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Issues in the multi-cultural assessment of parent–child interaction: An exploratory study from the starting early starting smart collaboration

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Abstract

A national, multi-site study of behavioral health services integration developed a parent–child interaction assessment tool and culturally anchored videotape protocol. Representatives from programs serving Chinese, Native American[1], Latin-American, African-American, and Anglo-American families discussed cross-cultural issues in parenting and developed a set of guiding principles for the assessment of parent–child interaction, resulting in a revised Parent–Child Observation Guide (PCOG: Bernstein, Percansky, & Hans, 1987 [Bernstein, V. J., Percansky, C., and Hans, S. L. (1987, April). *Screening for socialemotional impairment in infants born to teenage mothers*. Paper presented at the biannual meeting of the Society for Research in Child Development, Baltimore, MD]) and program-specific laboratory protocols. Data from ratings of videotapes of 683 preschoolers and their primary caregivers are presented. Across ethnic groups, parental sensitivity correlated with child involvement and parental discipline correlated with child compliance. Mean PCOG factor scores differed between ethnic groups, and correlations between PCOG factors and independent measures of child social skills and family environment differed across groups, suggesting that different aspects of parent–child interaction may

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 [1] Although representatives from the Western Tribal Reservation Childcare Program participated in the workgroup, logistical issues prevented them from videotaping more than a small minority of their families. Hence data from Native Americans are not included here.

have more salience in different ethnic groups. The collaborative process and how "best practice" was applied to the development of the PCOG and videotape protocol as well as strengths and limitations of the PCOG are discussed.

1. Introduction

Starting early starting smart (SESS) is a multi-site collaborative research study designed to evaluate the effectiveness of integrating substance abuse and mental health services into early childhood and medical settings serving impoverished families and their young children. The collaboration consists of 12 regionally and ethnically diverse programs across the country. The two premises of the program were that: 1) substance abuse and mental health prevention and intervention services would more likely be used by parents of young children if provided in comfortable, familiar settings such as community health clinics and early childhood programs; and 2) the availability of such services would improve a variety of parent and child outcomes including parent–child interaction. The SESS collaboration has been described elsewhere (Starting Early Starting Smart Collaborative, 2001).

The present article reports data on 683 families from seven early childhood education programs participating in SESS (5 head start and 2 preschool/day care centers) serving preschool age (3–6) children including Chinese immigrants, Spanish-speaking Latin-Americans, Native-Americans, African-Americans, and rural Anglo-American families.

The SESS steering committee spent 9 months, from September 1997 through June 1998, designing the evaluation and selecting instruments to be used in baseline data collection. The committee consisted of an interventionist and researcher from each site, two parent representatives, as well as three representatives from the Substance Abuse and Mental Health Services Administration (SAMHSA), two from Casey Family Programs, and one from the Data Coordinating Center. Much discussion focused on the roles that the primary caretaker, the family, and the broader environment play in the child's development. Salient to the committee deliberations was the widely replicated finding that a nurturing relationship between the child and his or her primary caretaker *protects* the child from the powerful negative influences of poverty and its associated risk factors, such as family conflict, parental substance abuse, and community violence (Bernstein & Hans, 1994; Rutter, 1990; Werner & Smith, 1992). Hence, the steering committee decided that assessment of parent–child interaction should be included in baseline data collection.

A challenge emerged from the discussion around instrument selection for assessing parent–child interaction: how can parent–child interaction be assessed in a way that is rigorous enough to be used for cross-site research purposes but that is also culturally appropriate? Among cultures as diverse as the ethnic groups participating in SESS, child-rearing goals, beliefs and practices vary widely (Greenfield, 1994; Lynch & Hanson, 1992; McCubbin, McCubbin, Thompson, & Thompson, 1998).

One approach to the issue of multi-cultural assessment is universalist (Whiteside-Mansell, Bradley, Little, Corwyn, & Spiker, 2001), in which certain core parenting constructs are believed to be relevant across cultures. These dimensions often include parental sensitivity to the child's needs and behavior (De Wolff & van IJzendoorn, 1997; Whiteside-Mansell et al., 2001), parent socialization of the child to cultural norms of behavior (Baumrind, 1996), and the child's attachment to the primary caregiver (Attachment Across Cultures, 2003; Posada et al., 2002).

Operationally, within a universalist approach, if a particular measure has equivalent factors when used with different cultural groups, then internal reliability allows cross-cultural comparisons. The universalist approach most often uses a standardized instrument and protocol. This approach has been criticized, however, because the factors may have different cultural meanings (even if the factor structure of an instrument is the same). Hence a particular parenting construct may differentially affect the child's development. Also, different ethnic groups may respond differently to a standardized protocol based, for example, on their perception of authority (Garcia Coll & Magnusson, 1999) or culturally anchored child-rearing practices (Rothbaum, Weisz, Pott, Miyake, & Morelli, 2000). Furthermore, applying a research paradigm or assessment instrument developed in one culture to another is not considered best practice in cross-cultural measurement (Shweder, 1995).

The SESS collaborators also had concerns about the universalist approach, in particular that the methodology would erroneously portray poor and minority parent–child relationships as deficient. Their fears were founded in a history of child development studies, recently criticized (Connors & Donnelan, 1998; Garcia Coll, Meyer, & Brillon, 1995; Greenfield, 1994; Joe, 1994; Laosa, 1999; Parke, 2000; Rogoff & Morelli, 1989), in which ethnic minority families were described as limited, deprived, or deviant rather than different. As Greenfield (1994) states "For too long, minority child development has been viewed exclusively as a series of responses to negative environmental forces, such as poverty, discrimination, and slavery…Rather than focus exclusively on the maladaptive nature of particular socialization practices for the dominant society, it is time to consider and understand their adaptive roles in their culture of origin (pp. 11–14)." The study sites did not want to participate in another investigation that would reinforce negative stereotypes through the use of culturally biased measures. Their familiarity with social service providers' misinterpretation of ethnic parenting practices as abusive or neglectful caused further concern (Fadiman, 1997; Roer-Strier, 2001).

Contradictory findings from research on authoritarian parenting represent an example of ethnic minority concerns about the universalist approach. Mainstream investigators often report authoritarian parenting as maladaptive. An authoritarian parenting style that includes corporal punishment has been reported to increase children's externalizing behavior, and hence, many experts suggest that spanking adversely affects child development (Prevent Child Abuse America, 2003; Straus, 2000). Gershoff (2002), in a meta-analysis, found that corporal punishment was consistently associated with a variety of problematic child outcomes across studies. In contrast, however, some studies have even suggested that corporal punishment can be a protective factor for some non-Anglo children (Baumrind, 1996). For African-American families living in dangerous communities, strict parenting can prevent children from becoming involved with violent people or the anti-social activities that may be close at hand (Deater-Deckard, Dodge, Bates, & Pettit, 1996; Gonzales, Pitts, Hill, & Roosa, 2000; Mandara & Murray, 2000; Mason, Cauce, Gonzales, & Hiraga, 1996; Whaley, 2000). For Chinese families, strict parenting, including corporal punishment, is considered part of proper training and has been associated

with positive child outcomes (Chao, 1994). Because of such differences in meaning of parenting behavior across cultures, some developmentally oriented investigators have advocated a culturally anchored approach in which research describes the normal range of relationships within a given culture and how those relationships are linked to child outcomes (Hughes & Seidman, 2002).

Considering these issues related to environmental risk and multi-cultural dimensions of parenting, the SESS steering committee called for the establishment of a multi-cultural workgroup. Representatives from each ethnic group would have input into the design of a parent–child interaction assessment instrument and observation protocol.

This article first describes the literature on parenting practices among the various cultural groups participating in SESS, the issues that arise when non-mainstream cultural practices interact with those of the mainstream, and how these issues affect the multi-cultural assessment of parent–child interaction. Further, it outlines a set of guiding principles that the SESS multi-cultural workgroup negotiated for approaching the assessment of parent–child interaction and in developing an assessment tool, the revised Parent–Child Observation Guide (PCOG: Bernstein, Percansky, & Hans, 1987). Next it describes how different sites modified the set of activities to be videotaped in order to make the activities appropriate for different ethnic groups. The psychometric properties of the PCOG are presented along with a description of procedures to maintain inter-rater reliability. To examine the construct validity of the PCOG, baseline data are presented for the various ethnic groups, along with a description of within group variations in parent–child interaction.

Finally, this article reports the relation between the Parent–Child Observation Guide (PCOG) and measures of child behavior and family environment. We hypothesized that over the sample as a whole, parents who were warm, sensitive, and invested in teaching their children proper ways of behaving would have children who were more socially competent and have fewer behavior problems. This pattern of dyadic behavior was expected to be related to other desirable features of the home and family environment as measured by the HOME scales (Caldwell & Bradley, 1984) and the Conflict Tactics Scale (CTS; Straus, 1979) as well as the child's social competence on the Preschool–Kindergarten Behavior Scales (PKBS; Merrell, 1994). As noted above, parents in different cultures may prioritize different goals for their children and hence focus on different aspects of parenting. Our exploratory hypothesis was that within each culture we expected different patterns of correlations to appear between the measures of parent–child interaction and the child social behavior and family environment measures assessed independently. We expected these differences to be interpretable post hoc in terms of the literature review of cross-cultural parenting practices.

1.1. Parenting practices among different cultural groups participating in SESS

Parenting practices in part reflect larger cultural values and goals for children (LeVine, 1988). "Familial values foreshadow the content and model of cultural transmission...Whereas some—especially Western (individualistic)—cultures emphasize academic, technological, or cognitive modes of social integrations, others—especially African—cultures place primary emphasis on social–affective socialization" (Nsamenang & Lamb, 1994; pp.133–134). This contrast between cultures that encourage child independence such as those in Northern European and North American countries and cultures that encourage child interdependence such as those in African, Asian, and Latin American countries has often been described in the literature on socialization (e.g., Greenfield, 1994; Triandis, 2001).

Interdependent (collectivist) cultures most often have agrarian or Confucian roots (Greenfield, 1994; Hoffman, 1988; LeVine, 1988). Interdependent cultures share the view that a person's life takes on meaning through relationships with others (Nsamenang & Lamb, 1994; Weaver & White, 1997). Parents, other adults, and even older siblings socialize children to share responsibility and resources within the family and community. Children are raised to share and to be obedient, respectful (especially of elders), hard working, helpful, cooperative, and honest. Additionally, it is considered inappropriate for children to be fearful, inquisitive, independent, assertive, or to move away from the family and community when they become adults.

