

Head Start Graduate Student Research Grantees

Local Stakeholder Perspectives on School Readiness: Implications for the National Reporting System

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Background and Significance

Using assessments to provide *program*-level accountability and to guide improvement is growing. The most notable and unprecedented example is the Head Start National Reporting System (NRS). Extensive controversy has broken out within the Head Start community and the early childhood field regarding what the NRS assesses (National Head Start Association, 2004; Meisels & Atkins-Burnett, 2004; Government Accounting Office, 2005; Raver & Zigler, 2004). Most notably, the NRS does not assess children's social and emotional development. Linn (2001, 2004) argues that one of the issues that the development and use of assessment systems ought to explicitly address is what should be assessed. Such choices result in assumptions about 'what matters.'

Although what the NRS assesses has been criticized, it also has potential value and legitimacy among local program stakeholders. Research demonstrates that parents often value academic skills, such as letter naming and counting (Piotrkowski, Botsko, & Matthews, 2000). The skills that the NRS assesses also relate to reading and mathematics skills, which will be the focus in public school. In order to understand the extent to which various aspects of school readiness are valued within a local Head Start program, this study addressed the following research question: What are various stakeholders' (i.e. program staff, parents, kindergarten teachers) beliefs regarding school readiness?

Methods

A multi-site Head Start program that serves rural and urban families for approximately 450 children, 200 of whom are Kindergarten-bound, participated in the study. Within this program, three samples were identified for this study: Head Start staff members (i.e. teachers, management) (n = 33), Head Start parents of kindergarten-eligible children (n = 96), and kindergarten teachers within the county (n = 28). Survey items were adapted from the Kindergarten Teacher Survey on Student Readiness that the National Center for Education Statistics conducted (Heaviside & Farris, 1993). Semi-structured interviews were conducted with representatives from all three groups.

Findings

Local stakeholders value the outcomes that the NRS assesses, but they do not view these outcomes as the most important for school readiness. The most important outcomes are related to social and emotional development. Overall, Head Start staff members and Kindergarten teachers place similar importance on various child outcomes. In contrast, parents valued what the NRS assesses more than the other stakeholder groups. They are also more inclined to view

child outcomes as basic skills, and less likely to differentiate the importance of skills. In interviews, all three stakeholder groups described ecological characteristics important for school readiness, including home-school connections, a quality pre-school experience, and appropriate expectations in kindergarten. Implications of these results for the NRS and use of the NRS within a local program were discussed.

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Aspects of Parenting as Mediators of Familial Risk and Protection on Emergent Literacy and Socioemotional Skills

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Parenting styles and practices are the means through which parents help their children to achieve the goals parents have for them. Theoretically, parenting styles moderate the relation between parenting practices and child outcomes, and have been empirically demonstrated as mediators and moderators. In contrast, parenting practices theoretically have direct effects on child development. The overall purpose of this study is to examine parenting practices and style as mediators through which risk and protection influence the emergent literacy and socioemotional development of children enrolled in Head Start.

Families ($n=237$) were recruited from two Head Start agencies in the Northeastern U.S. Children had a median age of 56 months, were primarily African American (69%), and were roughly split between gender (52% male). Caregivers had a median age of 30 years, were typically the child's mother (77%), reported single-parent status (60%), and were roughly split in employment status (53% employed).

Parents completed questionnaires either at home or at Head Start assessing familial risk and protection, and aspects of parenting. Indicators of risk included poverty (Difficulty Making Ends Meet; Conger, Conger, Elder, Lorenz, Simons, & Whitbeck, 1992) and caregiver depression (shortened CES-D; Radloff, 1977). Protective factors included social support (Family Support Scale; Dunst, Jenkins, & Trivette, 1984), parent efficacy (About Being a Parent Scale; Seefeldt, Denton, Galper, & Younoszai, 1998; Wentzel, 1993), and parent beliefs (Parent Play Beliefs Scale; Fogle & Mendez, in press). Aspects of parenting included parenting practices (FACES parent interview; ACYF, 2001) and parenting style (Preschool Parenting Measure; Sessa, Avenevoli, Steinberg, & Morris, 2001).

Independent examiners assessed children's emergent literacy development within three domains: receptive vocabulary (Peabody Picture Vocabulary Test, Third Edition; Dunn, Dunn, & Dunn, 1997), expressive vocabulary (Expressive One-Word Picture Vocabulary Test, Revised; Gardner, 1990), and code-related skills (four scales of the Developing Skills Checklist; CTB/McGraw-Hill, 1990). Teachers completed questionnaires on children's peer play behaviors (Penn Interactive Peer Play Scale, teacher version; Fantuzzo, Coolahan, Mendez, McDermott, & Sutton-Smith, 1998) and emotion regulation (Emotion Regulation Checklist; Shields & Cicchetti, 1997).

Bivariate correlations were reported for variables relevant to constructs of risk, protection, parenting style, and socioemotional skills. High economic stress related to frequency of caregivers' depressive symptoms ($r = .229$, $p < .001$). Caregivers with a rigid academic focus showed lower parental efficacy ($r = -.234$, $p < .001$) and had less developmentally appropriate beliefs about play ($r = -.295$, $p < .001$). Caregivers reporting high positive affect, responsiveness, and structure showed less hostility toward their children ($r = -.317$; $r = -.235$; $r = -.192$, $p = .003$).

to $< .001$). Finally, children with disruptive peer play styles demonstrated increased difficulties in self-regulation ($r = .156, p < .001$). These analyses provide preliminary support for exploring the content validity of the proposed latent constructs, allowing for subsequent testing two sets of mediational hypotheses: 1) parenting style partially mediates the relation between risk (and protection) and children's socioemotional skills, 2) parenting practices partially mediate the relation between risk and emergent literacy, whereas full mediation is hypothesized when protection is the predictor.

