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ABSTRACT
                The relationship of familial and school-based risk
factors to socioemotional and learning problems was assessed in a
sample of 69 Hispanic 3-year-old children in Head Start Programs in
New York City. In a preliminary study of maternal stress, child
temperament was identified as a significant predictor of child
socioemotional problems. School risk factors investigated were
solitary functional play; solitary dramatic play; parallel functional
play; onlooker behavior; negative peer interactions; and attention
span. Instruments used were the Maternal Stress Interview Schedule;
the Miller Assessment for Preschoolers (MAP), which measures neural
foundations, coordination, verbal and nonverbal skills, and complex
tasks; and the Preschool Behavior Questionnaire (PBQ), which measures
hostile-aggressive, anxious-fearful, and hyperactive-distractible
behaviors. Classroom observations were also made. As a result of the
study, 24 percent of the sample were identified as at-risk for
socioemotional problems as measured by the PBQ, and 37 percent were
identified as at-risk for developmental and preacademic problems as
measured by the MAP. Socioemotional problems related most strongly to
school-based solitary play, negative peer interaction, and maternal
reports of child temperament. Learning problems related most strongly
to school-based attention span. Significant interactions relating to
sex were found. The findings support a culturally sensitive,
ecological transactional framework for assessing child behavior. A
57-item bibliography is included. (AC)

INVESTIGATION OF FAMILIAL AND SCHOOL-BASED RISK FACTORS

FOR HISPANIC HEAD START CHILDREN*

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INVESTIGATION OF FAMILIAL AND SCHOOL-BASED RISK FACTORS

FOR HISPANIC HEAD START CHILDREN

Abstract

The relationship of familial and school-based risk factors to socioemotional and learning problems was assessed in a sample of Hispanic 3-year-olds in Head Start Programs in New York City. Socioemotional problems related most strongly to school-based solitary play, negative peer interaction, and maternal reports of child temperament. Learning problems related most strongly to school-based attention span. Significant sex interactions were found. The findings support a culturally sensitive ecological transactional framework in assessing child behavior.

INVESTIGATION OF FAMILIAL AND SCHOOL-BASED RISK FACTORS
FOR HISPANIC HEAD START CHILDREN

Documentation of child behavior problems reveals that a sizable portion of our children are at-risk socially, emotionally, and educationally, with estimates that as many as 21% to 27% of preschoolers exhibit behavior problems (Earls, 1980; Richman, Stevenson, & Graham, 1982; Rickel, Smith, & Sharp, 1979). Prevalence rates vary across class and ethnic group, Hispanic children being at disproportionate risk for learning, behavioral, and mental health problems (Canino, Early, & Rogler, 19(3). Given the extent of child behavior problems in general, and the vulnerability of young Hispanic children in particular, a study exploring familial and school-based risk factors can provide a research base for appropriate early intervention and prevention efforts.

Ecological models are useful frameworks for examining risk and protective factors for developmental outcomes since they contribute to understanding human development in context. The young child is influenced by his immediate family as well as social systems which support family life and parental and child competence (Belsky, 1981; Bronfenbrenner, 1977; Sameroff & Chandler, 1975). Using an ecological model, one level of analysis is to study patterns of behavior across settings, such as behaviors of the child at home and at school (Swap, Prieto, & Harth, 1982). Both home and school are significant socializing forces for the young child, and each may provide early indicators of maladaptation. The transactional nature of the parent-child relationship makes the young child particularly reactive to familial variables and those conditions which enhance family

life. Similarly, in the school setting there must be mutual
adaptation between the child and his teacher, his peers, and the
classroom setting.

Familial Risk Factors

Risk factors associated with maladaptive outcomes for
children include characteristics of the child, the mother, and
the social context (Abidin, 1980; Belsky, 1984). Repeatedly, a
combination of risk factors is the best predictor of outcome
(Rutter, 1987).

More specifically, the relationship between family stress
and subsequent developmental and psychiatric problems in children
includes personal, social, and environmental variables in the
determination of risk (Atlas & Rickel, 1988; Earls, 1983). There
is compelling evidence that chronic strain in the mother's life
is a more powerful predictor of maternal well-being and child
adjustment in low income children than stressful life events
(Belle, 1982; Hall, Williams & Greenberg, 1985). Furthermore, it
may not be stressful circumstances which are significant, but
rather how they influence relationships which are important to
the child (Earls, 1986; Rutter, 1983).

