement dimensions. Variables with a salient loading of .40 or greater (Weiss, 1972) were: (1) parent efficacy; (2) economic stress; and (3) neighborhood disorder. For the variables comprising the parent involvement set, all four dimensions contributed to the solution, with salient loadings exceeding .40 (see Fig. 1). This analysis confirms that each measure of parent involvement makes a contribution to the overall conceptualization of a multidimensional

construct. Also, global parent involvement is positively associated with parents' efficacy regarding education, and negatively associated with perceived economic stress and neighborhood disorder.

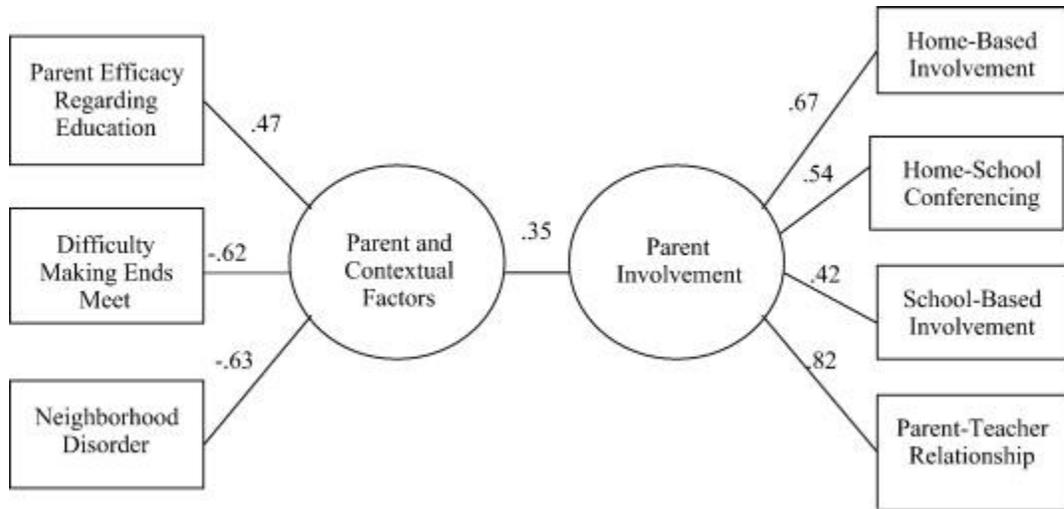


Fig. 1.

Relative contribution of parent characteristics and perceived context to variation in three specific dimensions of parent involvement

To provide greater specificity to our understanding of each dimension of parent involvement, we examined three hierarchical regression models. Parent–teacher relationship, home-based involvement, and school-based involvement (a composite of School-based Involvement and Home–School Conferencing of the FIQ) served as the dependent variables. Center was entered first in each model as a covariate, followed by parent characteristics (education, efficacy) and perceived context (street crime, neighborhood disorder, local social networks, economic stress). Table 2 displays the standardized regression coefficients from final models and significance tests for each model, as well as total R^2 's and changes in R^2 for each block of predictors.

Table 2.

Hierarchical linear regression results from predicting three dimensions of parent involvement^a

	Parent–teacher relationship	Home-based involvement	School-based involvement
Step 1 (R^2 change)	.02 *	.01	.01
Center	– .19 *	– .02	– .07
Step 2 (R^2 change)	.03	.07 * * *	.01
Parent education	.11	.15 *	.08
Parenting efficacy	.01	.15 *	.01
Step 3 (R^2 change)	.08 * *	.04	.07 * *

	Parent–teacher relationship	Home-based involvement	School-based involvement
Street crime	.18	.05	.04
Neighborhood disorder	– .32 * * *	– .11	– .11
Local social networks	– .05	.18 * *	.22 * * *
Economic stress	– .16 *	– .03	– .08
R^2	.13	.12	.09
Model F	2.77 * * *	2.62 * *	2.00 *

$N = 141$ for parent–teacher relationship model and 148 for home- and school-based involvement models.

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

^a Standardized betas from final model.

The regression model for teachers' relationship with parents was significant ($F[6,140] = 2.72$, $p < .01$), accounting for 12% of the total variance. Only the perceived context block contributed to a significant R^2 change (8%); specifically, parents reporting higher levels of economic stress and disorder in their neighborhoods were rated lower by teachers in regard to the quality of the parent–teacher relationship. There also was a slight trend toward teachers in one center providing higher relationship ratings as compared with teachers in the other center.