In the United States the cultural norms of the majority are Anglo-American, middle class and derive from a Western European/American heritage. The cultural goals are different from those of interdependent cultures (Hoffman, 1988). Parents want their children to become adults who are independent and economically self-sufficient—to move out rather than stay or return home to help contribute to the sustenance of the family. Anglo-American parents value their children's autonomous behavior, ability to play independently and solving problems on their own, and good verbal and creative abilities. Additional valued child characteristics include the child being happy, generous, assertive, curious and inquisitive, academically achieving, and capable of forming positive relationships with others outside the family (Rubin, 1998). Child-rearing practices for young children viewed as supporting these goals and characteristics include separate sleeping arrangements and structured bedtime, child-proofing the house so the child can explore without restriction, responsiveness to children's vocalizations, feeding on demand, maternal speech that draws the child's attention to exploring objects, distal verbal interaction and eye contact without physical contact, and encouragement to play independently. Most parents adhere to the goal of having the child be able to separate from them without distress. With more mothers of young children in the work force, these child-rearing goals now have economic salience. Structured meal and bedtime schedules, toilet training, separate sleeping arrangements, and day care attendance in infancy and preschool as a young child may be thought of as child-rearing practices that encourage the child to manage separation, a major step toward self reliance and independence (Hanson, 1992; Richman, Miller, & Solomon, 1988).

Latin-American parents use different strategies and respond to different aspects of their children's behavior than Anglo-American parents. Young children are overtly cherished and receive a great deal of attention from siblings, extended family and friends. Latin American people value family closeness and transmit this expectation via co-sleeping, and frequent physical and verbal expressions of affection. They appear permissive and indulgent on the one hand, but insist on overt displays of respect and obedience to extended family and community members. When Mexican parents are asked to describe an intelligent child, they list characteristics such as obedient, cooperative, socially competent and motivated. They value family and positive relationships with others over expression of independence and personal achievement (Delgado-Gaitan, 1994; Zayas & Solari, 1994). Puerto Rican mothers have been characterized as valuing demonstration of affection and respect from their children. They respond positively with warmth and affection (Harwood, 1992). They are more likely to be directive and to exhibit physical control with their infants than Anglo-Americans, but their infants are no less securely attached (Carlson & Harwood, 2003).

For Native American children, enculturation (the child's connection to her or his Native American identity and traditions) is considered a central goal of child-rearing practices (Zimmerman, Ramirez, Washienko, Walter & Dyer, 1998). Storytelling and oral tradition are some ways that Native American children learn about their traditions and themselves in relation to others. Joe (1994) expressed the

concern that non-Native American researchers believe "...that strong adherence to tribal culture is a strong negative force that prevents Native Americans from being... like other members of mainstream society (p. 108)." However, many Native Americans believe that traumatic historical events aimed at "mainstreaming", such as educating Native American children in boarding schools, have stripped tribal members of their connection to their families and community and placed their children at great risk for poor development (Long & Nelson, 1999; Weaver & Brave Heart Yellow Horse, 1999). The responsibility for caretaking, teaching, and transmitting tribal norms and values is shared by the parents, extended family, and community members (Cross, 1998). Cooperation with others is emphasized over individual achievement. The learning style of Native American children has been described as more holistic and relational as opposed to the linear and sequential style more typical of Anglo-American children (Tharp, 1994).

Investigators of socialization in African-American families have identified child-rearing practices that can be traced to African roots. At an early age, for example, young children contribute to the child care of their younger siblings. In describing West-African socialization of children, Nsamenang and Lamb (1994) state, "Socialization...is organized to teach social competence and shared responsibility within the family system and ethnic community (p. 137)." In Africa, as well as in the United States with African-American families, language and social interaction focuses on important people in the children's lives (Richman et al., 1988a). As Blake (1994) states, "The traditional cultural emphases of the African-American includes interdependence, extended family, and personal expression (p. 189)." As noted earlier, authoritarian parenting among African-Americans is intended to ensure child survival both in the immediate environment and in mainstream society.

In Chinese culture, children are raised to value familial obligation and to respect parents and elders. Chinese immigrant child-rearing practices are more parent-directed and less child-centered than those of Anglo-American families (Rothbaum, Morelli, Pott, & Liu-Constant, 2000). Chinese immigrant parents emphasize school achievement in their children because it brings honor to the family (Chao, 2000). In describing the Chinese immigrant parents, one SESS collaborator stated, "There has been a tendency to pathologize cultural differences that are observed in the way that Asian parents interact with their children—they do not emphasize individuation (a central goal of Western childrearing), rather they emphasize connection (between parent and child)." Cooperation and interpersonal harmony are valued. Self-assertion, conflict, and forceful emotional expression are to be avoided both among adults and children. Chinese parents demonstrate less overt affection and enthusiasm directly to their children than do Anglo-Americans. They are more likely to endorse the use of physical punishment and are more involved with issues of safety and protection than Anglo-American parents. These parenting beliefs are aligned with the Chinese child displaying behavioral inhibition, a desirable trait in Chinese culture (Chan, 1992; Chao, 1995; Ho et al., 1999).

1.2. Precautions against overgeneralization

Discussing cultural differences is useful in order to alert the investigator to biases in evaluation/ assessment methodology. Drawing distinctions, however, can lead to overgeneralization or stereotyping. Making conclusions based on cultural patterns can result in desensitization to the range of individual differences between cultures that share a common history and within a given culture (Garcia Coll et al., 1995; Greenfield, 1994; Harkness, 1992; Long & Nelson, 1999; Ogbu, 1994). Many Anglo-American mothers, for example, have been found to value a child's being interdependent

as well as independent (Raeff, 2000). Joe (1994) notes that investigators often fail to consider individual differences when generalizing research findings, projecting dysfunctional behavior to an entire ethnic group rather than recognizing maladaptive behavior as one point on a continuum of behaviors displayed by ethnic group members. From a research perspective, examining factors related to within cultural group variation becomes equally as important as portraying between group differences when striving to avoid generalizations that lead to cultural stereotyping.

Adding to the complexity of conceptualizing how the culture of origin relates to socialization are intracultural differences, such as urban vs. rural or working class vs. middle class (Gorman-Smith, Tolan, Henry, & Florsheim, 2000; Howrigan, 1988; Oloko, 1994). The assimilation of immigrant and ethnic minorities into mainstream American culture further complicates generalizations based on ethnic differences. Length of time in the United States may decrease some ethnic differences. Important beliefs about parenting among African-Americans are more similar to those of Anglo-Americans than they are to those of first generation African immigrants (Whiteside-Mansell et al., 2001).

1.3. Existing approaches to assessment of parenting practices: the HOME scales

How does one empirically bridge the gap between the culturally anchored and universalist viewpoints? One approach is to posit universal dimensions of parent–child behavior and examine their validity both cross-culturally and within particular cultures. Few large-scale, multi-cultural studies of parenting practices, however, have been conducted either cross-nationally or within the United States. Almost all of these have used the Home Observation for the Measurement of the Environment (HOME; Caldwell & Bradley, 1984) as the assessment of parenting. Generally, the methodology has been to compare and contrast the factor structure and construct validity of the HOME scale data in different cultures.

The HOME is a semi-structured interview centered on regularities of experience in the child's life and combines both parent-report and observations of parent behavior, the family's home, and the neighborhood. The HOME does not assess the child's contribution to the interaction. In a review of cross-national studies of the HOME in both independent and collectivist cultures, Bradley, Corwyn, and Whiteside-Mansell (1996) found that HOME factor structure and construct reliability data in countries that emphasized individualism as a child-rearing goal were comparable to those from studies done in the United States. In collectivist countries, the factor structure was less likely to replicate American patterns. When contrasting the results from the two types of cultures the authors state, "In general, there seemed to be greater cross-cultural equivalence for items assessing cognitively stimulating aspects of the environment than for items assessing socioemotional support…Evidence (for collectivist cultures) attesting to the cultural equivalence (and validity) of HOME subscales was far less plentiful and compelling (p. 251)."

Within North America, these cross-national HOME factor structure and validity findings were replicated. In a large-scale factor-analytic study of children born preterm, the HOME factors for Anglo-Americans and African Americans were similar and corresponded to the published subscales, although only 2/3 of the items were shared by the two groups. The HOME factor structure for more recently immigrated Latin-Americans differed considerably from both Anglo- and African-Americans. There was more similarity in factor structure for cognitively oriented than socioemotional items across the three ethnic groups (Bradley, Mundfrom, Whiteside, Casey, & Barrett, 1994). In a multi-site North American study, the pattern of construct validity for the HOME also differed by ethnic group (Bradley

et al., 1989). Family socioeconomic status ranged from poverty to middle class and was matched across ethnic group. The "correlations between HOME scores and social status indices were generally higher for Whites. Total HOME scores, for instance, had correlations ranging from .4 to .6 with social status variables for Whites, compared with .0 to .3 for Blacks and essentially zero for Mexican-Americans (pp. 222–223)." A similar pattern across cultures emerged; for example total HOME scale scores were related to a 3-year child IQ with correlations of .42 for Whites, .50 for Blacks, and .10 for Mexican-Americans. To summarize these multi-cultural studies using the HOME, subscales directed at cognitive development showed more predictive validity across cultures than those directed at social–emotional development. The HOME was generally less ecologically valid with families from collectivist, interdependent cultures than with those from individualistic, independent cultures.

1.4. Assessing parent–child interaction across cultures: the multi-cultural workgroup

Funding was secured from Casey Family Programs to form a workgroup to provide a multi-cultural perspective for the SESS collaborative parent–child interaction study. Two Asian representatives (one investigator and one interventionist) from the SESS site serving Chinese families, one Native American and one Anglo-American investigator representing the Native American Site, one African-American investigator and one Anglo-American investigator (from two inner city Head Start programs serving predominantly African-Americans), and one Anglo-American interventionist from a predominantly Anglo-American program attended the SESS video multi-cultural workgroup session held over three days in March, 1999. The workgroup discussed the following set of questions from a culturally anchored perspective. These questions derive from what has been identified as fundamental to best practice in multi-cultural research and culturally sensitive intervention (Lieberman, 1990; Pope-Davis, Liu, Toporek, Brittan-Powell, 2001):

- How do parents, family and community members show children they are valued?
- How do children show parents that they know they belong?
- What are some central child-rearing goals for your ethnic group?
- How do children act when they are or are not complying with these goals?
- What kind of interaction between parent and child is associated with good for the child's development in your community?
- What kind of interaction between parent and child is not good for development?
- How would you decide that a particular parent–child interaction (an example is used) is problematic or within the normal range? What makes it that way? How come?