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The Efficacy of a Print Referencing Intervention with Spanish-Speaking Preschoolers

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A critical element of children's school reading readiness is a set of skills that encompass alphabet knowledge, phonological awareness, and print awareness. Evidence indicates that low income children who are English Language Learners are at high risk for developing sufficient competence in these skill areas. As an increasing number of Spanish-speaking children are served in Head Start preschools, it is essential for researchers to identify strategies appropriate for the preschool period that will assist these at-risk children in acquiring the emergent literacy skills necessary for academic success. One method of promoting these skills is through improving the quality of book reading by using print referencing strategies (Ezell & Justice, 2000). These strategies are used by adults to orient children to the distinctive features of written language during book reading interactions.

The purpose of this study was to explore the impact of a classroom-based Spanish and English print referencing intervention on children, teaching staff, and classroom environments. Participants included 73 Spanish-speaking 4-year-old children and 31 teachers and assistants in 18 classrooms randomly assigned to intervention (9 classes) or control (9 classes) conditions. Children in intervention classes participated in 32 sessions of small group shared book reading (16 English and 16 Spanish) with teaching staff using bilingual print referencing prompts. Children in control classes participated in 32 small group sessions using teacher-selected preschool activities. Children were tested at pre- and post-intervention in both Spanish and English using a battery of emergent literacy assessments targeting alphabet knowledge, phonological awareness, and print awareness.

Results for children indicated significant group differences in English alphabet knowledge, Spanish phonological awareness, and Spanish and English print awareness. Children in the intervention group scored higher on these measures at posttest than children in the control group. Results for teaching staff in the intervention group indicated significantly higher spontaneous use of print referencing behaviors during book reading post-intervention. Before the onset of intervention, there was no significant presence of print referencing strategies used by the teaching staff in either group. Little emphasis was placed on written language while reading books, with no questions about words, letters, or sounds posed to children. At post-intervention, significant changes were noted in the spontaneous use of print referencing strategies by teaching staff in intervention classrooms, increasing from 15 to 525 overall instances of print referencing behaviors used during book reading. Results for changes to the classroom environment suggested that the language and literacy environments of intervention classes were significantly higher than control classes as the result of changes to teaching practices. Over the course of this intervention, teaching staff reported that children began to show increasing interest in words in print as well as letter names and sounds. As a result of children's growing interest in emergent literacy skills, teaching staff began to plan more activities that targeted alphabet knowledge, phonological

awareness, and print knowledge. Evidence from this investigation suggests that this intervention was successful at positively impacting children, teaching staff, and classroom environments.

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A Possible Biological Marker of Risk in Parents and Children

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Previous research has found that taste sensitivity to propylthiouracil (PROP) is related to cortisol stress reactivity (Epel & Bartoshuk, 2002), depression (Walker, 2002, Whittemore, 1986, 1990), insecure adult attachment, and decreased parent investment attitudes in low income mothers (Jones, 2004). PROP taste sensitivity may thus function as a potential biological marker for poor outcomes due to stress reactivity in mothers and poor emotion regulation in children. By knowing which families may be most at risk for psychosocial problems, services for parents and children at risk may be individualized to better meet families' needs and enhance child outcomes. The aim of the research is to examine how PROP taste sensitivity is related to stress reactivity in mothers and poor emotion regulation and other developmental functioning in children, and the maternal buffers that may help children with the biological marker.

PROP is a harmless chemical that some people can taste and others cannot. This characteristic is genetically transmitted and remains stable over time. Therefore, it can be measured at any time point and then tested in relation to earlier and later measures.

Participants in this study include 134 mother-child pairs who participated in a local Early Head Start Research and Evaluation (EHSRE) project. All mother child pairs were previously assessed during infancy. Extant data are available for child outcomes from the EHSRE project local data. New measures include the general Labeled Magnitude Scale (gLMS) to rate taste perception of PROP, a subset of the Differentiation of Self Inventory (Skowron & Friedlander, 1998) to rate stress and emotional reactivity in mothers, and ratings of maternal sensitivity and mother and child emotion regulation coded from videotaped observations when the children were 10, 18, 24, 36 months, at pre-kindergarten entry, and at 2nd grade. Emotion regulation was coded using the Emotion Regulation Rating Scale (ERRS: Fogel, Koeyer, & Johnson, 2005) in the mother, child, and dyadic relationship.

Preliminary results indicate that presence of the biological marker follows some patterns of previous research. Mothers who rated the taste of PROP the strongest reported being more anxious (avoidant) in their attachment relationship attitudes, but they did not report being more depressed or stress reactive. Children who rated the taste of PROP the strongest had lower cognitive scores on the BSID/MDI at 24 months. Children who rated the taste the strongest were less emotionally regulated with their mothers at 24 months and at pre-kindergarten. In general, trends were towards taste sensitivity to PROP relating to poorer emotion regulation in children, particularly with mothers who were observed to be less sensitive during the child's early months. Children least sensitive to the taste of PROP appear more resilient to insensitive mothering than children most sensitive to the taste of PROP. The primary aim of this research is to work towards the development of an intervention that addresses biological risk factors in mothers and children in promoting good parenting.

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An Experimental Investigation of Theory-Based Emergent Numeracy Instructional Methods

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Among US math educators, there is currently a movement towards making mathematics more relevant to the lives of children. Given that disparities between home and school environments are more likely to occur for children from culturally diverse low income households, parameters for what constitutes meaningful mathematics need to be investigated for this population which faces disproportional challenges for achieving school readiness. The current research takes the position that an examination of cultural diversity with a strengths-based approach can provide an opportunity for better understanding and facilitating Head Start children's early math learning.

This project involves examining the effects of presenting mathematical content in different types of meaningful contexts. There are two practical and theoretical roots for the approaches investigated. First, the National Council of Teachers of Mathematics (NCTM) encourages practitioners to consider children's interests and everyday activities and to present mathematical concepts in meaningful contexts (NCTM, 2000). In practice, this is often done through embedding mathematics in stories. Second, proponents of culturally consonant instruction stress the importance of presenting academic content through instructional strategies in accord with competencies and inclinations children have developed at home (e.g., movement expressiveness) versus traditional forms (e.g., requiring no movement; Hurley, Boykin, & Allen, 2005).