The regression model predicting parents' reported home-based involvement was also significant ($F[6,147] = 2.62$, $p < .05$). The set of predictors accounted for 12% of the variance in home-based involvement, but only the parent characteristic block contributed to a significant R^2 change (7%). In particular, there was a trend toward parents reporting greater home involvement when they were more educated and reported greater feelings of efficacy regarding their children's education. Also, though the perceived context block was not significant, local social networks were positively linked to home-based involvement.

Finally, the overall school-based involvement model showed marginal significance ($F[6,147] = 2.00$, $p < .06$). As a set, the predictors accounted for 9% of the variance in school-based involvement, but only the perceived context block resulted in a significant R^2 change (7%). Specifically, parents who reported being more involved at school also perceived that they lived in more socially cohesive, supportive neighborhoods.

Discussion

The purpose of this study was to gain a better understanding of the parent characteristics and perceptions of context associated with parents' involvement in education within Head Start programs. Several significant predictors of parent involvement were identified for this sample, and results confirmed the importance of considering multiple dimensions of involvement during

preschool. Moreover, multiple regression analyses detected combinations of factors that predicted different dimensions of parent involvement, which may be relevant for policy and practice in early childhood education programs serving low-income populations.

Multidimensionality of parent involvement

The canonical correlation analysis was useful in providing empirical support for our multidimensional model of parent involvement during preschool. The dimensions of home involvement, school involvement, home–school conferencing, and teachers' connection with parents were loaded significantly on a single canonical variate. This suggests that, despite representing conceptually distinct dimensions of parent involvement, all four variables are part of the same general construct of parent involvement. The inter-relatedness of these dimensions argues for the multidimensional conception of parent involvement employed in this study, and speaks to the importance of considering aspects of the surrounding context that influence different types of parent involvement. However, some dimensions (e.g., school involvement and conferencing) may have more overlap than other more distinct elements, especially activities in the home and the parent–teacher relationship.

Considering the associations among the dimensions of parent involvement is also interesting, particularly given the use of a multi-modal assessment strategy. First, the objective attendance records and teacher reports of connection validate the parent reports of school involvement and home–school conferencing. The converging pattern of associations reinforces the idea that these dimensions tap into activities that are dependent upon parent interaction within the school setting. Based on these data, it is likely that a stronger relationship between teachers and parents is fostered by interactions within the school setting, which may run counter to a standard preschool practice of conducting a home visit twice per year. Therefore, early childhood practice that increases opportunities for parent visitation with teachers in school settings may be an underutilized approach to fostering healthy home–school connection during preschool.

A second noteworthy pattern is that parents' reports of their involvement at home are unrelated to objective indicators of attendance at school events or to the teacher–parent relationship. We believe these results show the relative independence of educational involvement in the home and school contexts. For example, teachers may be relatively unaware of parents' home involvement in educational activities, particularly if work schedules or other barriers prevent high quality teacher–parent communication from developing. Alternatively, home involvement may have more to do with individual (e.g., efficacy) and family factors (adult–child ratio, parenting style) than factors associated with the preschool setting. In summary, the results are consistent with our emphasis on an ecological perspective that guides the study of parent involvement across the key settings of home and preschool.

In recent years, there has been an increase in research examining multiple dimensions of parent involvement (see [Fantuzzo et al., 2000], [Grolnick et al., 1997] and [Smith et al., 1997]). The challenge remains, however, to understand more fully the proximal and distal ecological factors that influence different dimensions of parent involvement, in order to inform policies and practices aimed at increasing parent involvement. Prior research on barriers to parent involvement has shown that several factors have a limiting effect: time constraints, including schedule conflicts related to work or school, having a baby or toddler at home, and a lack of

energy or interest ([Gettinger and Guetschow, 1998] and [Parker et al., 2001]). Some parents have more time and interest in center involvement, while others are more comfortable with or available for home involvement. Current findings point to the importance of creating a variety of parent involvement opportunities within Head Start. Historically, parent involvement opportunities have been designed to meet *school* needs (Gettinger & Guetschow, 1998). Instead, staff should make a concerted effort to tap parents' diverse abilities and interests and to consider the limiting circumstances for families, in order to engage as many parents as possible.