The result of this discussion was the following set of guiding principles:

1.4.1. Recognition of cultural influences

An assessment tool developed from the study of middle class Anglo-Americans may not be appropriate for assessment of poor or non-Anglo Americans without reliability and validity analyses for the groups to be studied. Ethnic or cultural differences identified with such a tool may reflect reliable between-group differences on the measure, but likely are not ecologically valid (Shweder, 1995). The instrument and/or protocol itself may need to be altered to achieve "functionally equivalent" data and experience for the different ethnic and minority groups.

1.4.2. Meaningful involvement of cultural representatives

Because of the impact of one's own culture, training, and experience many cultural "outsiders" are not qualified to identify the behavioral range of maladaptive to adaptive (or poor to good) in a culture different from their own. Cultural "insiders" are individuals who have insight and understanding about the range of poor to good in their culture of origin. The mainstream investigator needs to involve the "insider" in all phases of the research study, including instrument development, field testing, subsequent revision, and interpretation of the results (Ho et al., 1999; Segall, Lonner, & Berry, 1998; Tharp, 1994; Weaver, 1997). Efforts should be made to match the ethnicity of parent–child dyads and video coders (Gonzales, Cauce, & Mason, 1996).

1.4.3. Virtually all societies value their children (Mead, 1972)

This common ground becomes the starting point for a nonjudgmental discussion of the various cultural scripts that underlie different parenting styles. The challenge becomes to apply this construct given local, culturally diverse variations that arise when answering two important questions: "How do parents, family, and community members show children they are valued?" and "How do children show parents that they know they belong?"

1.4.4. Individual differences among families from the same culture must be observable, i.e., reliably captured by the assessment instrument

An instrument must be able to generate data able to account for within group variation—ideally with a range from poor to good—and be related to child outcomes (Cocking, 1994; Stevenson-Hinde, 1998). This article describes the within group construct validity of the measure ultimately developed by the SESS collaborators.

1.5. Developing a multi-cultural parent–child interaction instrument

1.5.1. Discussion of parent–child interaction videotapes

The first goal of the workgroup was to develop a parent–child interaction assessment instrument. Attendees brought at least two pilot videotapes of parent–child interaction that, using their clinical judgment, represented a range in the quality of parent–child interaction. The videotapes were discussed in terms of the above questions. Collaborators found it useful to have "outsiders" ask questions based on their observations of the interactions. Representatives from the same ethnic group, the "insiders", reported that the questioning was helpful in gaining a deeper understanding of their own cultural practices, particularly of behaviors they had taken for granted. The resulting discussion of the videos and parenting practices was similar to the descriptions of parenting in diverse cultures summarized above in the review of the literature.

1.5.2. The Parent–Child Observation Guide (PCOG)

The workshop attendees then examined item-by-item a tool for assessing parent–child interaction that had demonstrated reliability and construct validity when used with varied ethnic groups including African-Americans (e.g., Bernstein & Hans, 1994; Voight, Hans, & Bernstein, 1996; Wakschlag & Hans, 1999), Dominican immigrants (Bejarano, 2001; Nusbaum, 2000) and in a multi-ethnic study that included Anglo-Americans, African-Americans, and Latinos (O'Connell, 1996). The age-specific versions include: newborn 0–3 months; infant 4–15 months, toddler 16–36 months, early childhood 3–

8 years, school age 9–12 years of age, and adolescent 13–17 years of age. For the current study the early childhood version was used as the starting point for the workgroup deliberations.

The PCOG is a tool that can be used flexibly to code interaction in a variety of contexts including everyday situations. Rather than using time or event coding, the PCOG uses global judgment to code each item with respect to the entire interaction. Because parents and children influence one another (Bell, 1968; Sameroff, 1975), the PCOG goes beyond rating solely the parent's behavior and includes the child's as well. Based on resilience research and Goldberg's (1977) concept of mutual competence, the PCOG addresses the question: "What type of communication between parent and child is good for development—both of the child and the parent?"—with the answer: "Any interchange in which the child and parent feel secure, valued, successful, happy, or enjoy learning together." The answer is operationalized by child items focusing on initiative, involvement with parent, expression of positive feeling, communication and learning with parent. Similarly, parent items focus on balancing the child's self-expression and socialization (discipline), responding to the child's activity and interests, caring feelings shown to the child, and helping the child learn new skills and to communicate. The items, being in question form, are dichotomous (yes=observed and no=not observed). Generally speaking, the various studies using the different age-based versions of the PCOG have yielded similar factors. For the child two factors have been reported: positive involvement and negative emotional expression (or noncompliant behavior as the child grows older). For the parent two basic factors have been identified: sensitivity and teaching (teaching splits into 2 factors as the child turns age 3— teaching and effective discipline).

The workgroup members chose to redefine or expand some of the items. For example, one item on the initial PCOG draft asked "Does child make eye contact with the parent?" Representatives from the Chinese site said that it is relatively uncommon for children and parents to interact with eye-to-eye contact. They suggested that more examples of nonverbal child-involvement behavior (e.g., reaching up toward the parent without looking or, while playing, positioning self in a position oriented toward the parent without directly looking) would be important indicators of the child's involvement—albeit less obvious. The item was rewritten to "Does the child act connected to the parent?" In the coding manual entry for the "act connected" item, making eye contact, reaching for the parent without looking, and orienting toward the parent in space were all listed as examples of the child acting connected.

Representatives from the Native American site suggested that less formal examples of teaching be included as part of observing the parents' behavior, since teaching in their community is less directive and more holistic and relational than the linear and sequential style typical of Anglo-American children (Tharp, 1994). Beyond teaching basic concepts, they suggested that story telling (e.g., relating incidents about family or community members) serves an important educational function in their community and should be included in coding the extent to which the parent interacts with the child in a teaching mode. These suggestions were included under expanded explanations for the items "Does the parent help the child learn basic concepts?" and "Does the parent help the child learn new skills?" Also, based on this discussion, an additional item was added to the first parent category about socialization, i.e., "Does parent/caregiver communicate values, morals and traditions to the child?" This item definition included the parent's encouraging the child's patience, generosity, humor, humility, sense of connection to ancestors, and tribal leaders, as well as discussion of participation in cultural activities. The PCOG version developed by the SESS workgroup will be described in more detail in the Method and Results sections below.

1.6. Videotape protocol

Another goal of the workgroup was to develop a protocol for videotaping parents and children that would have common elements across sites, but would include situations familiar to families from each site. Usually the videotaping was done in a room at the early childhood center at the site. However, practices differed at some sites. For the predominantly Latin-American site (see below), the taping was done at home. One of the workgroup members proposed a videotape protocol that included four situations, listed in sequential order:

1) The parent is asked to have their child put a US$15.00 bag of real groceries away on shelves marked with pictures of the items organized by type (drinks, condiments, canned fruit, paper products, etc.). For the predominantly Latin-American site, groceries were put away in their usual place in the home.
2) The parent is asked to play with the child "as you would at home" for 5 min. Age-appropriate toys are provided. These include: a story book, farm and farm animals, xylophone, child-size broom, real desk phone, toy doctor kit, 10″ rubber ball, 15″ tall baby doll, blanket, and bottle. The doll is matched to the ethnicity and gender of the child. At the predominantly Latin American site parents were asked to play as they usually would with their child using their own toys. After the 5-min play segment the caregiver is asked to have the child clean up the toys;
3) The parent is asked to have the child choose a snack from the groceries on the shelf for the caregiver and the child. A table and two chairs are provided nearby for the caregiver and child to sit at during snack time. Snack time lasts approximately 5 min. At the conclusion of snack time the caregiver is asked to have the child clean up the table. A spray bottle filled with water and paper towels are placed nearby to aid in the clean up process;
4) The caregiver is asked to have the child pack up the remaining groceries from the shelves into the grocery bag so the caregiver can take them home. The groceries also served as an incentive for participation in the videotaped observation. This task was not completed at the predominantly Latin American site, since videotaping was done in the home.

Representatives from the SESS sites participating in the initial workgroup meeting requested various changes to the original videotape protocol in order to capture as much within-cultural group variability as possible. Participants explained that a rigidly standardized protocol could have the unintended effect of reducing variability (by increasing social desirability or resistance in certain ethnic groups). For example, Chinese parents may try to please the examiner at the expense of ignoring the child. The site representatives suggested that the examiner, caregiver and child have tea together at the San Francisco Study Site before turning on the videotape in order to relax the families and allow to them to behave more naturally on camera. The representatives from the Native American site suggested that families on the reservation would feel more comfortable sharing a picnic lunch together at the beginning of the protocol, rather than at the end, based on feedback from a community focus group. Mealtime is considered central to family interaction within the tribe. In addition, tribal representatives chose to substitute story telling or book-reading for the free play component of the protocol because the former is more consistent with what caregivers and children do in their community. The predominantly Latin-American site chose to collect the videotape data in the home rather than at an early childhood education center. The site representatives felt the Latin-American

parents' behavior would be too strongly influenced by what they perceived as socially desirable and be too inhibited from interacting naturally with their child. This change was consistent with a protocol developed by Posada et al. (2002) for collecting parent–child interaction data in a Latin American country. Each study site chose the different foodstuffs to be put in the grocery bag, (e.g., fresh bananas instead of canned fruit).

The outcome of the SESS workgroup collaboration was a revised version of the PCOG with a scoring manual that included definitions and explanations for coding items that were deemed acceptable to all members of the workgroup. The workgroup also designed site-specific alterations to the videotape protocol in order to accommodate what representatives found to be appropriate for each particular ethnic group. Although the sequence may vary, for all ethnic groups the videotape protocol included the core activities of putting away groceries, play time and toy cleanup, and sharing a snack together. The resulting protocol instructions were translated and then back-translated into Cantonese and Spanish. The script was revised slightly when a direct translation resulted in a different meaning than in the English script. For example, the word "have" (as in "have your child pick up the toys") has a different connotation when translated into Cantonese; have implies insistence. The word "ask" was used instead of "have" in order to avoid provoking different behaviors among Chinese speaking parents.