Many Hispanic children are growing up in disadvantaged
families where they experience socioenvironmental stress and a
sense of hopelessness and frustration due to the lack of personal
resources, support networks, and coping strategies (Canino,
Harley & Rogler, 1988; Delgado & Montalvo, 1979; Vega & Miranda,
1985). A preliminary study was conducted by one of the
investigators as the first step in the analysis of familial and
school-based risk factors for Hispanic preschool children. Using
the same sample and outcome measures described in this paper,

Grossman (1991) examined the associations among maternal stress, social and psychological resources, and behavioral and learning problems in young children. Sources of stress included child temperament, housing, health and money. The moderating variables included maternal depression, mastery, role satisfaction, and social support.

Grossman (1991) reported that child temperament was the only significant stressor, accounting for 14% of the variance in child socioemotional behavior. High activity level, one of the child attributes measured in the temperament scale, was the most discriminating variable, a finding previously reported by Thomas & Chess (1977) for children in working class Puerto Rican families.

Role satisfaction also made a small contribution to the prediction model (R2=.04, p=.001). This is consistent with Werner and Galambo's (1985) process of influence model documenting a significant relationship between maternal role satisfaction, mother-child interaction, and child difficulty. Hispanic women experience strain because of sexually defined roles, restricted role expectations, lack of role satisfaction (Munoz, Chan, & Aramas, 1986), and the accompanying sense of fatalism and resignation about their fate (Delgado & Montalvo, 1979). There are also higher rates of maternal depression among Hispanic women compared to general community samples (Telles, 1987; Vega & Miranda, 1985). In the present Head Start sample, 41% of the mothers reported depressive symptomatology as measured by the Center for Epidemiological Studies Depression Scale (CES-D).

Grossman (1991) conducted additional analyses to explain the pathways of influence and the relationships among variables.

Child temperament was a significant predictor of maternal
depression, accounting for 48% of the variance in CES-D scores in
combination with maternal role satisfaction, mastery, and other
maternal stressors. One explanatory model of child behavior
problems is the goodness of fit between child temperament and
maternal psychological variables, e.g., maternal depression and
the child's non-compliance or high activity level.

The findings on familial risk factors support the growing
evidence that temperamental attributes have predictive
significance for developmental psychopathology. Using a goodness
of fit model, temperament may influence the parent-child
relationship and thereby increase child risk when the fit is poor
(Wertlieb, et al. 1987; Barron & Earls, 1984). This transactional
approach combines child characteristics, maternal perceptions of
the child, and maternal mood in the determination of child
behavior problems (Bates, 1980).

School Factors

Canino et al. (1988) surmise that schools may be an arena
where Hispanic children manifest stress responses "because of
their different cultural norms and values and their bilingualism"
(p. 33). Culturally sensitive early intervention models such as
Niños Especiales Program (Bruder, Anderson, Schutz, & Caldera,
1991) have been developed, but there is still little empirical
research examining school indicators of at-risk status for these
children. It would be helpful, therefore, to determine whether
at-risk indicators identified in the literature are also
applicable to Hispanic children.

The quality of young children's play in school, especially the nature of their social interactions, has proven to be a valuable index of functioning (Rubin, 1982b; Rubin, Daniel-Beirness, & Hayvren, 1982). The value of examining children's play for diagnosis, assessment, and treatment is becoming increasingly apparent (Alessandri, 1991; Trostle, 1988). Assessment of minority children has always been problematic because of potential bias in the evaluation instrument. Examination of naturalistic play potentially eliminates such bias. Another attractive aspect of naturalistic observations of children's play is its possible utility by informed teachers, unlike the special training required for many standardized measures.