This project utilizes a randomized pre-post design to evaluate instructional approaches. Participants include 135 children (mean age = 61 months, 96% African American) attending 3 urban Head Start centers. Each child receives a pretest, two instructional sessions that center on skills related to counting, and a posttest. During the pretest and posttest children's general math performance is assessed individually with an adaptation of the Test of Early Mathematics Ability: Third Addition (TEMA-3; Ginsburg & Baroody, 2004).

Participating children are stratified by classroom and randomly assigned to one of four math instruction groups-Math-Only, With-Story, Math-and-Movement and an attention control Comparison group. In the Math-Only condition, participants receive math instruction with manipulatives based on a commercially available preschool math curriculum. In the With-Story condition, the procedure is the same with the exception that the math is embedded in stories designed to provide a meaningful context to highlight the relevance and conceptual nature of the mathematics. In the Math-and-Movement condition, movement is present during instruction (e.g., clapping while counting). Children in the attention-control Comparison group listen to stories and are asked to answer questions that focus on concepts unrelated to those taught in the other conditions (e.g., patterns and shapes).

ANCOVA analysis with data collected to date demonstrates a significant main effect for method of instruction, where $F(3, 130) = 3.82, p < .05$, when covarying for baseline math performance. The posttest performance of children in the Math-and-Movement group exceeded the performance of children in the Comparison group. Similar benefits were not yet evident for the

Math-only and With-Story groups. In increasingly diverse classrooms, teachers need to be prepared with a wide repertoire of strategies to meet the needs of diverse learners (Gay, 2000). The current research explores the intersection of culture and cognition in an effort to provide alternative instructional strategies to meet this need.

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False-belief and Belief-based Emotion Understanding in Urban Head Start Children

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This study investigates the development of theory of mind, specifically the development of false-belief and belief-based emotion understanding, in 155 urban children enrolled in Head Start. The development of these two theory-of-mind skills is foundational for children's perspective-taking abilities. Children's perspective-taking abilities are, in turn, critical to their linguistic and social development.

Holmes, Black, and Miller (1996) note that "mastery of false belief provides the first clear evidence that children realize that beliefs are mental representations and not direct reflections of reality" (p. 263). Thus, a great deal of research has been conducted to better understand the developmental trajectory of children's false-belief understanding (Astington, 1993). Yet, very little of this research has been conducted with children from low-income families (Cutting & Dunn, 1999; Holmes et al., 1996). Much of the theory-of-mind research, however, assumes that the developmental trajectory found in children from higher-SES families is universal (Holmes et al., 1996). Cutting and Dunn (1999) challenged this assumption, finding that children from working-class families did less well on theory-of-mind measures than did their middle class peers. Notably, Holmes and her colleagues (1996) found that on tests of false-belief understanding the performance of children enrolled in Head Start was lower than that reported for children of the same age from higher-SES families.

In addition to the acquisition of false-belief understanding, theory-of-mind research has also documented children's understanding of belief-based emotions (Bradmetz & Schneider, 1999, 2004; de Rosnay, Pons, Harris, & Morrell, 2004; Pons, Lawson, Harris, & de Rosnay, 2003; Tenenbaum, Visscher, Pons, & Harris, 2004). This body of research has found a lag between children's understanding of false beliefs and their understanding of belief-based emotions (Bradmetz & Schneider, 1999, 2004; de Rosnay et al., 2004; Harris, Johnson, Hutton, & Andrews, 1989). Cutting and Dunn (1999) note that studies "hint at poorer emotion understanding in children from deprived backgrounds" (p. 855). Although a few studies of belief-based emotion mention including children from working-class families (Cutting & Dunn, 1999; de Rosnay et al., 2004; Pons et al., 2003), it seems only a Peruvian study looked at children from very low-SES families. Culturally, however, these Peruvian children, raised in an agro-pastoral Quechua village (Tenenbaum et al., 2004), are quite dissimilar from American children enrolled in Head Start.

The present study analyzes the false-belief and belief-based emotion understanding of 155 New York children. Cutting and Dunn (1999) found that "children's false-belief understanding, emotion understanding, and language abilities were clearly related to one another" (p. 859). Thus, analyses investigate the relationship between the children's language development and their development of false-belief and belief-based emotion understanding. Analyses exploring

the effect of children's home language on these two aspects of theory of mind will also be reported.

This research will provide the much needed evidence of the development of false-belief and belief-based emotion understanding in American children from low-income families. The development of these abilities is important because not only do they foster academic skills, such as literature comprehension, but they also promote empathy, which is critical to socialization.

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Low-Income Latino Mothers' Storytelling Styles

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Sharing books is one of the most important activities parents and children can do together in the early years. Not only is it the frequency of reading beneficial for child outcomes, but the style parents adopt while sharing books also promotes children's language and literacy development (Fletcher & Reese, 2005; Whitehurst & Lonigan, 1998). This study investigated the styles that Head Start Latino mothers used to engage their children during a wordless booksharing interaction.

Eighty mothers and their four-year-olds, evenly divided by gender, participated in this study. Mothers and children were recruited from four Head Start sites in New York City. Eighty-five percent of the mothers were either Dominican or Mexican and the majority of mothers (77%) spoke only Spanish in the home. Mothers were visited in the home and asked to share a wordless book, *Frog, Where Are You?* (Mayer, 1969) with their children. All interactions were audio taped, transcribed and verified following a standardized format (MacWhinney, 2000). Transcripts were coded at the utterance level for the following discourse elements: pragmatic function (provision or request of information), language, and content (narrative or non-narrative information).

A k-means cluster analysis was conducted on frequencies of four major variables: Provision of narrative information, provision of non-narrative information, request for narrative information, and request for non-narrative information. Results identified three types of maternal storytelling styles: (1) storybuilder-labelers (N=26) who co-construct the story with their child by requesting narrative and non-narrative information (2) storytellers (N=25) who narrate a rich story with minimal requests of their children and (3) abridged-storytellers (N=29) who look much like storytellers but request and provide significantly less information than they do.