Prediction of specific dimensions of parent involvement during preschool

Using a set of parent characteristics and contextual predictors, separate regression analyses were conducted for three dimensions of parent involvement in order to determine whether prediction models are distinctive, as reported in past research with an elementary school sample (Grolnick et al., 1997). Results showed different patterns across the predictors, which may have implications for the development and implementation of school- or home-focused parent involvement interventions.

The parent–teacher relationship

The model predicting teachers' sense of connection with parents accounted for the greatest amount of variance. Significant predictors within this model were perceived context variables, namely parents' reports of neighborhood social disorder and economic stress. There were also significant differences associated with center, with teachers from Center One rating parents as more connected on average than those at Center Two. Size of program may have been an unmeasured variable that could account for these differences. Center Two had almost twice as many classrooms as Center One, which may have contributed to a different school climate or culture—one less conducive to parent involvement. Barker's theory of behavior settings suggests that people in smaller schools are more likely to get involved, and to get involved in multiple ways (Barker, 1978). These data appear to support Barker's theory, though school climate within Head Start centers is an area that merits more careful empirical investigation.

The additional predictors in this model, particularly neighborhood characteristics, are often overlooked in studies of family functioning. Living in a community with greater social disorder has been found to exacerbate parents' psychological distress, very likely leaving them with less energy for activities like developing relationships with their children's teachers (Wandersman & Nation, 1998). In addition, neighborhood social disorder may cause people to stay inside their homes more, thereby depriving their children of potentially enriching educational experiences outside the home (Furstenberg, 1993). Prior research also shows that, as a result of the emotional distress that often accompanies economic hardship, parents are equipped with less energy for involvement in educational activities (McLoyd, 1998). Additionally, the time burden faced by low-income families trying to make ends meet and the greater inflexibility of many low-wage jobs likely interfere with the quality of parent–teacher interactions. Parents working in the service industry, for example, tend to have less control over their work schedules and are less able to take time off for activities with their children (Wright & Smith, 1998). Overcoming such barriers requires schools to engage in alternative, non-traditional practices to promote greater involvement among these parents.

Parent involvement in education at home

The model for home involvement revealed that the block of parent characteristics was most useful in explaining variance, along with the contribution of local social networks. Specifically, parents who were more involved in home educational activities were those parents with more years of education, a greater sense of efficacy regarding their children's education, and a strong social network. It is noteworthy that home involvement is the only dimension of parent involvement for which parent efficacy regarding education was a significant predictor. This may be due to the fact that home involvement is the one dimension that is comprised of decisions driven exclusively by parents. Perhaps more initiative is required on the part of the parent to engage in independent educational activities at home, as compared to attending programs held at the center. In considering relevant intervention strategies, it may be that a parent's strong belief in the importance of his or her role in a child's education is a necessary precursor to extending educational involvement beyond the confines of Head Start and into the home. The present data show that parents who perceived themselves as important agents in the education of their children were more likely to be involved in educational activities as a whole. Parents who endorsed the belief that education of their children was solely the job of the teacher and the school tended to be less involved.

These results are generally consistent with prior work examining ethnic minority families and parental efficacy. For example, Smith and colleagues (1997) found that parents' attitudes toward involvement were related to home involvement but not school involvement. Similarly, Downer and Mendez (2005) showed that African American fathers' ratings of efficacy using the same measure as the present study were associated with greater involvement in education at home, but not at school. In contrast, Grolnick et al. (1997) found that school involvement was affected by parents' efficacy regarding education, while "personal" involvement (analogous to Home Involvement) was not. Perhaps the converging results for ethnic minority families in particular suggest that promoting efficacy or control over one's own environment is a salient dimension upon which to build intervention programming.

Prior work has also confirmed the role of higher educational status in parent involvement, even within a low-income sample. Kohl, Lengua and McMahon (2000) found that parents' education level was positively associated with home involvement, school involvement, and parent-teacher contact, but not with the quality of the parent-teacher relationship. Dauber and Epstein (1993) found both home and school involvement to be significantly related to parents' education level. Fantuzzo and his colleagues (2000) found that home-school conferencing and school involvement were impacted by parental education level, while home involvement was not. The results of the current study confirm some of these findings, but contradict others.