2. Method

2.1. Participants

Study participants were 683 parents (or other primary caregivers) and their preschool-age children who were involved in the baseline assessment phase of the SESS study. The families generally were low-income; 93% percent met the income eligibility requirements for Head Start. Eighty-seven percent of these participants were recruited through early childhood education programs and 13% through pediatric primary care sites. Six early childhood programs served as recruitment sites: Two inner city Head Start programs serving predominantly African-American families; one urban child care program serving immigrant Chinese families from mainland China; one suburban Head Start program serving Latin-Americans immigrants from Central America; one rural Head Start program serving predominantly Anglo-American families; and one medium-sized city Head Start program with equal representations of African-Americans, Anglo-Americans, and Latin-American families who were recent immigrants from Mexico.

Fewer than 10% of the primary caregivers reported using alcohol at least once a week. Fewer than 3% reported using marijuana weekly. Only 2 caregivers in the whole sample reported weekly use of cocaine or heroin. A substantial majority of the sample reported no or minimal mental health symptoms. Fifteen percent reported a moderate or severe level of mental health symptoms on the Brief Symptom Inventory (Derogatis, 1993). Hence, this was a poor, community-based non-clinical sample. This article examines caregiver–child interaction among 4 American ethnic groups: Chinese immigrant, Latin-American immigrant (2/3 Central American, 1/3 Mexican), Anglo-American, and African-American.

Most of the primary caregivers were biological mothers (88.7%) or biological fathers (5.0%). Other primary caregivers included grandparents (3.1%), other relatives (1.6%), foster parents (0.6%),

adoptive parents (0.6%), or stepparents (0.4%). Ethnicity was self-identified by the primary caregiver. The majority of the Chinese families spoke Cantonese on the videotapes (99%); 1% spoke a dialect Toinsonese. The majority of the Latin-American families spoke Spanish on the tapes (80%). The non-English speakers, on average, had been in the United States less than 10 years. There were no significant differences by ethnic group in which type of primary caretaker was interviewed and appeared on the videotape with the child. Table 1 lists the demographic characteristics of the participating families. Primary caregivers will subsequently be referred to as parents.

2.2. General procedures

All data reported in the present paper were collected early in the study, before the intervention began. Baseline data were drawn from parent reports, teacher reports, direct assessment of children, and videotapes of parents and children. Data were collected on family demographics, child health, family service utilization, home environment, caregiver child-rearing attitudes, caregiver substance use and mental health status, child social and cognitive/language development, and parent–child interaction. Interview data were gathered in-person by data collectors trained to adhere to cross-site standards. Two cohorts of families were recruited 1 year apart. For the first cohort, questionnaires and interviews with parents were collected from September through December 1998 of the school year 1998–1999. To give the teachers time to get to know the children, their reports of child behavior were collected from October through December of the same year. The parent–child interaction videotapes were usually done during a separate session and always occurred within three months of the initial baseline interview. Baseline data were collected from the families and teachers in the second cohort in alignment with the school year, approximately one year later. As with the first cohort, videotape sessions occurred within 3 months of baseline data collection. There were no differences between the cohorts on any measure presented herein.

Table 1
Demographic characteristics of SESS participants at the baseline assessment ($N=683$)

	Chinese immigrant	Latin American	Anglo American	African American
	$N=115$	$N=120$	$N=158$	$N=290$
% Receiving welfare	5.1	8.4	13.9	40.7
% High school diploma or GED	44.8	55.1	68.8	68.7
% Married	81.2	57.5	45.2	18.9
% Divorced	3.4	6.7	16.6	4.4
% Separated	3.4	10.0	8.9	5.7
% Single	8.5	25.8	26.1	69.6
% Widowed	3.4	0.0	3.2	1.0
% Income<poverty level	25.9	46.4	57.8	70.2
% English primary language	9.4	20.8	100.0	99.7
M (SD) # of children	1.89 (.79)	2.35 (.98)	2.25 (1.13)	2.46 (2.45)
M (SD) age of caregiver	35.9 (7.8)	30.0 (6.2)	28.5 (6.5)	29.3 (8.8)
% Male children	52.2	55.8	58.8	45.3
M (SD) child age in months	44.9 (6.2)	51.9 (7.2)	49.3 (9.45)	50.8 (7.9)
M (SD) birth weight in kg	3.31 (.62)	3.49 (.78)	3.29 (.72)	3.14 (.62)

2.3. Measures

2.3.1. Caregiver–child interaction: Parent–Child Observation Guide (PCOG) instrument description

The PCOG is designed to use objective clinical judgment to code behavior across a variety of situations designed to mimic the family's natural environment. In previous studies free play, teaching, and daily routine activities comprise the parent-child interaction session, the totality of which is coded with the PCOG. PCOG items are phrased as dichotomous yes (observed) and no (not observed) questions: Does the child...? Does the parent...? Observed items are scored 1; not observed items are scored 0. The PCOG version developed by the SESS workgroup consisted of 17 child and 26 parent items. The same items were used for all ethnic groups. The definitions of several items were expanded to include examples of representative behaviors from different ethnic groups. More detailed information about the PCOG is available from the first author.

In a prior longitudinal study, a principal components analysis (PCA) of the PCOG yielded two child factors (positive involvement and negative emotional expression, the latter evolving into noncompliant behavior as the child becomes a toddler), and two parent factors (sensitivity and teaching; Wakschlag & Hans, 1999). In the version for children age 9–12, teaching included not only cognitively oriented items, but also teaching proper behavior. As will be seen in the results, in the current study, teaching proper behavior becomes a third parent factor, which will be called parent effective discipline below. These factors closely parallel the scales based on PCOG categories reported in the other studies.

In the studies that have used the PCOG, alphas for the child scales ranged from .52 to .75 for the child positive involvement and .15 to .56 for child negative emotional expression or noncompliance (O'Connell, 1996). As the child became older, the alpha for the noncompliance measure increased (Bejarano, 2001). The alphas for the parent scales ranged from .69 to .87 for parent sensitivity and from .71 to .86 for parent teaching (Bernstein & Hans, 1994; Wakschlag & Hans, 1999). In terms of construct validity, parent scales were related to level of social support (Nusbaum, 2000; Voight et al., 1996), to child maltreatment status (O'Connell, 1996), and to child conduct disorder (Wakschlag & Hans, 1999). Both parent and child PCOG scales have predicted child cognitive and social competence (Bejarano, 2001; Bernstein & Hans, 1994).

2.3.2. PCOG coding

Videotapes were coded on the SESS early childhood PCOG version at the Data Coordinating Center (DCC) by six staff under the supervision of a psychologist who had participated in the multi-cultural workgroup. Coders were ethnically and linguistically diverse, speaking six different languages and representing Native American, Anglo-American, African-American, Latin-American, and Asian American cultures. Most of the videotapes were coded by at least one "cultural insider." Altogether, every tenth tape was used as a reliability tape and was coded by members of the coding team who spoke the language used by the family on the tape. Almost all reliability tapes were coded by both cultural insiders and outsiders, except for tapes of Chinese families where, because of language constraints, coding was done by a recently immigrated Chinese coder and an American-born Chinese coder.

The entire team of coders met weekly to review their work with their supervisor, to discuss reliability tapes, and to resolve disagreements on each item into a consensus score that was used in data analysis. The training goal was that each coder's initial item scores would agree with the group's consensus score 85% of the time. If coders could not resolve their differences or if they fell below 85% agreement, they met with their supervisor and/or a senior coder for team coding until their skill level rose back to the

85% agreement level. Because sometimes the agreement between coders fell below the 85% cutoff and required a "refresher", the overall reliability across all tapes and coders was 82.3% for the parent items and 76.2% for the child items. Two parent items were excluded from further analyses because videotape coders found them difficult to rate reliably (i.e., "Remain patient with child when child acts in a challenging way?" and "Ever demonstrate concern about child's feelings/preferences?"). Three child items were excluded from further analyses because videotape coders indicated they found them difficult to rate reliably ("Want to do things her/himself?" "Ever take a leadership role in an activity?" "Ever share or express negative feelings to parent?"). When these two parent items and three child items were excluded, the overall reliability rose to 84.3% and 80.7%, respectively.

2.3.3. Other baseline measures

The following measures from the SESS baseline interview were used to assess the concurrent construct validity of the PCOG with respect to family characteristics and child behavior. The Data Coordinating Center examined the reliability and construct validity data of these baseline measures for the whole sample and each ethnic group and found their levels acceptable except where specifically noted below.

2.3.3.1. The preschool kindergarten behavior scales: parent and teacher versions. The Preschool and Kindergarten Behavior Scales (PKBS: Merrell, 1994) assess both children's social skills and behavior problems. The same form is designed for both parents and teachers. It was normed on a nationally matched sample of 2855. The 4-point Likert scale items are scored on a range from "never" to "often." The 34-item social skills total and 27-item externalizing behavior problems total were used in analyses. Alphas for these two scales were .96 and .97, respectively and identical to the national sample. There were virtually no differences in alpha levels among the different ethnic groups on these scales for SESS participants. The three-month test–retest reliability was .69 and .78, respectively. The 15-item internalizing scale total was not included because its two subscales were found to be unreliable in this sample (Edwards, Whiteside-Mansell, Connors, & Deere, 2003). There have been several studies of the construct validity of the PKBS. It has been found to be highly correlated with other measures of child adjustment in the classroom and identified children in need or who required special services (Canivez & Rains, 2002; Carney & Merrell, 2002; Jentzsch, 1996).

2.3.3.2. Home Observation for the Measurement of the Environment (HOME)—preschool version. The HOME inventory (Caldwell & Bradley, 1984) is a widely used semi-structured interview about the child's environment, learning activities, daily routines, and child-rearing practices that also includes direct observation in the home. The early childhood version of HOME used in the SESS study consists of 55 items clustered into 8 subscales. Each item is scored 1=Observed, 0=Not Observed, and each subscale has between 4 and 11 items. Subscale alphas reported in the literature range from .3 to .8. Following Bradley's (1993) criterion and similar to the PCOG reliability training, at each SESS site interviewers were trained to a level of 85% agreement. The construct validity of the HOME has been widely established (Bradley, 1993) with a wide array of environmental, social, and cognitive measures, and as discussed above, has shown stronger patterns of prediction in Anglo and African American samples.