The three styles differed in length and narrative content. Storytellers produced the longest narratives, followed by storybuilder-labelers and then abridged-storytellers [$F(2,77) = 40.603, p < .001$]. Bonferonni post-hoc comparisons indicated that differences were significant among the three styles. Controlling for length of narrative, storytellers and abridged-storytellers produced significantly more evaluations [$F(2, 77) = 18.79, p < .001$] and events [$F(2, 77) = 4.957, p < .005$] than storybuilder-labelers (but did not differ from each other) while storybuilder-labelers provided significantly more labels than the other two styles [$F(2, 77) = 9.745, p < .001$].

Children's age and gender were related to the styles mothers adopted. The average age of the child of a storybuilder-labeler was significantly higher than the average age of the child of a storyteller (M=52.65 months, SD=3.11 vs. M=50.20 months SD=3.04, respectively) [$F(2,77)=3.993, p=.022$]. Moreover, a higher percentage of boys (69.2%) fell into the storybuilder-labeler style than girls ($\chi^2(2)=6.62, p=.036$).

Results of this study suggest that individual variations exist in maternal storytelling practices and that not all low-income Latino mothers will engage their children in storytelling in the same way. Future research will explore how these styles relate to children's subsequent language and literacy abilities as well as how family literacy programs can build curriculum based on these naturally occurring styles.

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Building Capacity Within Head Start for Quality Whole-Child Assessment

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High quality, whole-child assessment practices and mutually beneficial research partnerships are two important means for Head Start to carry out its mission to promote the positive development of low-income children (USDHHS, 1998). Whole-child information can facilitate connections between Head Start staff and families regarding young children's skill development. In particular, by understanding how children's skills within the often-overlooked social-emotional domain interact with other skills, programs can gain useful information about this protective factor for later academic success (Knitzer & Raver, 2002).

The central objective of this partnership is to establish co-constructed research goals with Head Start educational staff to enhance on-going whole-child assessment with an emphasis on building capacity for quality assessment of children's social-emotional strengths and needs. Three sub-objectives guided the project: 1) to examine systematically the quality of information from existing child assessments, 2) to work toward maximizing the use of information already collected to help inform the program's support of whole-child development, and 3) to consider how to involve parents in the program around the specific issue of children's social-emotional development.

This project developed from an ongoing research partnership with an urban, multicultural Head Start program. Archival child data were collected on the 187 children enrolled in the program. Sixty-three percent of the children enrolled in the program were Latino, 30% were White (Polish), and 7% represented other ethnic groups. Focus group participants were 16 teachers/teaching assistants and 16 parents.

In order to help the program understand more about the child information they collect, the psychometric properties of various child assessment instruments (*Child Observation Record* (COR; High/Scope Educational Research Foundation, 1992), the *Early Screening Inventory - Revised* (ESI-R; Meisels, Marsden, Wiske, & Henderson, 1997), and the *Adjustment Scales for Preschool Intervention* (ASPI; Lutz, Fantuzzo & McDermott, 2002) as they are employed in this program were investigated through the secondary analysis of archival data. Adequate internal consistency was found for the ASPI and improved from fall to spring (Cronbach's alpha for fall ranged from .59 - .90; for spring ranged from .69 - .93). Test-retest coefficients were adequate for both the COR (ranging from .40 - .52) and ESI (.41). Concurrent and predictive validity of the measures was examined via bivariate and bi-multivariate statistical analyses and several statistically moderate relationships were found in the expected direction.

In order to work toward bridging the contexts of home and school around preschoolers' social-emotional development, parents and teachers were recruited to discuss their perspectives of young children's social-emotional development, as well as ways they can work together to support this important child competency. Three focus groups with teachers (N=16) and five focus groups with parents (N=16) were held. Potential next steps for the project involve running

focus groups with administrators around parent-teacher collaboration, transcribing and analyzing focus group data, and discussing with program staff how information from current child assessments can inform programmatic decisions regarding curriculum, services, and parent involvement.

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Pretesting Physical Activity Messages and Graphics With Head Start Children, Teachers, and Parents for the *Food Friends and Mighty Moves* Obesity Prevention Program

Laura Bellows, Jennifer Anderson

PRESENTER: Laura Bellows

Food Friends – Making New Foods Fun for Kids is a social marketing campaign conducted to increase children's willingness to try new foods.¹⁻³ However, improving dietary behaviors is just one piece of the complex issue of childhood overweight with physical inactivity being the other major contributor. The addition of a comprehensive physical activity component, *Mighty Moves*, to *Food Friends* will enhance the program's overall efforts to establish healthy habits early in life. Like *Food Friends*, *Mighty Moves* will be built on the tenets of social marketing, including constant target audience input.

Testing of program names with teachers and parents has revealed an overwhelming preference for fun and kid-friendly names rather than health-oriented names. Therefore, researchers and marketing experts selected a superhero theme with *Mighty Moves* as the physical activity component name.⁴ To test the superhero theme with the children, graphics utilizing the *Food Friends* characters were designed.

The program name, theme and graphics have currently been tested at 4 Head Start centers with 114 children of mixed age (3-5 years), gender and ethnicity. Three distinct rounds of pretesting were conducted with subsequent rounds building off the previous results. Initially, children were asked to select their favorite character of the 8 *Food Friends* characters with *Mighty Moves*. Next, the child was shown each of the characters participating in an activity. To ascertain if children could identify various activities, they were asked what each of the 8 characters was doing. Last, investigators asked children what types of physical activity they liked to do and if they liked superheroes. Based on feedback attained in Round 1 and 2, modifications to the activities the characters were made and subsequent rounds of pretesting occurred using similar methods.