Inappropriate and low-level solitary forms of play have been identified by Rubin (1982a) as at-risk indicators. Functional or low-level play is characterized primarily by repetitive actions. Inappropriate solitary play occurs when a child engages in dramatic play in isolation rather than in the usual social setting. Specifically, Rubin (1982a) found solitary-functional, solitary-dramatic, and parallel-functional play correlated negatively with indices of social-cognitive skills . Children on the periphery of a group who function as on-lookers rather than participants illustrate another mode of behavior identified as at-risk (Rubin 1985). Although a Canadian sample of preschoolers from lower socio-economic backgrounds was found to engage in more solitary and parallel functional play and in less constructive play than their middle-class counterparts (Rubin, Maioni, & Hornung, 1976), no report was found regarding ethnicity and the prevalence of such behaviors.

Negative peer interactions, such as physical attacks, teasing and quarreling, have been found to be related to problematic functioning (Maccoby & Jacklin, 1980; Rubin, et al. 1982). Consistent reports are available of sex differences in play behavior. Boys reportedly are more physically active, while girls are more often sedentary (Rubin, Fein, & Vandenberg, 1983). There are, however, conflicting findings regarding aggressive behavior which warrant further examination. Claims that boys display more aggressive behavior than girls in both poor and middle-class samples (Maccoby & Jacklin, 1980) have been countered by a meta-analysis which concluded that sex differences in aggressive behavior could not be reliably observed prior to the age of 5 (Tieger, 1980).

Concentration or attention span has been defined by Sylva, Roy and Painter (1980) as the ability to sustain attention and capacity for commitment to one's actions. In their study of 3 1/2 to 5 1/2 year old British children, Sylva et al. (1980) reported a positive relationship between attention span and the complexity of a child's play. Consistent with these findings, Shigaki (1987) also reported a positive relationship between complexity of play and attention span for her Japanese preschool sample. These studies suggest that inability to sustain attention on a task may be an indicator of at-risk behavior.

To summarize, familial and school-based risk factors were analyzed in two stages. In a preliminary study of maternal stress, child temperament/goodness of fit was identified as a significant predictor of child socioemotional problems (Grossman, 1991). School-risk factors investigated were solitary-functional, solitary-dramatic, and parallel-functional play; on-looker

behavior; negative peer interactions; and attention span. The purpose of this study was to determine which of these school-based risk factors, combined with child temperament/goodness of fit, are most salient in relationship to socioemotional and learning problems of Hispanic children.

<div align="center">Method</div>

Subjects

A sample of 69 Hispanic 3-year-old children attending Head Start Programs in New York City served as subjects for the study. Thirty-seven girls and 32 boys were selected from five programs which as a group represented program and geographic variations in the city. Socio-demographic information obtained from the mothers indicated that on average, mothers were 28.8 years old (SD = 5.7 years). Fifty-seven percent were married or living with a boy friend, 19% were separated, 14% were single parents who had never married, and the remainder were divorced or widowed. Forty-four percent of the mothers did not graduate from high school, 23% held high school diplomas, 29% had some post high school or college education, and 4% were college graduates. Over 80% were not working, 61% being full-time homemakers. Seven percent were working full-time while another 10% were employed part-time. Almost two-thirds of the families were receiving public assistance. Approximately two-thirds of the mothers were born outside the United States mainland (primarily in Puerto Rico), but over three-fourths have lived in the United States for over ten years. One third of the mothers spoke predominantly Spanish.

Instruments

Maternal Stress Interview Schedule. The maternal stress measure was a semi-structured interview with six subscales in the

areas of child temperament, housing, health, money, social support, and role satisfaction. The preliminary study reported by Grossman (1991) also included the CES-D scale and the Pearling Mastery Scale (1978). For child temperament/goodness of fit, mothers responded on a 4-point Likert scale to seven questions about their perceptions and reactions to specific attributes of their child, i.e., activity level, mood, adaptability, persistence, child management, degree of bother, and maternal expectations. Coefficient alpha for the scale was .67. Inter-rater reliability for the total instrument was r=96.9 (p<.005) based on 65 items scored simultaneously by two raters. A Spanish version of the interview protocol was also developed.

Miller Assessment for Preschoolers (MAP). The MAP was developed to identify children from 2 1/2 to 5 1/2 years old who exhibit mild to moderate developmental delays and are at-risk for school-related problems (Miller, 1982). The instrument measures five domains: neural foundations, coordination, verbal skills, non-verbal skills, and complex tasks. Good reliabilities have been reported with an inter-rater reliability of .98 for the total scale and test-retest reliability of .81. For this study, an inter-rater reliability of .96 (p<.005) was obtained from five tests scored simultaneously by two raters. Miller (1982) provides evidence of content, criterion-related, and construct validity for the MAP. It was administered in Spanish for Spanish-dominant children.