Although most of the HOME interviews were completed in the home (70%), environmental factors necessitated some being conducted at the program site using modifications developed and reported by

Jacobson & Jacobson (1995, 1996). These modifications involve interviewing the parents around items that ordinarily would be naturally observed during a home visit such as the condition of the physical environment and the type and number of toys available. An in-depth analysis by the Data Coordinating Center found no difference in how data from the home vs. site HOME administrations related to other variables in the study. Parallel to the factors described by Bradley et al. (1994), the Data Coordinating Center created two HOME summary scores for analysis: Cognitive Environmental (summing the Learning Stimulation, Language Stimulation, Academic Stimulation, Variety of Experience and Physical Environment subscales) and Social-Emotional (summing the Warmth and Acceptance, Modeling, and Acceptance subscales).

2.3.3.3. Conflict Tactics Scale. The Conflict Tactics Scale (CTS: Straus, 1979) measures the respondent's behavior during conflict resolution with their partner. Where there was no current partner, the scale was not completed. It consists of 3 scales: Reasoning has 3 items; Verbal Aggression has 6 items; Violence has 9 items. Due to very low internal reliability (<.40) the Reasoning subscale was not included. Hence, only the Verbal Aggression and Violence (physical aggression) subscales were used in analyses. Each item was marked by the examiner on a frequency scale based on the number of times it occurred in the past year: never; 1 time; 2 times; 3–5 times; 6–10 times; 11–20 times; more than 20 times. In the current study alphas were .80 for Verbal Aggression and .83 for Violence. These reliabilities were comparable to the original published data. As in Straus (1979), the source article for the scale, the Violence subscale data were highly skewed. Following Straus' recommendation, a logarithmic transformation of the Violence subscale was used in data analyses. The CTS has been used in hundreds of published studies. Some examples of its construct validity are that it has been used for identifying batterers (Archer & Graham-Kevan, 2003) and demonstrating the relation between conflict and health problems (Tollestrup et al., 1999). The Chinese site chose not to administer the CTS because the scale's questions concerning verbal aggression and physical violence were considered offensive.

For analytic purposes, data resulting from the parent and teacher ratings of the child on the PKBS scales were considered child behavior outcome variables while HOME and CTS scales were considered to be family environment variables. The parent and teacher PKBS externalizing scale, the CTS verbal aggression and violence scales, and the PCOG child noncompliance scale were reverse scored, meaning high scores reflect poorer functioning. The parent and teacher PKBS social skills scales, the HOME scales and the remaining PCOG scales were scored so that higher scores indicate higher functioning.

3. Results

The analytic plan consisted of three parts: 1) principal components analyses of the PCOG with the purpose of identifying child and parent subscales to be used in data analysis; 2) one-way analysis of covariance (ANCOVA) comparing the means of each PCOG subscale by ethnic group, controlling for potential confounding variables; and 3) both overall and within ethnic-group correlations of each PCOG subscale with the other dependent variables in the study to assess the concurrent and construct validity of the PCOG. To reduce problems associated with multiple simultaneous tests of statistical significance in the five ANCOVAs, we employed Bonferroni's corrections. Specifically, because our primary interests were in the 40 correlations between the 5 PCOG variables and the 4 family environment and 4 child outcome environment variables, the significance level was set at $p = .00125$, one-tailed test.

3.1. Principal components analysis

A principal components analysis (PCA) with varimax rotation was conducted on the PCOG child items using the cross-site baseline sample ($N=683$) and separately for each of the four ethnic groups. The two-factor solution for the overall sample showed components similar to those in prior studies: 1) positive involvement with parent and 2) noncompliance. For PCAs computed separately for the Latino, Anglo, and African-American groups, the pattern of variable loadings on the components was almost identical to the sample as a whole. For the Chinese group, several of the items loaded negatively on the noncompliance component; in the other groups these items loaded on the positive involvement component. Despite this difference between the Chinese and the other ethnic groups, it was decided to compute component scores for all children using the same set of items. This was done in order to facilitate comparisons across groups even though such a sum for the Chinese might be less valid. Sums were computed using items that loaded on each of the two factors in the solution for the sample as a whole (see Table 2). Since factor loadings typically do not replicate across independent samples, even when factor structures do, and since factor loadings did vary somewhat across ethnic groups in this study, items were unit-weighted for the sums. Four items did not load on either of the two child factors ("Ever insist on doing something her or his own way?" "Ever touch parent affectionately/seek close physical contact?" "Ever share with or express negative feelings to parent?" "Like to 'show off' what she or he is learning or mastered to parent?"). Alpha coefficients computed the positive involvement scale for each of the ethnic groups were .69 (overall) and were .67, .68, .65, and .70 for Chinese, Latin-American, Anglo-American and African-American children, respectively. Child noncompliance consisted of two items. For the whole sample and each ethnic group Spearman-Brown corrected reliability coefficients between the two items were .67 (overall), .44, .86, .66, and .70 for the Chinese, Latin-American, Anglo-American and African-American children, respectively.

A PCA on the parent items for the overall sample produced a three-component solution where the components could be described as 1) sensitivity to child, 2) teaching, and 3) effective discipline. Three-component PCAs computed separately for the ethnic groups all showed similar solutions. Unit-weighted

Table 2
Rotated principal components analysis of PCOG child items (total sample): child subscales

Parent–Child Observation Guide (PCOG) child subscales	PC1	PC2
I. Child positive involvement with parent (33.4% of variance)		
2a. Try to get parent's attention?	.698	− .044
2b. Act emotionally "connected" to parent in routines and play?	.617	.306
2d. Initiate with or invite parent to interact (beyond minimum)?	.624	.134
3b. Smile at parent's face in a variety of situations?	.554	− .040
3c. Enjoy being with parent in everyday activities (share fun)?	.681	.273
3d. Ever express interest in, respect for, and concern about parent?	.585	.202
4a. Ask parent questions?	.614	− .003
4b. Turn to parent as a source for learning?	.656	.106
4d. Chat with parent (a back-and-forth conversation)?	.694	.051
II. Child noncompliant behavior (15.2% of variance)		
1c. Ever refuse to do what parent tells him?	− .016	.854
2c. Cooperate in daily routines? (reversed score for sum)	.138	− .834

sums were computed using items that loaded on each of the three factors in the solution for the sample as a whole (see Table 3). Two parent items did not load onto any of the factors for the sample as a whole ("Ever touch child affectionately?" "Smile at child in a variety of situations"). Alpha coefficients were computed for these three factor scores for each of the ethnic groups. For parent sensitivity, alphas were .84 (overall), .81, .69, .78, and .87 for the Chinese, Latin-American, Anglo-American and African-American parents, respectively. For parent teaching, child alphas were .62 (overall), .64, .65, .57, and .62 for the Chinese, Latin-American, Anglo-American and African-American parents, respectively. For parent effective discipline, alphas were .69 (overall), .47, .69, .63, and .75 for the Chinese, Latin-American, Anglo-American and African-American parents, respectively. For all the PCOG scales higher scores mean better functioning, except for the child noncompliance scale where higher scores means more noncompliance (note that item "Cooperate in daily routines?" was reverse scored for sums).

3.2. Analysis of covariance: comparison of ethnic groups on PCOG factor-based subscales

Table 4 presents the unadjusted means, standard deviations, and results of paired mean comparisons for the two child and three parent PCOG subscales for the four ethnic groups. For each of the PCOG

Table 3
Rotated principal components analysis of PCOG parent items (total sample): parent subscales

	PC1	PC2	PC3
I. Parent sensitivity to child (19.0% of variance)			
1a. Encourage the child to take the lead in an activity?	.667	.201	.052
1h. Treat the child in a respectful manner?	.712	−.043	.008
2a. Have accurate developmental expectations for child's age?	.415	.037	.116
2b. Observe and act interested in what child is doing?	.691	.294	.078
2c. Respond positively to child's nonverbal/verbal communication?	.518	.422	.065
2d. Adjust/pace behavior to that of child (not over-stimulate)?	.714	−.059	.077
2e. Follow child's lead into new activity (child-led transitions)?	.549	−.028	.161
3a. Enjoy interacting during everyday activities (daily routines)?	.638	.406	.003
3d. Talk to child with a warm tone of voice?	.674	.049	−.042
3e. Enjoy playing with child?	.563	.379	.048
4f. Converse with child?	.411	.264	.192
II. Parent teaching child (11.9% of variance)			
1f. Ever communicate values, morals, traditions to the child?	−.123	.501	−.047
1g. Ever make positive comments about the child's behavior?	.142	.602	−.113
4a. Successfully engage child in a learning activity?	.157	.503	.185
4b. Teach child to learn basic concepts?	.039	.422	.025
4c. Help child learn to problem solve?	.072	.508	.112
4d. Help child generalize from child's experience?	.130	.515	.090
4e. Ever provide constructive feedback about child's learning?	.160	.579	.061
III. Parent effective discipline (9.05% of variance)			
1b. Promptly and effectively stop child's inappropriate behavior?	−.008	−.004	.848
1c. Effectively negotiate child through transitions?	.143	.052	.655
1d. Ever prevent the child from engaging in inappropriate behavior?	.078	−.004	.806
1e. Ever help child learn to behave appropriately?	.112	.189	.462

Table 4
Unadjusted means (and SD) Parent–Child Observation Guide child and parent subscales sums[a] by ethnic group ($N=683$)

Component sum	ANCOVA main effect for ethnic group (eta)[a]	Chinese immigrant $N=115$ (Chi)	Latin American $N=120$ (Lat)	Anglo American $N=158$ (Ang)	African American $N=290$ (Afr)	Significant paired comparisons[b]	Significant covariates (beta coefficients)	
Child positive involvement	.19	8.92	13.08	11.67	11.43	Chi<Lat	Birth weight	.16
		(5.42)	(5.24)	(5.46)	(5.56)	Chi<Ang		
						Chi<Afr		
Child noncompliance[a]	.17	1.53	0.95	1.37	0.65	Chi>Afr	Child age	−.16
		(1.44)	(1.56)	(1.60)	(1.29)	Ang>Afr	Male gender	.13
Parent sensitivity	.31	14.24	19.47	18.79	16.46	Chi<Lat	Welfare status	−.14
		(5.79)	(3.36)	(4.23)	(6.12)	Chi<Ang		
						Chi<Afr		
						Afr<Lat		
						Afr<Ang		
Parent teaching	.13	8.19	7.97	9.00	7.42	Afr<Ang	Education	.12
		(3.64)	(3.73)	(3.36)	(3.69)			
Parent effective discipline	.26	5.18	6.13	6.47	7.00	Chi<Ang	Child age	.12
		(2.38)	(2.43)	(2.17)	(2.01)	Chi<Afr		
						Lat<Afr		

[a] All main effects for ethnic group were significant at the .01 or .001 level, after controlling for relevant demographic variables.
[b] Only paired-comparison tests that were significant at the .01 or .001 level are reported in this column on the table.

subscales, a one-way analysis of covariance (ANCOVA) was computed with ethnic group as the primary independent variable. Demographic and background variables, which on preliminary inspection showed a significant relation to at least one PCOG subscale, were entered into all the models as covariates. These included child's age, gender, birth weight, number of children in the family, parent education (high school completion), and family welfare status. We also explored interactions between ethnic group and gender, but because none was significant, did not include them in the final model.