The superheroes theme resonated with preschool-aged children (n=112) and was widely accepted by teachers and parents. Children ranked the characters evenly as favorites or least favorites. Thus, we feel that no characters appear to be scary to the children, nor does there appear to be gender or ethnic differences in how children ranked the characters. When asked about individual activities that the characters were doing, children could identify concrete activities (tricycle, balls, jump rope) but had difficulty with abstract concepts (rolling and jumping). They identified other activities that they liked (rollerskating) which were incorporated in Round 2. Round 3 tested additional activities (walking/running) and other modifications.

Additionally, two group discussions (rural (n=6) and urban (n=5)) have been conducted with teachers to assess the current plan for development of the *Mighty Moves* classroom component. Teachers were presented with an outline detailing program components –length, duration, theme, and teaching tools. Researchers and teachers discussed ensuring that all lessons were tied to the

Head Start learning objectives and domains, ways to incorporate the program into the existing day, ideas for activities, lesson enhancing materials, safety concerns, and preferred mode of program packaging. Findings were consistent with researchers' findings from the formative evaluation stage of this project. This project is funded by DHHS ACF Head Start Bureau and USDA CSREES NRI.

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The Correlates of Proactive and Reactive Aggression in Early Childhood

Jennifer Conaty, Terri L. Shelton

PRESENTER: Jennifer Conaty

When studied and treated as a unitary construct, aggression yields conflicting information regarding etiology and treatment. The results of these studies will be clouded and inconclusive if the variable of interest is actually multiply determined. Because of the varying presentations of aggressive behavior, some researchers have come to believe that distinct etiological pathways and presentations of aggression are identifiable (Moffitt, 1993; Silverthorn & Frick, 1999). Two subtypes of aggression that are being examined are reactive and proactive.

Reactive aggression is associated with physiological arousal and irritation (Hubbard et al., 2002) as an angry reaction to provocation, often followed by remorse for such behavior. In childhood, this is manifested as temper tantrums and striking back at a perceived aggressor. The behavior of proactively aggressive children, on the other hand, is considered planned and calculated and executed without remorse (Dodge et al., 1997) such as bullying or intimidating others for some gain. Compared to reactive aggression, proactively aggressive behavior has a later age of onset, is maintained by reinforcement of aggressive behavior, often by aggressive role models (Smithmeyer et al., 2000), and has not been associated with concomitant physiological arousal, anger, or negative emotionality nor impulsivity or AD/HD. Heightened physiological reactions to frustration and problems regulating emotions, combined with high rates of behavioral impulsivity, make it difficult for these children to think through the consequences of their aggressive behavior. These characteristics also make parenting such a child a unique challenge, and a negative parent-child interaction can exacerbate the problem.

According to the current hypotheses, parents of *proactively aggressive* children will be likely to endorse the use of violence either as a way to resolve disputes or as a means of achieving goals. They might teach their children to use aggression in self-defense, or they might model bullying behavior to their child during daily interactions with others, with their spouse or with their children. It is hypothesized that these children have learned from their environments how to behave aggressively, and their behavior emerges later and tends to follow the developmental trends of aggressive behavior.

Thus, the following hypotheses are offered: 1) It is predicted that reactive aggression, and not proactive aggression, will be associated with emotional and behavioral overarousal in infancy, as evidenced by early deficits in self-regulation and increased negative emotionality in early childhood. 2) As predicted by Keenan and Shaw (2003) and Dodge (1990), more children will be categorized as reactive aggressive than proactively aggressive with girls proportionally more often categorized as reactive aggressive than boys. 3) As proactive aggression is thought to develop through the mechanism of social learning, and particularly exposure to aggressive role models, proactive aggression will be more strongly associated with parental aggression and reinforcement for aggressive behavior than reactive aggression. This parental aggression is thought to be manifested as inter-parental violence and hostility, as well as harsh discipline of the child.

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Measuring Pedagogical Content Knowledge for Preschool Mathematics

Jennifer S. McCray

PRESENTER: Jennifer S. McCray

In recent years, researchers have begun to examine the quality of teachers' mathematical knowledge as a possible contributor to less-than-optimal mathematics teaching in the U.S. (Koency & Swanson, 2000). Analyses that use teachers' scores on basic skills tests of mathematics as a proxy for subject matter knowledge have found only weak connections between basic skills and actual teaching behaviors (Galuzzo, Leali, & Loomis, 2000). Studies focusing on math content knowledge specifically geared to teaching, however, have demonstrated a stronger connection between content understanding and quality of instruction (Ma, 1999). This key distinction, between general subject matter knowledge and subject matter knowledge that is particularly suited to the requirements of teaching, owes its genesis to the work of Shulman and his associates, who coined the phrase *pedagogical content knowledge* (Shulman & Grosman, 1988).

Shulman defines pedagogical content knowledge (PCK) as "a knowledge of subject matter for teaching which consists of an understanding of how to represent specific subject matter topics and issues appropriate to the diverse abilities and interest of learners" (Shulman & Grosman, 1988, p. 9). For example, PCK emphasizes knowledge of which content ideas are more central to the subject and how they connect to one another, appropriate examples for illustrating those concepts, and awareness of how they develop in the thinking of novices with differing levels of experience. In essence, PCK combines a thorough understanding of *what* to teach, with a sophisticated sense of *who* is learning it, and a repertoire of ideas for *how* to teach it that are informed by both. While there are several lines of work that examine PCK in *elementary* mathematics (see, e.g., Study of Instructional Improvement, 2002), there is no work defining a specifically *preschool* version of this knowledge or attempting to examine it empirically.

This study will pilot a new teacher interview meant to assess pedagogical content knowledge for preschool mathematics. The interview represents a significant contribution to research and evaluation efforts in early childhood mathematics, since it provides a first look at what early childhood teachers know about preschool math and its teaching. It draws on several bodies of literature relevant to pedagogical content knowledge in preschool mathematics to construct typical teaching scenarios and pedagogical questions that allow teachers to demonstrate PCK for preschool mathematics. It is meant to provide a quantitative measure of PCK while also describing the relative strengths and weaknesses in teachers' understandings of how to teach math to preschool age children. The interview will eventually be used as part of a larger study describing relationships between Head Start teachers' preschool math PCK, their math-related teaching practices, and gains made in math achievement scores among the children they teach. Piloting will be utilized to examine ease of implementation and utility of the data collected. Results of ongoing face validity analysis will also be reported.