Preschool Behavior Questionnaire (PBS). The PBQ was developed for the early detection of socioemotional problems in young children (Behar & Stringfield, 1974). The authors report three factors: hostile-aggressive, anxious-fearful, and

hyperactive-distractible behaviors. Designed for teachers to rate children in the context of their peer group, scores can range from 0 to 35. A mean inter-rater reliability of .84 and a mean test-retest reliability of .87 has been reported (Behar & Stringfield, 1974). The test also has been demonstrated to have good discriminative validity in differentiating between normal and disturbed populations (Behar & Stringfield, 1974).

Classroom observations. A "target child" methodology (Sylva, et al. 1980) was utilized for this study. A continuous 10-minute running account of each child's activities was made by an unobtrusive observer with 15-second intervals noted. Observations were made during play periods rather than during time scheduled for routines such as eating and toileting. Each child was observed for two such 10-minute periods, usually on successive days, resulting in 20 minutes of observation per child.

Scoring procedures for activities were an adaptation of those used by Rubin (1982a and 1982b). A total of 12 codes were utilized: solitary-functional, -constructive, and -dramatic; parallel-functional, -constructive, and -dramatic; group-functional, -constructive, and -dramatic; onlooker; unoccupied; and transition as an indicator of attention span. The predominate activity for each 15-second segment was determined and assigned one of these 12 codes.

The quality of children's interactions was coded using categories defined by Furman, Rahe, and Hartup (1979). When the target child was observed interacting with another child or other children, the interaction was rated positive, neutral or negative.

Observations were made by one of the co-investigators and a research assistant. Inter-rater reliability was determined by dual coding of 10% of all protocols randomly selected. This resulted in 92% agreement for activities and 81% agreement for interactions.

Results

Twenty-four percent of the sample, 10 boys and 7 girls, were identified at-risk for socioemotional problems as determined by a score of 17 or above on the PBQ. For the norming population a score of seven constituted the 50th percentile, while the mean for our sample was 10.9 (SD=9.7). Thirty-seven percent of the sample, 12 boys and 11 girls, were identified as at-risk for developmental and preacademic problems by scoring below the 25th percentile on the MAP. The mean for the sample was the 34.2 percentile (SD=22.5). The MAP was not administered to two children, reducing this sample to 67, 31 boys and 36 girls. Sixteen percent of the sample, 6 boys and 5 girls, were identified at-risk on both measures, while 55% performed age appropriately on both instruments.

In preparing the observational data for analysis, a log transformation was applied to normalize the proportional data representing play activities. Solitary play was defined as the log of solitary-functional play plus the log of solitary-dramatic play. Attention span was defined as the log of transition. Logs were also computed for parallel-functional play and onlooker. Frequencies were used for negative peer interactions. A preliminary analysis indicated that child temperament, solitary play, attention span, and negative peer interaction were the most viable independent variables. To increase power, only these

independent variables were entered into the multiple regression analyses.

To rule out problems of multicollinearity, Pearson correlation coefficients were computed between all pairs of the four independent variables identified above. In addition, correlations were computed between each predictor and the product involving that predictor and sex. These products carry the interaction term with sex in the multiple regression (see Table 1). According to Table 1, although correlations between predictors were at most in the moderate range, correlations involving the product terms deserve some note.

Insert Table 1 about here

Table 2 presents the results of a multiple regression analysis of the combined effects of familial and school-based risk factors on child socioemotional behavior after controlling for sex.