ANCOVA results showed that on every subscale (Child positive involvement $F(3648)=8.75$, $p<.001$; Child noncompliance=6.79, $p<.001$; Parent sensitivity=21.8, $p<.001$; Parent teaching=3.65, $p<.01$; and Parent effective discipline=19.4, $p<.001$) there was a significant difference among the ethnic groups, even after controlling for covariates. Post hoc partial group comparisons, displayed in the right portion of Table 5, showed that after controlling for covariates, Chinese children scored lowest on positive involvement, significantly lower than children in all other groups. Chinese children displayed the most noncompliant behavior, significantly more than African-American children. Chinese parents were rated as least sensitive of parents in all groups; African-American parents were seen as less sensitive than either Latin- or Anglo-American parents. Anglo-American parents were rated as more involved in teaching their children than African-American parents. Chinese parents were rated as the least effective at disciplining their children, significantly less effective than Anglo- or African-American parents. African-American parents were rated, in turn, as more effective at disciplining their children than either Latin-American or Chinese parents.

Table 5
Pearson correlations between PCOG child and parent subscales and other baseline measures ($N=683$[a])

	1	2	3	4	5	6	7	8	9	10	11	12	13
HOME scale social–emotional	1.00												
HOME scale cognitive	0.33***	1.00											
CTS verbal aggression[b]	–0.09	–0.13	1.00										
CTS violence (log)[b,c]	–0.11	–0.16***	0.62***	1.00									
Parent PKBS externalizing[b]	–0.16	–0.12	0.28***	0.19***	1.00								
Parent PKBS social skills	0.18***	0.19***	–0.03	–0.09	–0.34***	1.00							
Teacher PKBS externalizing[b]	–0.01	–0.10	0.12	0.09	0.15***	–0.09	1.00						
Teacher PKBS social skills	0.13	0.15***	–0.15***	–0.12	–0.09	0.15***	–0.53***	1.00					
PCOG child positive involvement	0.06	0.13	–0.10	–0.15***	0.02	0.10	–0.06	0.14***	1.00				
PCOG child noncompliance[b]	–0.05	0.01	0.03	0.04	0.18***	–0.11	0.08	–0.09	–0.24***	1.00			
PCOG parent sensitivity	0.08	0.12	–0.13	–0.16***	0.03	0.09	–0.01	0.08	0.56***	–0.10	1.00		
PCOG parent teaching	0.08	0.17***	–0.07***	–0.14	0.04	0.08	0.04	0.04	0.25***	–0.01	0.40***	1.00	
PCOG parent discipline	0.04	0.04	0.01	–0.06	–0.08	0.16***	–0.07	0.10	0.23***	–0.58***	0.23	0.15***	1.00

***Significant at the $p<.001$ level. Because of Bonferroni corrections, other coefficients are not marked as statistically significant.

[a] Some of the instruments were not administered to all participants and N's vary across coefficient (HOME Scale $N=678$; Conflict Tactics Scale $N=478$; PKBS Parent $N=636$; PKBS Teacher $N=550$).

[b] Items scored so that higher scores indicate dysfunction; all other items are scored so that higher scores indicate good functioning.

[c] Log transformation used for CTS violence to adjust for skew.

Of the covariates that remained independently related to PCOG scores after controlling for their shared variance in the ANCOVAs, all were related in the expected direction. For the child subscales, lower birth weight children demonstrated less positive involvement. Younger children and boys were more noncompliant. For the parent subscales, welfare dependence was related to less sensitive parenting and lower parent education to less parent attention to teaching.

3.3. Construct validity: relationship of the parent–child observation guide scores to other measures overall and within ethnic groups

The relation reported above between the PCOG subscales and covariate demographic and background variables provided the first examination of evidence pertaining to the construct validity of PCOG measures. Table 5 shows the intercorrelations among PCOG subscales scores and other measures for the whole sample. To further examine the construct validity of the PCOG we will first examine the relations between the parent and child PCOG subscales, then we examine the relation between the PCOG subscales and the family environment variables, and finally the relation between the PCOG subscales and the parent and teacher ratings of the child's social skills and externalizing behavior. Each of these issues will be explored for the sample as a whole, as well as for the ethnic groups separately.

3.3.1. Interrelations among the PCOG subscales

When the PCOG scales for families in all groups together were considered (lower right triangle on Table 5), there was a strong and significant negative correlation, as expected, between PCOG child noncompliance and PCOG parent effective discipline ($r = -.58$ for the sample as a whole); this relation occurred for each ethnic group as well, (Chinese: $r = -.34$, Latin-American: $r = -.79$, Anglo-American: $r = -.49$, African-American: $r = -.61$). Positive child involvement and parent sensitivity were also related in predictable ways across all 4 ethnic groups (Chinese: $r = .58$, Latin-American: $r = .57$, Anglo-American: $r = .44$, African-American: $r = .55$). For three of the four ethnic groups, child positive involvement was related to parent teaching (Chinese: $r = .37$, Anglo-American: $r = .22$, African-American: $r = .33$, but this was not the case for Latin-American families: $r = .09$).

3.3.2. Relation of PCOG subscale scores to preschool behavior (PKBS) scores (reported by parents and by teachers)

Table 6 presents the relation of PCOG subscales to child PKBS behavior outcome variables for each ethnic group. Correlations for the whole sample are presented in the top row of each section as a point of reference. Child noncompliance and parent effective discipline PCOG scores are presented side-by-side, as are child positive involvement with parent sensitivity and parent teaching, because these parent and child behaviors are conceptually linked and empirically related for the sample as a whole and within most ethnic groups (see Section 3.3.1 above).

Few significant correlations were observed between the PCOG variables and ratings of children's behavior, but significant relationships tended occur between variables measuring similar constructs. In the sample as a whole, PCOG scores for child noncompliance correlated in the expected direction with externalizing behaviors and PCOG scores for effectiveness of parental discipline correlated with parent ratings of children's social skills. Within both the Chinese and African-American groups, observed child noncompliance was related to PKBS ratings of child externalizing

Table 6
Relation of PCOG to child behavior (PKBS) by ethnic group ($N=683$)

Subscale	N	Group	Child noncompliance[a]	Parent discipline	Child positive	Parent sensitivity	Parent teaching
Parent report	636	All	.18***	−.08	.02	.03	.04
Externalizing[a]	115	Chi	.33***	−.07	−.04	.04	.07
	110	Lat	−.02	−.03	.07	−.10	−.17
	128	Ang	.17	−.05	.05	.04	.03
	283	Afr	.22***	−.19***	−.03	−.02	.05
Parent report	636	All	−.11	.16***	.10	.09	.08
Social skills	115	Chi	−.11	.29**	.10	.18	.28**
	110	Lat	−.13	.18	.24**	.32***	.23**
	128	Ang	−.04	.11	.01	.12	.12
	283	Afr	−.07	.02	.05	−.05	−.03
Teacher report	550	All	.08	−.07	−.06	−.01	.04
Externalizing[a]	115	Chi	.15	−.02	.03	.08	.07
	102	Lat	.00	−.07	−.15	−.02	.03
	100	Ang	.00	.10	.07	.17	.20
	233	Afr	.06	−.13	−.08	−.08	−.06
Teacher report	550	All	−.09	.10	.14***	.08	.04
Social skills	115	Chi	.01	.09	.18	.17	.08
	102	Lat	−.19	.25**	.29**	.07	.03
	100	Ang	−.07	−.04	−.04	−.06	−.03
	236	Afr	−.05	.06	.07	−.01	.08

**$p<.01$. ***$p<.001$, two-tailed test.

[a] Items scored so that higher scores indicate dysfunction, all other items are scored so that higher scores indicate good functioning.

behavior by parents. Also for African American children, when PCOG coders scored parents lower on effective discipline, the parent independently rated the child as higher on externalizing behavior problems.

PCOG ratings of positive child involvement were related to teacher ratings of child social skills. Within the Chinese immigrant group, PCOG scores for effective discipline and teaching were related to the child's social skills reported on the parent version of the PKBS. For Latin-American dyads, the parent's positive rating of the child's social skills was related to high PCOG scores for the child's positive involvement, and to good parent sensitivity and teaching behavior. For Latin-American children, independent teacher ratings of positive child social skills were related to PCOG ratings of the child's positive involvement with the parent and parent effective discipline. For the other 3 ethnic groups, no teacher rating of the child's behavior was related to any PCOG subscale.

3.3.3. Relation Of PCOG subscale scores to home and family factors (HOME and CTS scores)

Table 7 presents the relation between PCOG subscales and the family environment variables for each ethnic group. Again, correlations for the whole sample are presented in the top row of each section as a point of reference. The HOME social–emotional summary score was not associated with any PCOG

Table 7
Relation of PCOG to home and family variables by ethnic group ($N=683$)

Subscale	N	Group	Child noncompliance[a]	Parent discipline	Child positive	Parent sensitivity	Parent teaching
HOME soc. em	678	All	−.05	.04	.06	.08	.08
	115	Chi	.07	.05	.05	.11	.07
	120	Lat	−.15	.13	.07	.08	.01
	155	Ang	−.02	−.01	.02	.07	.15
	288	Afr	−.08	.01	.04	.03	.05
HOME cognit.	678	All	−.01	.04	.13	.12	.17***
	115	Chi	.12	.18	.04	.19	.21
	120	Lat	−.12	.06	.20	.06	.10
	155	Ang	.03	.05	.15	.19	.21**
	288	Afr	−.06	.01	.12	.07	.16**
CTS verbal aggression[a]	478	All	.03	.01	−.10	−.13	−.07
		Chi					
	101	Lat	.26**	−.24	−.26**	−.13	.08
	141	Ang	.07	.01	−.04	−.01	.02
	236	Afr	−.09	.04	−.07	−.15	−.19***
CTS violence (LOG)[a b]	478	All	.04	−.06	−.15***	−.16***	−.14**
		Chi					
	101	Lat	.28**	−.23	−.17	−.20	.03
	141	Ang	.07	−.08	−.12	−.02	−.09
	236	Afr	−.02	−.06	−.14	−.17**	−.22***

**$p < .01$. ***$p < .001$, two-tailed test.
[a] Items scored so that higher scores indicate dysfunction, all other items are scored so that higher scores indicate good functioning.
[b] Log transformation used for CTS violence because responses were skewed.

subscale for the sample as a whole or within any ethnic group. For the sample as a whole the HOME cognitive summary score (comprised of learning stimulation, language stimulation, academic stimulation, variety of experience, and physical environment scores) was positively related to the PCOG parent teaching subscale scores, as it was for both the Anglo-American and African-American groups.