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Banking Time: Effectiveness of an Intervention Designed to Promote Supportive Teacher-Child Relationships

Katherine C. Driscoll, Robert Pianta

PRESENTER: Katherine C. Driscoll

Head Start Performance Standards address the importance of fostering supportive adult-child relationships at home and within the program, and research emphasizes the importance of exploring children's gains in social and emotional development as benchmarks of Head Start's potential effectiveness (Lee, Brooks-Gunn, Schnur, & Liaw, 1990; Raver & Zigler, 1997). Based upon Pianta's (1999) theory of teacher-child relationships, the Banking Time intervention offers a unique contribution to existing social-emotional interventions, as it specifically targets the teacher-child relationship. This project encompasses a collaboration with Head Start programs to evaluate experimental and control conditions of Banking Time, a set of techniques designed to build positive, supportive relationships between teachers and children; the goal of the intervention is for teachers to build stronger relationships with students who may be having a difficult time in the classroom.

This project implemented and investigated the effects of Banking Time in Head Start classrooms. Participants included 30 Head Start teachers and 120 children from Head Start classrooms in Virginia. Teachers were randomly assigned to condition, and four children from each classroom were randomly selected to investigate the impact of the Banking Time intervention on teacher-child relationships and child outcomes. Measures address child, teacher, and observer report of the relationship and behavior over time. The presentation will include preliminary results of intervention outcomes.

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Partnering to Encourage Transfer of Learning

Elizabeth M. McLaren, Jennifer Grisham-Brown

PRESENTER: Elizabeth M. McLaren

“Partnering to Encourage Transfer of Learning” is a partnership between the University of Kentucky and the Blue Grass Head Start to investigate the impact of follow-up professional development strategies on teacher and child behaviors. Specifically, the project looks at the effect of peer versus consultant coaching following professional development sessions on challenging behaviors.

Teachers and directors consistently call for professional development and technical assistance to better serve children who are exhibiting challenging behaviors (Buscemi, Bennett, Thomas, & Deluca, 1995; Raver & Knitzer, 2002). In addition, the literature calls for increased access to and improved quality of in-service training for teachers to help prevent challenging behaviors and behavioral disorders (Gilliam, 2005; Raver & Knitzer, 2002). Unfortunately, not all in-service trainings are effective catalysts for teacher behavior change. In order to provide the support that Head Start teachers, directors, and researchers request, more research needs to be conducted to identify training practices that effectively support teacher behavior change. More specifically, research is needed on strategies that facilitate the transfer of learning from the training workshop to the classroom environment.

This research investigates the impact of peer coaching and consultant coaching incorporated into a series of professional development trainings on child social and emotional competence. Peer coaching and consultant coaching were chosen for evaluation because they are suggested in the professional development literature as effective strategies, are cost-effective, and can be replicated using existing Head Start resources. The research questions addressed are a) Are peer support and/or consultation support related to higher levels of teacher behavior change than no follow-up support, b) Is peer support or consultant support related to higher levels of teacher behavior change, and c) Is there a relationship between positive change in teacher behavior (i.e., transfer of learning) and positive change in child behaviors?

A total of 18 teachers and 50 children participated in the study. All teachers attended a series of three professional development trainings and teachers were randomly selected to participate in the control group or one of two treatment groups. Participants in the control group received no follow-up activities following the trainings. Participants in the peer support treatment group worked with peers to develop take-home action plans, provided verbal consultation to their co-workers in the classroom environment following training modules, and met with a peer group to discuss the successes and barriers to action plan implementation. Participants in the consultant support treatment group received assistance from the trainer in creating take-home action plans, received one on-site visit and one phone call from the trainer following each training module, and met with the trainer to discuss successes and barriers to action plan implementation.

As suggested in the literature (Gusky, 2000; Kirkpatrick, 1997) the professional development strategies were evaluated using a multi-level model. Evaluation methods addressed a) participant

reaction, b) teacher learning, c) teacher behavior change, d) child behavior change, e) teacher belief change, and f) organizational variables that affected implementation. This poster session will describe the methods and measures employed and preliminary findings from each of these variables.

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Project WRITE! Benefits of Development Writing in Bilingual Head Start Preschool Children

Carola Matera, Michael Gerber

PRESENTER: Carola Matera

Preschool children never fail to amaze adults when asked to describe their symbolic productions (e.g. storytelling, role-play, drawings, etc). More specifically, children who are at the initial stages of emergent writing and have begun to differentiate drawings from written language provide elaborate and sophisticated descriptions to support new insights about a symbolic system. Once children are motivated and inspired by the function of print they begin to explore the written world to make sense of the representational system embedded within it (Goodman, 2001). This innovative process is characterized by children recreating language and reconstructing knowledge with novel solutions, that is, children combine new information to generate original hypotheses to make meaning from arbitrary signs (Ferreiro & Teberosky, 1979).

The extant scientific literature in the field of emergent writing has been instrumental in describing children's evolutions in the development of writing abilities (Beers & Henderson, 1977; Gentry, 1978; Bissex, 1980; Ferreiro, 1986; Pontecorvo & Zucchermaglio, 1988; Ferreiro and Teberoski, 1979; Read, 1971; Teale and Sulzby, 1986). However, emergent writing in preschool bilingual classrooms where children intentionally begin to experiment with and decisively explore the world of print to convey meaning has not been sufficiently explored. Moreover, individual differences in emergent writing development for children who are identified as at risk need to be investigated. The National Reading Panel has identified children's concept of print as a strong predictor for reading development in later school years (Strickland, 2004; Strickland & Shanahan, 2004). As children engage in meaningful participation with print, writing serves as a tool for raising awareness and understanding of the structure of language while simultaneously building on the crucial developmental skills needed to become future successful readers.