Insert Table 2 about here

Solitary play and temperament account for 34% of PBQ variance. While the temperament x sex interaction was significant, the interaction between solitary play and sex was not, perhaps because of the high degree of overlap between solitary play and the product term as noted earlier. Accordingly, to shed additional light on the patterns of relationships by sex between PBQ and familial and school factors, separate analyses by sex were carried out. These analyses suggest that while both solitary

Table 1

Pearson Correlation Coefficients Between Independent and Dependent Variables, and Predictor x Sex Product Terms

	Temp	NegP	Att	Sex	SolSex	TempSex	NegPSex	AttSex	PBQ	MAP
Sol	.17	.04	.44***	.02	.94***	.10	.06	.42***	.49***	-.23*
Temp	—	.26*	.17	.07	.16	.52***	.23*	.23*	.t***	-.10
NegP		—	.0?	-.01	.05	.11	.92***	.10	*	-.13
Att			—	-.16	.42***	-.02	.06	.89***	**	-.40***
Sex				—	.07	.87***	.24*	.20*	.18	-.06
SolSex					—	.15	.09	.47***	.50***	-.25*
TempSex						—	.32**	.32**	.29**	-.11
NegPSex							—	.17	.27*	-.14
AttSex								—	.34**	-.45***
PBQ									—	-.34**

* = .05 level of significance
** = .01 level of significance
*** = .001 level of significance

Table 2

Hierarchical Multiple Regression of Familial and School-Based
Risk Factors Predicting to Child Socioemotional Problems (PBQ)

Predictor	B	Beta	R2	Adj. R2	R2 Change	Sign. F Change	Overall Sign.
ANALYSIS 1. OVERALL (N=69)							
Sex	20.34	1.05	.03	.02	.03	.138	.138
Solitary Play	.31	.05	.27	.24	.23	<.001	<.001
Temperament	2.21	.79	.34	.31	.07	.009	<.001
Interactions:							
Sol/Sex	1.84	.42	.35	.31	.01	.303	<.001
Tem/Sex	-1.06	-1.10	.38	.33	.03	.077	<.001
ANALYSIS 2. GIRLS (N=37)							
Solitary Play	2.15	.33	.16	.14	.16	.014	.014
Temperament	1.15	.46	.37	.33	.20	.002	<.001
ANALYSIS 3. BOYS (N=32)							
Solitary Play	3.99	.59	.36	.33	.36	<.001	<.001
Temperament	.09	.03	.36	.31	.0008	.855	.002

INTERCORRELATIONS OF VARIABLES BY GROUP

	Overall		Girls		Boys	
Sol x PBQ	.49	p<.001	.40	p=.007	.60	p<.001
Tem x PBQ	.36	p=.001	.51	p=.001	.13	p=.232
Sol x Tem	.17	p=.084	.17	p=.163	.17	p=.175

play and temperament are significant predictors for girls, only
solitary play is significant for boys. Moreover, a t test for the
significance of the difference between the regression
coefficients obtained in the independent samples of boys and
girls (Cohen & Cohen 1983) suggest a significant difference by
sex for temperament (t=1.61, p<.10), but not for solitary play
(t=-1.28, NS).

Table 3 presents the results of a multiple regression
analysis of two school risk factors on child socioemotional
behavior after controlling for sex. Solitary play and negative
peer interaction together account for 31% of PBQ variance,
predicting to socioemotional behavior almost as strongly as the
combined familial and school-based risk factors reported above.
Negative peer interaction did not reach an acceptable level of

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Insert Table 3 about here

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significance in the separate analyses by sex where sample sizes
were smaller. In addition, negative peer interaction accounted
for a similar proportion of the variance for both boys and girls.

Table 4 presents the results of a multiple regression
analysis of the effect of the school risk factor attention span
on learning problems. Child temperament did not predict to the
MAP. Attention span accounted for 17% of the variance on the MAP
when controlling for sex; and with the addition of the
significant interaction effect, 21% of the variance was
explained. This interaction effect was explored further through
separate analyses by sex. These analyses indicate that attention
span is a significant predictor only for boys. A t test for the

Table 3

Hierarchical Multiple Regression of School-Based Risk Factors
Predicting to Child Socioemotional Problems (PBQ)

Predictor	B	Beta	R2	Adj. R2	R2 Change	Sign. F Change	Overall Sign.
ANALYSIS 1. OVERALL (N=69)							
Sex	3.06	.16	.03	.02	.03	.138	.138
Solitary Play	1.46	.22	.27	.24	.23	<.001	<.001
Negative Peer	.75	.21	.31	.28	.05	.041	<.001
Interactions:							
Sol/Sex	1.21	.27	.32	.28	.008	.394	<.001
NegP/Sex	-.01	-.004	.32	.27	.000	.990	<.001
ANALYSIS 2. GIRLS (N=37)							
Solitary Play	2.67	.41	.16	.14	.16	.014	.014
Negative Peer	.74	.21	.21	.16	.05	.174	.019
ANALYSIS 3. BOYS (N=32)							
Solitary Play	3.88	.58	.36	.33	.36	<.001	<.001
Negative Peer	.73	.21	.40	.36	.05	.150	.001