In the sample as a whole, higher CTS violence scores were related to less parent sensitivity, parent teaching and child positive involvement. A similar pattern was observed for African-American families. For Latin-American children, high CTS violence scores showed similar relations at the level of statistically trend, but were also related to child noncompliance. The Chinese parents did not complete the CTS, and the CTS scores were unrelated to PCOG scores for the Anglo-American families.

4. Discussion

To what extent was this multi-cultural collaboration to assess parent-preschool child interaction successful? What were the shortcomings of the process? What are the next steps?

4.1. Multi-cultural workgroup

Most important in the process was the starting point: the universal belief that all cultures value their children and, by implication, develop a cultural script aimed at having them become contributing members of their community. This common ground approach is a documented effective strategy in cross-cultural conflict resolution because it de-emphasizes who or what is right or wrong. It is less likely to be offensive or create upset, and increases the likelihood of constructive discussion (Pedersen, 1993). By using a culturally anchored approach to describe how this script is played out, many areas of traditional conflict between cultural groups were avoided, especially conflicts focused on whose way to rear children is best. The SESS representatives of the different cultural groups greatly enjoyed learning about similarities and differences from one another. They said that being asked to speak about their beliefs around child rearing that were subconscious increased their self-awareness and their ability to observe more objectively.

The representatives from the different ethnicities participating in the SESS workgroup accepted mutual competence (Goldberg, 1977) as the conceptual framework for observing parent–child interaction. What became apparent was that in different cultural groups different aspects of mutual competence were emphasized, and mutual competence was manifested through different behaviors in different cultural groups. For example, in the pilot videos observed by the workgroup, there was more laughter and playful physical contact on the Latin American tapes and more time spent teaching the child on the Chinese tapes. The challenge for the collaborators was to develop behavioral exemplars for mutual competence that were functionally equivalent across groups and to develop culturally appropriate observation protocols that would allow mutual competence to be assessed.

The cultural diversity of the PCOG coders was also a strength of the collaboration. There was a risk that the same dyadic interchange would be coded differently if trained coders were from the same or different ethnic groups as the dyad being observed (Gonzales et al., 1996). The coders' weekly reliability meetings helped maintain objectivity and prevent overgeneralization about a particular interaction due to bias caused by being from the same or different ethnic group. The open interchange and discussion evolving out of the collaborators and coders differing perspectives, i.e., cultural diversity, was this collaboration's greatest strength.

4.2. Universalist perspective

The data presented from this multi-cultural collaboration to assess parent-child interaction must be considered exploratory given the limited prior research on this topic and the fact that the PCOG is an instrument under development. The project began with no specific hypotheses about ethnic differences in parent–child interaction. Moreover, the tool for observing parent–child interaction that was adapted for use in this project had not previously been used to examine ethnic differences.

In several ways this study supported the position that there are universals in parent–child interaction that can be meaningfully assessed in different ethnic groups. The multi-ethnic team that modified the PCOG was able to achieve high levels of consensus on what kinds of parent and child behavior represented important features of parent–child interaction and should be included in the final version of the instrument. In addition, coders were able to achieve good inter-rater reliability using this instrument to observe dyads from varied ethnic backgrounds. Factor analyses of the instrument yielded dimensions of behavior similar to other studies of parent–child interaction. Moreover, the patterns of correlations

between parent and child factors were similar for each of the ethnic groups and consistent with previous research. Specifically, parent effective discipline related to child compliance (Crockenberg & Littman, 1990; Kochanska, 2002) and maternal sensitivity related to positive child involvement (Bernstein & Hans, 1994; De Wolff & van IJzendoorn, 1997).

Results concerning the construct validity of the PCOG are mixed. For the sample as a whole, there were meaningful associations between parent–child interaction ratings and demographic variables, child behavior outcome variables, and family environment variables that resemble findings reported in other studies of parent–child interaction. Child covariates of age, gender and birth weight related, as expected, to child noncompliance and positive involvement. Parent covariates of education and welfare status related, as expected, to parent sensitivity and teaching. Parent reports of children's externalizing behavior and poor social skills were associated with observations of child non-compliance. Observed effective parental discipline was related to the parent rating of child social skills. For the sample as a whole, parent and teacher ratings of the child's social skills were also associated with observations of the child's positive involvement with the parent. These findings are consistent with other studies suggesting that young children's social competence and behavior problems are closely linked with aspects of their interactions with their parents (Kerns & Barth, 1995; van der Mark, Bakermans-Kraneburg, & van IJzendoorn, 2002). For the sample as a whole, the data also suggested that family environment variables are correlates of child positive involvement and parental sensitivity and teaching. This finding is consistent with theory and findings of numerous studies linking parenting to an ecology of risk factors in their lives (Jaffee, Caspi, Moffitt, Belsky, & Silva, 2001; Oyen, Landy, & Hilburn-Cobb, 2000).

While there were apparent universals in dimensions of parent–child interaction derived from the PCOG, when one compares ethnic groups based on the ANCOVA analysis, there were differences in average levels of parent–child interaction behavior on these dimensions. Given the review of the literature and the discussions of the workgroup, mean differences on PCOG subscales across ethnic groups was to be expected due to the likely presence of different priorities and cultural scripts. Some findings matched anticipated outcomes, while some clearly did not. Specifically, the finding that Latin- and Anglo-American parents were the most sensitive is not surprising given the Latino culture's emphasis on interpersonal warmth and the Anglo-American's emphasis on contingent responsivity to promote independence (see sensitivity factor items). Similarly, the finding that African-American children demonstrated the least noncompliance and that their parents were rated most effective at discipline is consistent with the literature concerning the role of authoritarian parenting in African-American families living in dangerous environments. The Chinese dyads' lower PCOG ratings on child positive involvement and parent sensitivity may be related to the PCOG subscale item content of overt positive emotional expression, which is not characteristic of typical Chinese parent–child interaction. The findings most inconsistent with the review of the literature were the PCOG ratings of the Chinese children's high level of noncompliance and parents' ineffectiveness at discipline. Given the Chinese cultural emphasis on proper training and respect for elders, one might have expected these dyads to have been rated more similarly to African-American dyads.

4.3. Culturally anchored perspective

For each ethnic group, there were meaningful, but different patterns of correlations between the child and parent PCOG subscale scores and the child behavior outcome and family environment variables.

However, warnings abound in the research literature—even if a measure is reliable (and apparently valid) across ethnic groups, it may not be measuring the same thing across cultures (e.g., Berlin, Brooks-Gunn, Spiker, & Zaslow, 1995). Where the construct validity of the PCOG was confirmed within a particular cultural group, we will speculate as to how the findings relate to the cultural script described in the introduction. Keeping this warning in mind, we discuss post hoc each ethnic group presented in this report in the following section.

4.3.1. Chinese children and parents

The differences between the Chinese dyads and the other groups were large and often surprising. Chinese children in this study showed the most noncompliance of any group, and their parents were rated by coders as being the least effective at discipline. One possibility for this unexpected finding might be that the PCOG child noncompliance subscale was not reliable for Chinese children. It was the one child factor that had a structure unique to the Chinese group, and the Spearman–Brown reliability coefficient was considerably lower for the PCOG child noncompliance subscale. In addition, the Chinese children were the youngest in this study, and their age could partially explain this finding. Three- and four-year-old children display more externalizing behavior than five-year-olds according to the PKBS manual and in the SESS study (Merrell, 1994). However, Chinese children differed even after we controlled for age in the ANCOVA analyses. Chao and Tseng (2002) have suggested that for Chinese mothers of young children, emotional closeness is more valued than child compliance. Higher expectations for the Chinese child's behavior and compliance become more important developmentally at around age five or six, an older age than for the children we studied. Another possibility for the difference between the Chinese dyads and the other groups may be the relative unfamiliarity of the videotape situation for the Chinese immigrant families. The Chinese parents were relatively uncomfortable with the videotape situation, requiring a social period with the examiner before taping began. They were videotaped in a day care center where corporal punishment was not permitted. Perhaps wanting to please the examiner, they may have been hesitant to be forceful in their discipline while being videotaped for it was against the rules.

When one looks within the Chinese group, however, there is considerable evidence for construct validity of the videotaped observations. Parent ratings on the PKBS of child externalizing behavior related to child noncompliance observed during the videotaped interactions. Parent PKBS ratings of child social skills related to observers' PCOG ratings of effective discipline and of teaching during interaction. There was a similar nonsignificant trend ($r = .21$) for the HOME cognitive summary scale to relate to PCOG parent teaching. These patterns of construct validity may reflect the cultural expectations for the child to be a properly behaved and a learner whose academic achievement brings honor to the family (Chao, 2000).

PCOG subscales dealing with positive emotional expression did not demonstrate construct validity within the Chinese group. Neither the PCOG parent sensitivity subscale, which contains the PCOG items dealing with overt positive emotional expression and child-centered responsiveness, nor did PCOG child positive involvement scale was related to external variables. For the child, only the PCOG noncompliance subscale demonstrated construct validity. PCOG child noncompliance related to the teacher's rating of the child's social skill while PCOG child positive involvement did not. Overt expression of positive feelings may have a less prominent role in the cultural script than the parent's investment in the child's proper behavior and in teaching the child. As noted, overt positive emotional expression can work against the Chinese value of behavioral inhibition. Sensitivity to the

child's cues can increase the child's expression of independence. Since neither overt positive emotional expression nor expression of independence is valued in Chinese culture, it is not surprising that the child positive involvement and the parent sensitivity PCOG subscales did not demonstrate construct validity.