As research tells us, language and literacy skills in early education are considered critical developmental precursors to conventional forms of reading and writing (Snow, Burns & Griffin, 1998). Not surprisingly, the National Institute for Child Health and Human Development (NICHD) and the International Reading Association have recently recognized the need for more substantial and significant research on emergent writing development in preschool children to promote successful reading acquisition in formal school years (Reading Today, 2005). Evidently, more research is needed in this area for second language learners.

This paper will discuss preliminary findings from a two-year field-based, experimental research study funded by the U.S. Department of Health and Human Services that focuses on early writing development for Spanish-speaking preschool children attending Head Start programs in Santa Barbara, California. The study used a randomized experimental design to evaluate effects of an intervention designed for improving writing development outcomes for 80 Head Start preschool children who speak Spanish as their first language. In addition, the second year of the

study focuses on evaluating maintenance of learning gains when children begin kindergarten. The study seeks to answer the following research questions: (a) is an instructional intervention designed to facilitate writing development effective for Spanish-speaking children in Head Start?, (b) do the effects of intervention interact with initial levels of vocabulary knowledge.

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Parenting Techniques and Parent Characteristics Associated with Child Externalizing Behavior Problems

Beth H. Garland, Robert W. Heffer, Tammy D. Barry, Erica Prentkowski, Ferne A. Pinard

PRESENTER: Beth H. Garland

Externalizing behavior problems are commonly reported difficulties within the educational community and one of the largest referral reasons for parents seeking therapeutic services for their child. One important concern with these problematic behaviors is the potential for escalation to more deviant and harmful behaviors that affect a child's home life, academic success, and relations with family and peers. Research has reported that externalizing behaviors present early in development can be a marker for later development of more severe psychopathology, such as Oppositional Defiant Disorder, Conduct Disorder, and Antisocial Personality Disorder, and criminality. Current research has identified several parenting variables related to child behavior problems. Higher levels of negative parenting techniques, such as inconsistent discipline and poor parental monitoring, have been associated with higher levels of child problem behaviors such as aggression, delinquency, and Attention-Deficit/Hyperactivity Disorder symptoms. Higher levels of positive parenting techniques, such as parental involvement and the use of positive reinforcement have been associated with lower levels of similar child problem behaviors. Also, parental characteristics, including parental stress and distress (e.g., anxiety and depression) have been significantly related to child behavior problems, such that higher levels of stress and distress are predictive of higher levels of delinquency, attention problems and aggression. Few studies have considered the importance of both parenting techniques and parent characteristics (distress and stress) on children's behavior problems. This poster presentation will consider the combined contribution of these key variables as well as a hypothesized mediational role of parenting techniques in a sample of preschool-aged children and their parents. Participants are primary caregivers of children enrolled in Head Start. This multi-site study is sampling participants from Head Start facilities in College Station and Bryan, TX and Hattiesburg, MS. A major advantage to this study is the collection of data from several Head Start programs in two states that serve socio-economically disadvantaged families living in small city / rural populations, an often underrepresented population in empirical research. Participants are administered a demographic questionnaire, Alabama Parenting Questionnaire (Frick, 1991; Shelton, Frick, & Wootton, 1996), Parenting Stress Index (Abidin, 1995), Brief Symptom Inventory (Derogatis, 1991), and Behavior Assessment System for Children – 2 (BASC-2; Reynolds & Kamphaus, 2004). All measures are available in English and Spanish translations. Analyses will include descriptive analyses of the different parenting techniques most commonly used by Head Start families living in small town/rural areas. In addition, regression analyses and SEM will be conducted to determine the relation between several parenting variables (parental stress, anxiety, somatization, and depression), parenting techniques, and childhood aggression, attention problems and hyperactivity. Implications of this project include: (a) a better understanding of the parental variables most influential on child behavior that can be used to enhance parent training curricula; and (b) more precise screening of at-risk families by professionals that will continue to promote a focus on the whole family and allow for multiple pathways of healthy development for the child (e.g., through direct work with child and through the parents).

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Social Interaction with Peers, Peer Relationships, and Socioemotional Adjustment of Immigrant Children at Head Start Preschool

Linda Lee

PRESENTER: Linda Lee

Presentation summary: According to the 2000 Census, 1 out of every 5 children in the United States is a child of immigrants, with one or both parents foreign-born (Hernandez, 2004). More strikingly, immigrant families account for 48% of all children in California, and 20% to 30% in 10 other states across the country. Even in many nontraditional immigrant gateway states, such as Oregon, Idaho, Utah, Colorado, and Nebraska, immigrant population is increasing rapidly. Survey data reveals that immigrant children are confronted with additional barriers to well being and development compared to their native-born counterparts. Immigrant children are much more likely to live in poverty, and grow up in linguistically isolated and overcrowded housing. In addition, they are more likely to be separated from parents during migration, and to fall behind in school as compared to their native-born counterparts (Edelman & Jones, 2004; Hernandez, 2004; Shields & Behrman, 2004; Suarez-Orozco & Suarez-Orozco, 2001; Takanishi, 2004). These risk factors may place immigrant children at an elevated risk for psychological and behavioral maladjustment. However, not all experiences related to or resulting from international migration are risk factors for maladjustment. Census data suggests that immigrant children are less likely to live in one-parent homes, to be born with low birth weights, to die during the first year of life. In addition, they are more likely to live with grandparents and other relatives that can provide social support. These protective factors may help to compensate for the obstacles and barriers frequently encountered by recent immigrant children.

Regardless of whether the experiences of settling in the United States are negative or positive, many issues confronted by immigrant children are unique and distinct from that of the nonimmigrant population. For example, as immigrant children adjust to life in the U.S., they learn to cope with or overcome homesickness, language and cultural barrier, separation anxiety, family role change (i.e. parents relying on child to be translator), racism, discrimination, and anti-immigrant sentiment (Buriel et al., 1998; Garcia-Coll & Magnuson, 1997; Portes & Rumbaut, 1996; Suarez-Orozco & Suarez-Orozco, 2001).