INTERCORRELATIONS OF VARIABLES BY GROUP

	Overall		Girls		Boys	
Sol x PBQ	.49	p<.001	.40	p=.007	.60	p<.001
NegP x PBQ	.23	p=.028	.21	p=.110	.27	p=.067
Sol x NegP	.04	p=.380	-.02	p=.465	.10	p=.296

significance of the difference between the regression
coefficients obtained in the independent samples of boys and
girls supported the significant difference by sex (t=-1.70,
p<.05).

Insert Table 4 about here

Discussion

The present study identified several predictors of
socioemotional and learning problems in young Hispanic children.
The findings support Felner and Felner's (1989) ecological
transactional framework in its attempt to measure a number of
child/setting interactions and the relationship between settings.
Implications of the findings and recommendations for future
research are presented.

The findings that solitary play and negative peer
interaction account for a significant and substantial portion of
PBQ variance is consistent with the literature that identifies
solitary-functional play, solitary-dramatic play, and negative
peer interactions as risk behaviors (Rubin, 1982a; Rubin et al.,
1982). A recent study comparing the play behavior of maltreated
and nonmaltreated 4-5-year-olds provides further support for a
higher incidence of functional play in at-risk children
(Alessandri, 1991). Familial risk factors were not as
significant, yet the greater salience of school predictors in
this study may be explained, in part, by the fact that both the
teacher rated PBQ and the formal observations were based on child
performance in school.

Table 4

Hierarchical Multiple Regression of School-Based Risk Factor
Predicting to Developmental and Preacademic Problems (MAP)

Predictor	B	Beta	R2	Adj. R2	R2 Change	Sign. F Change	Overall Sign.
ANALYSIS 1. OVERALL (N=67)							
Sex	4.22	.09	.003	-.01	.003	.644	.644
Attention Span	4.96	.17	.17	.14	.17	<.001	.003
Interaction Att/Sex	-11.19	-.62	.21	.17	.04	.094	.002
ANALYSIS 2. GIRLS (N=36)							
Attention Span	-6.23	-.22	.05	.02	.05	.202	.202
ANALYSIS 3. BOYS (N=31)							
Attention Span	-17.42	-.58	.34	.32	.34	<.001	<.001

INTERCORRELATIONS OF VARIABLES BY GROUP

	Overall		Girls		Boys	
Att x MAP	-.40	p<.001	-.22	p=.101	-.58	p<.001

More boys than girls were identified at-risk, moreover,
different predictor variables appear to operate for each sex.
Solitary play was a markedly stronger predictor of socioemotional
behavior for boys than for girls; whereas child
temperament/goodness of fit was only significant for girls.
Contrary to the literature supporting a greater vulnerability to
family stress for boys, our data indicate more maternal reports
of stress in the parent-child relationship for girls. At this
time, we can only postulate that cultural factors may play a role
in determining maternal tolerance for child behavior. There are
reported sex role differences between boys and girls in Hispanic
families, and highly active, demanding behavior is contrary to
the sexually defined submissive role for females (Canino et al.
1988). Culturally prescribed norms may explain why mothers are
more accepting of externalizing, noncompliant behavior in boys.
In contrast to findings from other studies, sex differences in
negative peer interactions were not found. This supports Tieger's
(1980) claim that sex differences in aggressive behavior cannot
be reliably observed in young children.

For males in our sample, attention span accounted for 34% of
MAP variance, while for girls attention span was not significant.
Attention span may share common variance with the construct
hyperactivity where inability to sustain attention is a factor
(Campbell & Cluss, 1982). Boys have generally been reported to be
more hyperactive than girls (Trites, Dugas, Lynch, & Ferguson,
1979). Further, Alessandri (1991) reported more transitional
behavior, an indicator of attention span, by maltreated as
compared to nonmaltreated children. If a short attention span is
a general indicator of at-risk behavior, it is puzzling why it

was not a significant predictor for girls. One explanation may be that boys in our sample engaged in more solitary-functional play than the girls, a setting where hyperactive or inattentive behaviors could be exhibited without constraint. In contrast, the social settings of parallel and group play may help promote longer attention spans.