4.3.2. Latin-American children and parents

The literature suggests that the interaction style of the Latin-American dyads could be characterized as one in which there is considerable overt expression of positive feeling and affectionate physical contact (McDaniel & Andersen, 1998). Consistent with this portrayal, in the current study the Latin-American parents demonstrated the highest mean level of sensitivity on the PCOG, significantly more than the Chinese and African-American parents, and their children displayed the most positive involvement, significantly more than the Chinese children.

Latin-Americans were the only group in the study for whom the child social skills PKBS ratings—from both parents and teachers—consistently related to PCOG interaction subscales reflecting overt positive expression–child positive involvement and parental sensitivity. For Latin-Americans, positive engagement and warmth may play the central role in interaction. It is interesting that unlike the Chinese, no parent rating of the child's behavior predicted PCOG child noncompliance.

What did predict PCOG noncompliance for the Latin-American children was the level of conflict in the home; both CTS verbal aggression and CTS violence were predictors. However, the level of reported conflict did not predict any of the 3 PCOG parent scales, although there was a nonsignificant relationship ($r = -.24$) between CTS verbal aggression and PCOG parent effective discipline. How might domestic conflict affect the children? It is known that witnessing domestic violence can adversely affect children's behavior (Groves, Lieberman, Osofsky, & Fenichel, 2000). Conflict in the home may affect the child's behavior directly rather than being mediated by the parent's behavior in interaction. Modeling the observed aggression may be one possible avenue leading to noncompliance. Also, the Latin-American dyads were the only ones videotaped in the home. For the noncompliant children who may have witnessed conflict in the home, home may be a relatively uncomfortable place. The home-based videotapes may be more likely to capture their anxiety than one made at preschool, a place that might represent a safer place for the children. It should be noted that we compared the means for the CTS among the three ethnic groups (the Chinese were not included). The Latin-American mothers reported significantly less verbal and physical aggression than the other two groups. For the relatively fewer Latin-American children who lived in households where aggression was reported, it seemed to have a negative impact on the children's behavior.

4.3.3. Anglo-American children and parents

The Anglo-American children in the study were relatively noncompliant, and their parents were relatively sensitive toward their children's cues. These results are consistent with the claim that within American mainstream culture and its emphasis on independence and individual achievement, child-rearing patterns encourage children's self expression (Richman et al., 1988b). For the most part, this characterization fits the Anglo-American dyads in the sample. This is the case even though the Anglo-American children in this study were drawn from a lower income, rural population as opposed to a middle-class population where values and behavior are often assumed to be the prototype for American mainstream culture. Unexpectedly few correlations between PCOG interaction variables and any external variables emerged for the Anglo-American sample. We examined all the variables for problems

with ceiling and floor effects and in no instance were these an issue for the Anglo-American sample. The relation that performed as expected for Anglo-American families was the correlation between PCOG parent teaching and the HOME cognitive scale, which is consistent with the Anglo-American emphasis on stimulating the cognitive development of their children. The collaborators from this site were not able to provide insight into the lack of predicted correlations between other PCOG subscales, parent and teacher reports of child behavior, and family environment variables for the poor, rural Anglo-Americans in this study.

4.3.4. African-American children and parents

In terms of mean scores on the PCOG subscales, African-American children in the study showed low levels of PCOG noncompliance, and parents were notably effective in their discipline (more so than Chinese and Latinos). Although African-American parents were coded as more sensitive than Chinese parents, they were less sensitive than Latino and Anglo-American parents. In addition they were coded as doing less teaching than Anglo-American parents. Most of the African-American families in this study lived in poverty, in dangerous inner-city communities, which may in part explain interactional patterns that emphasize discipline and compliance for reasons of safety and respect (Deater-Deckard et al., 1996; Whaley, 2000). Poverty and high levels of stress are known to adversely affect maternal sensitivity (Crockenberg & Littman, 1991) and teaching (Bradley & Corwyn, 2002). Environmental stress may also have contributed to limiting the sensitivity shown by African-American parents. In spite of relatively lower parental sensitivity, the African-American children in the SESS study were as positively involved with their parents as were Anglo-American and Latino children. This finding needs to be further explored, but may be analogous to the finding reported by Carlson and Harwood (2003) for Puerto Rican families, where child attachment was less related to parental sensitivity than to parental directive play. In the present study, parent discipline may serve a similar positive function for African-American families.

When we turn to the patterns of correlations between the PCOG and the child outcome and family environment variables, the African-American dyads show some similarities with each of the other ethnic groups. Like the Chinese dyads, the parent's PKBS ratings of the child's externalizing behavior predicted PCOG noncompliance coded from the videotapes. This finding may point to the salience of the cultural script of proper child behavior in both African-American and Chinese culture. African-American and Latino dyads' coding on the PCOGs each were predicted by family conflict from the CTS; however, the African-American dyads showed a different pattern of relations. Rather than showing increased noncompliance and less positive interaction with the parent as observed in Latino children, African-American children living with more verbal aggression and violence at home experienced less parental sensitivity and teaching during parent–child interactions.

4.4. Summary

In this cross-site study, similar dimensions of interaction were observed reliably among parent-child dyads from four different ethnic groups, and meaningful but different patterns of associations were found between interaction measures and indices of child socioemotional development in three of the four groups. Although the pattern of findings is complex and not easily summarized, these associations suggest that different aspects of the parent–child relationship may be especially salient and important for child development in different cultural settings: affective responsiveness and closeness for Latin-

American dyads, compliance and parental control for African-American dyads, and compliance, parental discipline and teaching for Chinese dyads. The picture is less clear for the Anglo-American dyads. While the mean level of performance on the PCOG subscales was consistent with what was suggested by the Anglo cultural script, generally the PCOG did not demonstrate construct validity for the Anglo-American dyads. Overall, the patterns of correlations of PCOG subscales with child externalizing problem behaviors, social skills, and family environment variables are interpretable post hoc. The generally low number of associations within each ethnic group, however, raises the issue of the usefulness of the PCOG. It may be that by developing an instrument that focused on behavioral indices of relationships that were judged appropriate across all the ethnic groups, aspects of relationships that have great significance for individual ethnic groups were overlooked.

We suspect that the central deficiency of the PCOG lies in the ways in which parents and children express their affective ties to one another. The PCOG instrument used in this study may place too much emphasis on parental sensitivity and on overt demonstration of positive emotion between parent and child. Recall that for the HOME scale data reported by Bradley et al. (1996) the factor structure for the parent's contribution to cognitive development was more consistent across cultures than was the parent's support of the child's social–emotional development. Similarly for the PCOG, the dimensions of child noncompliance and parent discipline were closely linked in the SESS study with other variables among the ethnic groups whose countries of origin are collectivistic (Chinese, Latin-American, and African-American), but parental sensitivity and child positive involvement were not. Assessment of parental sensitivity and child positive involvement may be particularly challenging from a cross-cultural perspective.

It should also be noted that the other instruments used in this research study as sources of external validity of child behavior outcomes and family environment may also require further scrutiny, for they may not be appropriate, meaningful or valid for different samples, even if they are reliable measures (Edwards et al., 2003). Like the PCOG, these measures may tap into aspects of development that are more or less "salient" or meaningful for each of the groups.

The greatest shortcoming of the process is its reliance on assessing dyadic parent–child (most often mother–child) interaction. Other family and community members often have meaningful relationships with children and are involved in their socialization, particularly in collectivist cultures. For many children in the study, brief and perhaps contrived parent–child interactions will provide too limited a view into factors affecting the child's development. Ironically, one of the collaboration's strengths, its commitment to culture-specific protocols, is also one of its shortcomings. For example, observed differences between ethnic groups may be the result of the setting (e.g., home vs. early childhood center). Setting and ethnicity hence are confounded. Varying both the protocol and the PCOG coding by ethnic group may introduce too much confounding to make meaningful cross-cultural comparisons. On the other hand, any within-group patterns that are also found to be cross-cultural are more likely to be robust findings and less likely to be artifacts of the measure or protocol (Garcia Coll & Magnusson, 1999).

More positively, there were many exciting elements to this study. As mentioned, the multi-cultural collaboration of the investigators and coders was invigorating for all involved. The universal principle that all cultures value their children opened wide vistas for discussion and learning about one another; it created common ground. Hindsight allows us to see the shortcomings of measurement and design. However, the 683 videotapes contain a treasure trove of possibilities. We did not analyze the situations separately, even though specific aspects of interaction elicited in the different contexts could help clarify

ethnic group differences. For example, one could compare ethnic groups on how the parents have their children to put away the groceries—to what extent are learning vs. social interaction emphasized. During free play one could look at fantasy play. During snack time one could examine the content of the parent-child conversation. During cleanup after snack, one could examine parental scaffolding and directiveness. We intend to attempt to secure funding for further analysis.

There are many other directions for further research comparing the patterns of interaction among the different ethnic groups in the United States. This study focused only on three and four year old children and was limited to children living under conditions of poverty. It did not provide data on many other important issues that are relevant to American cultural differences, including parents' expressed values about childrearing, parental beliefs about issues of independence and communalism, and issues related to immigration and acculturation, especially likely to be salient for the Chinese immigrant sample. Ultimately, large cross-site studies such as this one, whose main goal was not to study parent–child relationships but rather to evaluate programming, are not well-suited to produce the kind of rich information that are needed to understand cultural differences in child-rearing practices. Multi-site studies that focus on parent-child relationships in natural settings, using similar assessment methods will ultimately be necessary to shed light on cultural differences in parent-child relationships. Whiting and Edwards' (1988) study of childrearing and children's experiences in cultures around the world may serve as a model for the kinds of methods that could be employed to examine cultural differences closer to home. There is a critical need for ethnographic and other qualitative research to provide rich accounts of parent-child relationships in different cultural contexts. This need, however, does not mean that we should abandon attempts, such as this one, to find dimensions of parenting and tools to measure them across cultures. Multiculturalism is a fact of life in contemporary American society. As developmental research increasingly includes children from diverse backgrounds, and as intervention programs directed toward high-risk families must find ways of best serving families from around the world, it becomes essential to work toward creating tools for assessing parenting and parent–child relationships, tools whose utility within different ethnic groups can be clearly demonstrated.

Acknowledgements

The authors would also like to thank the participants of the March 1999 meeting in Los Angeles for their valuable input into measuring caregiver–child interaction in a culturally competent manner. Finally, the authors would like to thank Melody Chao and Anne Morris from Asian American Recovery Services, who offered valuable insight into parent–child interaction among Chinese immigrant families.

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