The study examined the process through which experiences of immigration are related to children's socioemotional outcomes during the preschool period. The project aimed to answer the following questions: (a) How do immigrant settlement experiences influence children's social interactions with peers and peer relationships at school? (b) Do variations in children's social interaction with peers mediate the relation between settlement experiences and children's peer relationship? (c) How do classroom characteristics attenuate or strengthen the path from settlement experiences to children's socioemotional adjustment? Participants were 250 families from Head Start preschools. Parent and teacher questionnaires, child interviews, and classroom observations were conducted throughout a school year. Preliminary descriptive analysis of the data will be presented.

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Exploring Relationships between Head Start Behavior Policies and Procedures, Teacher Beliefs, and Child Behaviors

Amanda Quesenberry, Michaelene Ostrosky

PRESENTER: Amanda Quesenberry

This presentation will provide information from a study conducted in six Head Start programs. Within each program, a teacher survey was conducted to measure teachers' feelings of job satisfaction, competence, and support when addressing young children's challenging behavior. These surveys were also conducted to better understand the possible relationship between programs with more comprehensive and well implemented policies and procedures and those with less comprehensive and implemented policies and procedures. Our hypothesis was that programs with more comprehensive policies and procedures will have teachers who feel more confident, competent and supported than those who have less comprehensive and implemented behavior policies and procedures. Additionally, child level measures were gathered using the Social Skills Rating System (SSRS) (Gresham & Elliott, 1990) to help better understand the potential relationship between the programs' policies and procedures related to child guidance and behavior, teachers feelings of job satisfaction, competence and support, and the level of challenging behaviors reported in teachers' classrooms. Our hypothesis was that teachers who perceived themselves as more competent, supported and satisfied with their jobs will rate children's problem behaviors lower than teachers who perceive themselves as less competent, supported and satisfied with their job. Further we predicted that the teachers who rate challenging behaviors as lower work in programs with more comprehensive and implemented policies and procedures related to child guidance and discipline. The results related to these relationships, as well as their implications for future research and practice will be shared.

In this study, we found that most Head Start programs have some sort of behavior policies and procedures in place, but are rarely implemented consistently and with fidelity across the program. This inconsistency often leads to confusion among staff and increased problem behaviors in the children because behavioral expectations are not clear. Early childhood staff can use information from these studies to consider the resources and supports needed to implement a comprehensive behavior management system and/or policies and procedures in their program.

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Relations between the Teacher-Child Relationship, Children's Emotion Regulation, and School Adjustment in a Head Start Sample

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PRESENTER: Sonya S. Myers

The relationship between teacher and child is very important, especially during the early school years. Three distinct patterns of teacher-child relationships have emerged regarding teacher-child interactions. These include the level of "closeness," the prevalence of "conflict" among teacher-child interactions, and how "dependent" the child is on the teacher to regulate the environment. Many studies have shown that close teacher-child relationships are related to positive child outcomes, while teacher-child discord is linked to negative outcomes, such as poor school attitudes, and poor academic competence.

Another factor that has recently received attention in relation to child outcomes is Emotion Regulation. Children's abilities to regulate their emotions can influence how they adapt to the classroom environment, their subsequent behaviors, and how students are regarded by their teachers. Previous research has found that children with poor emotion regulation abilities have poorer teacher-child interactions, exhibit more behavior problems, have poorer social and academic competence.

In response, this study examined: 1) Relations between aspects of the teacher-child relationship (closeness, conflict, dependency) and Head Start children's social and behavioral outcomes, 2) Relations between the teacher-child relationship and Head Start children's emotion regulation, and 3) Relations between Head Start children's emotion regulation and social and behavioral outcomes. Additional analyses examined these variables in combination to predict overall adjustment.

One hundred fifty-four Head Start children (68 girls and 84 boys) and classroom teachers (two teachers from each class) participated in this study. Ages ranged from 3 to 5 years of age, and all families represented low-income households eligible for Head Start enrollment. Head Start Lead Teachers were asked to provide reports of their relationships with each child using the Student-Teacher Relationship Scale, which measures teacher-child dynamics, and is used to assess teacher-child closeness, dependency, and conflict (Pianta & Steinberg, 1992). Teacher Assistants provided reports of children's emotion regulation abilities using the Emotion Regulation and Socialization Scale (Robinson & Morris, 2004). In addition, assistants provided reports of children's behavior problems using the Strengths and Difficulties Questionnaire, which consists of scales assessing conduct problems, hyperactivity, emotional symptoms, peer problems, and prosocial behavior (Goodman, 1997).

Analyses indicate that conflict in the teacher-child relationship was significantly related to emotional problems, conduct problems, hyperactivity, and problems with peers and was negatively related to children's pro-social school behaviors. Additionally, child dependency on the teacher was significantly related to more conduct problems and hyperactivity. Closeness,

on the other hand, was significantly related to fewer emotional problems, less hyperactivity, and fewer problems in peer relationships.

In regards to emotion regulation, children higher in emotion regulation were likely to have less conflictual and dependent relationships with their teachers. In addition, emotion regulation was also significantly related to fewer conduct problems in school. Upon conducting further analysis examining the interrelatedness among the variables, results indicated that children's emotion regulation mediated the relationship between a dependent teacher-child relationship and children's conduct problems. Results of this investigation indicate that examining these factors in Head Start children is important for children's emotional development, school success, and the prevention of future problem behaviors.

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“Sister, You Can’t Go to School Today ‘Cause You’re Sick.” Family Routines and Head Start Preschoolers’ Stories of Asthma Response Plans

Mary Spagnola, Barbara H. Fiese

PRESENTER: Mary Spagnola

Preschoolers’ stories of family response to an asthma attack and family routines were examined. Children who depicted “adaptive” plans (adult or family team as asthma attack respondents) had higher scores on a caregiver measure of family members’ roles in routines than did children who showed less adaptive plans (chaotic response or child-only response). Findings are discussed in light of the development of family medical emergency plans and transfer of disease management responsibility from parent to child.