Several reasons may explain why two of the school-based factors were not good predictors of socioemotional behavior or developmental and learning problems. First, Rubin (1982a) concluded that parallel-functional play may be a risk predictor for 4- and 5-year-olds, but this may not apply to the younger 3-year-olds in this study for whom such play activity would be more developmentally appropriate. Second, though onlooker behavior was reported by Rubin (1982a) to have a small but significant negative correlation with the PBQ, the finding may be due in part to his sample size which was approximately twice as large as the sample in this study.

For familial risk factors, the findings strengthen the evidence that child temperament is more powerfully associated with behavior problems in early childhood than familial and environmental risk factors which become increasingly significant over time (Earls & Jung, 1987; Werner, 1989). It may be that difficult temperament creates a vulnerability to subsequent stress, or stress in the parent-child relationship. The strong associations among variables lend support to an interactional, process of influence model. For example, child attributes and lack of fit between mother and child can influence maternal mood and the ability to function competently in the maternal role.

Future Research

The identification of familial and school-based predictors of child socioemotional behavior and learning problems is encouraging. Nevertheless, there is a need for replication to determine the robustness of our findings.

The study underscored the importance of a multidimensional approach to the assessment of child behavior problems, and the need to gather data from multiple sources across multiple settings. The findings suggest that significant predictors differ for the two criterion measures; thus, it is helpful to differentiate constitutional and environmental risk factors, both of which are overrepresented in the Hispanic population. The inclusion of home and school transactions is also useful to gain more understanding of child behavior across settings.

There is a need for cross-cultural comparisons, keeping social class constant. It may be that different risk indicators are more salient depending on the cultural sub-group examined, especially for play behaviors. For example, Yawkey and Alvarez-Dominguez (1984) found significant differences in the play behaviors of middle-class Hispanic and Anglo five-year-olds.

Naturalistic observation of a child's play has diagnostic potential as an indicator of the child's general coping skills and social competence. Differences in the level of play have been reported, e.g., maltreated children engaged in more functional play while nonmaltreated children engaged in more constructive play (Alessandri, 1991). The pervasiveness of functional play in our sample limited the predictive power of level of play; nevertheless, this variable should continue to be investigated, particularly in studies with a comparison group. More attention

should also be focused on the context of play and the qualitative dimensions of nonsocial activity. It is important to analyze the underlying reasons for solitary play such as anxiety, low self esteem, poor coping skills, poor interpersonal skills, or peer rejection. Solitary play may be a reaction to the school experience which can become a stressor for Hispanic children who may experience discontinuity between home and school.

Foremost, it is important to conduct culturally sensitive research, including instrumentation and interpretation of findings (Rogler, 1989). For example, goodness of fit for Hispanic girls must be understood in a cultural context. Korn and Gannon (1985) did find differences in parental demands and practices between middle-class Anglo and working-class Puerto Rican families. Since ecological and familial variables may help to explain adverse outcomes for children, research models should include the broader social and cultural context in which the family functions in order to understand maternal competence.

Goodness of fit is also a useful construct to study the nature of children's transactions in different contexts. For example, there is support for the importance of goodness of fit in the school setting (Keogh, 1986), where associations were reported between teacher temperament ratings and teacher attitudes, classroom behavior, and achievement scores (Martin, Nagle, and Paget, 1983). This is another area which deserves further investigation.

Finally, the discontinuities between the familial culture and that of the school must continue to be explored (Conen, 1985). There is a need to gather more epidemiological data on Hispanic families to determine needs and the allocation of

resources for child and family services. This includes longitudinal studies to examine the pathways of maladaptive development. Maternal reports of child difficulty can alert professionals to potential problems in the parent-child relationship, just as poor adaptational responses in the classroom can signal distress. Stability across settings may provide further support for the child's risk status and need for child and family-centered interventions.

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