Home involvement was associated with parents' education, while parent ratings of school involvement and home-school conferencing were not. It has been argued that parents who are more highly educated place a greater value on education, and therefore, get more involved in their children's educational activities (Kohl et al., 2000). This would explain the greater degree of home involvement by more educated parents in the present sample, but it does not explain the lack of effect of education on parent-reported school involvement. Again, it may be that school involvement, which is mandated in Head Start programs, is less variable and less sensitive to differences in parents' personal characteristics. The inconsistencies between present findings and

existing literature indicate the need for further research into the impact of education level on different types of parent involvement.

Parent involvement in education at school

The proposed ecological model explained much smaller amounts of variance in parent-reported school involvement/conferencing than in the other dimensions. A strong local social network, defined as perceived social cohesion within parents' neighborhoods, was the only predictor that accounted for a significant amount of variance in school involvement. When parents knew many of the people in their neighborhoods and reported having positive interactions with neighbors, they were more involved at school and participated in home–school conferences. Thus, it may be that having neighbors who can help with child monitoring, for example, makes it easier to get involved at the Head Start center. Alternatively, social networks may be fostered within a smaller, more intimate community, which paves the way for parents to expect social interactions within the school context as well. Prior research has confirmed that neighborhood social support is vital to single mothers' well-being (Goldberg, Greenberger, Hamill, & O'Neil, 1992), a group with a significant representation in the sample for this study. Lastly, the limited variability in reported school involvement (as measured closer to the end of school year) may account for the lack of other significant relationships involving perceived context variables or parent characteristics.

Unique contributions and limitations of the present study

This study extends our understanding of the multidimensionality of parent involvement and ecological factors that may serve as barriers or supports to different types of educational involvement in low-income families during preschool years. A limitation of the study is that the sample of low-income parents may be more involved than usual, due to their participation in Head Start and their involvement in this study. We acknowledge that these results may not generalize to other populations, and the restricted range of involvement can limit our understanding of the phenomenon. We are also unable to conclude that the parent characteristics and ecological variables included in this study are directly responsible for parental involvement levels, which speaks to the need for intervention designs that can test the relative importance of these variables in producing changes in parent involvement (Mendez, submitted for publication). Many of the measures employed in the study were developed and validated for use with a population of African American mothers, which is a strength of this research. Unfortunately, there are likely method effects involving the self-report measures. These could be remedied with additional observational or objective measures (e.g., census data for neighborhood context).

A unique contribution of this study is the support it lends for assessing the personal connection between teachers and parents when considering parent involvement. This dimension of parent involvement deserves further attention, as it appears to be distinct from home involvement and home–school conferencing (Kohl et al., 2000). The Teacher–Parent Connection Sort technique developed for this study emerged as a valuable measurement tool for assessing teachers' perceptions of their relationships with parents. This measure was validated through correlations with the FIQ School Involvement dimension and objective attendance data. This rating technique assesses the quality of parent involvement rather than measuring quantity, and previous research has found quality of parent involvement to be more strongly related to child outcomes than quantity (Kohl et al., 2000). Beyond its usefulness for parent involvement research, this measure

may be used to reflect upon and improve teacher practices. Teachers could use the Connection Sort periodically throughout the school year, in order to assess how well they are reaching the parents in their classroom. Future research could track changes in this relationship over time, as a measure of the outcome of parent involvement interventions. For both practical and research purposes, it would also be interesting to create a similar Connection Sort system by which parents could rate their relationships with teachers.

In summary, the results of the present study provide support for the proposed ecological model of parent involvement, and have important implications for Head Start practitioners interested in increasing parent involvement. It is clear that parent involvement is a function of the interaction between family, school, and community factors and certainly not the responsibility of parents alone. Previous research has shown that parents do not tend to identify economic and neighborhood factors as barriers to parent involvement (Parker et al., 2001). However, current results demonstrate that these factors do, in fact, significantly relate to involvement for many parents. Teachers, too, may be unaware of the significant impact of these contextual variables on parent involvement. Increasing teachers' awareness of the economic and community issues that impact families could foster more positive attitudes toward parents' involvement in their children's education. Understanding the effects of contextual factors, such as perceived economic stress and neighborhood social cohesion, could allow educators to better target their efforts to promote parent involvement.

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