ATTACHMENT, CULTURE, AND THE CAREGIVING SYSTEM: THE CULTURAL PATTERNING OF EVERYDAY EXPERIENCES AMONG ANGLO AND PUERTO RICAN MOTHER–INFANT PAIRS

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ABSTRACT: This investigation focuses on cultural differences in the relationship between maternal sensitivity, emotional expression, and control strategies during the first year of life and infant attachment outcomes at 12 months. Participants were middle-class Puerto Rican and Anglo mother–infant pairs (N = 60). Ratings of physical control, emotional expression, and maternal sensitivity during mother–infant interactions in five everyday home settings, videotaped when the infants were 4, 8, and 12 months old, were examined in combination with 12-month Strange Situation classifications. Results suggest that physical control shows a different pattern of relatedness to maternal sensitivity, emotional expression, and attachment outcomes among the Puerto Rican compared to the Anglo mothers in this study. These findings have implications for practitioners and researchers interested in normative parenting among diverse cultural groups.

RESUMEN: Esta investigación se enfoca en las diferencias culturales en la relación entre la sensibilidad materna, la expresión emocional y las estrategias de control durante el primer año de vida y los resultados de la afectividad del infante a los 12 meses. En el estudio participaron 60 pares de madres-infantes de origen puertorriqueño y anglosajo. Los puntajes de control físico, expresión emocional y sensibilidad materna, durante las interacciones entre la madre y su infante en cinco situaciones caseras de cada día, grabadas en video cuando los infantes tenían 4, 8 y 12 meses de nacidos, fueron examinados en combinación con las clasificaciones de la “Situación Extranja” a los doce meses. Los resultados indican que el control físico muestra un patrón diferente de relación en cuanto a la sensibilidad materna, a la expresión emocional, y...
a los resultados de afectividad entre las madres de origen puertorriqueño, al compararlos con las madres de origen anglosajón en este estudio. Estos resultados tienen implicaciones para los practicantes clínicos y los investigadores interesados en la crianza normativa entre grupos culturales diversos.

HÉSUMÉ: L’accent de cette enquête est placé sur les différences culturelles dans la relation entre la sensibilité maternelle, l’expression émotionnelle et les stratégies de contrôle durant la première année de la vie et les résultats en matière d’attachement à l’âge de 12 mois. Les participants consistaient en paires mère-nourrisson portoricaines et américaines, issues de la classe moyenne (N = 60). Les évaluations du contrôle physique, de l’expression émotionnelle et de la sensibilité maternelle durant les interactions mère-nourrisson dans cinq situations quotidiennes à la maison, filmées à la vidéo quand les bébés avaient 4, 8, et 12 mois ont été examinées en association avec les classifications de situation étrange pour l’âge de 12 mois. Les résultats suggèrent que le contrôle physique montre un pattern différent de relation à la sensibilité maternelle, à l’expression émotionnelle et aux résultats d’attachement chez les mères Puerto- ricanas, comparées dans cette étude à des mères américaines. Ces résultats ont des implications pour les praticiens et les chercheurs intéressés par le parentage normatif au sein de groupes culturels divers.


抄録: この研究は、最初の1年間の母親の感受性、感情表現、およびコントロール戦略と12ヶ月児の乳児の愛着の結果との関係性における、文化の違いに焦点をあてる。参加したのは、中間階級のプエルトリコ系と英語アメリカ系の母親と乳児のペアだった（N = 60）。乳児が4、8、12ヶ月のときにビデオ録画された、5日間毎日家庭での母親と乳児の相互作用の間、身体的なコントロール、感情表現、そして母親の感受性の評価は、12ヶ月のStrange Situation 分類を組み合わせて、検討された。結果から、この研究では、英語アメリカ系の母親の間で、プエルトリコ系の母親では、身体的なコントロールは、母親の感受性、感情表現、および愛着の結果と、異なる関係性パターンpattern of relatednessを示すことが示唆される。これらの結果は、多様な文化グループの間の標準的な育児 parentingに興味を持つ臨床家や研究者にとって、意味がある。

* * *

INTRODUCTION

Attachment and Maternal Sensitivity

Attachment theory predicts that sensitive, responsive maternal care will lead to the development of secure attachment relationships and subsequent socio-emotional competence (Ainsworth, Blehar, Waters, & Wall, 1978; Bowlby, 1969). John Bowlby summarized the ideally sensitive
mother as "...being readily available, sensitive to her child’s signals, and lovingly responsive when he or she seeks protection and/or comfort and/or assistance." (Bowlby, 1988, p. 4). This description of sensitive caregiving closely parallels Ainsworth’s four caregiving dimensions of sensitivity vs. insensitivity, acceptance vs. rejection, cooperation vs. interference, and accessibility versus ignoring (Ainsworth, Bell, & Stayton, 1974). These dimensions are based upon both her naturalistic studies and her work using the Strange Situation to investigate patterns of individual difference in attachment (Ainsworth, 1967; Ainsworth & Bell, 1970).

The hypothesis that sensitive, responsive maternal care is the single most important precursor of secure attachment relationships and subsequent socio-emotional competence (Ainsworth et al., 1974; Ainsworth et al., 1978; Bowlby, 1969) is now supported by meta-analyses that find weak to moderate relationships between maternal sensitivity and security of attachment. However, the most recent meta-analysis (De Wolff & van IJzendoorn, 1997) found that global assessments of emotional expression among nonclinical samples showed moderate effect sizes equal to those of sensitivity ratings in predicting attachment quality. Such meta-analytic findings are more compatible with a hypothesis in which maternal sensitivity is one of several important precursors of secure attachment instead of the single, primary precursor.

Indeed, DeWolff and van IJzendoorn conclude that efforts to understand the specific contributions of sensitivity should be abandoned in favor of a multidimensional approach to investigating the antecedents of attachment. In particular, the role of parental management and control strategies as well as broader contextual influences are highlighted as areas in need of further investigation in studies of attachment antecedents (De Wolff & van IJzendoorn, 1997).

In addition, despite Ainsworth’s careful efforts to operationalize the concept of sensitivity, several researchers have suggested that observer judgments regarding the “appropriateness” of maternal responses are based in part on cultural and other contextual factors, and have recommended adding measures of a variety of maternal and contextual variables (level of social support, personal attachment history/integration, cultural beliefs about parenting and child development) to investigations of the caregiving antecedents of attachment quality (Barnett, Kidwell, & Leung, 1998; De Wolff & van IJzendoorn, 1997; Fisher, Jackson, & Villariuel, 1998; Harwood, Miller, & Irizarry, 1995; Jackson, 1986; Leyendecker, Lamb, Schöllmerich, & Fracasso, 1995; Rothbaum, Weisz, Pott, Miyake, & Morelli, 2000; Waters, Bailey, Pederson, & Moran, 1999). Indeed, Ainsworth’s meticulous naturalistic studies in Uganda led her to caution future researchers that caregiving must be understood in cultural and historic context (Ainsworth, 1967).

The most comprehensive effort to reframe the definition of sensitivity is presented by George and Solomon (1999). Bowlby (1969) proposed that the infant’s developing attachment behavioral system is supported by the attachment figure’s organized caregiving behavioral system. Bowlby’s work, however, remained focused on the infant attachment system and little or no investigation of the caregiving system was undertaken. George and Solomon suggest that the effort to define sensitivity in terms of discrete behaviors or behavioral patterns be abandoned in favor of an ethologically based behavioral systems approach to caregiving from the perspective of the attachment figure, not the child. The goal of the caregiving behavioral system is the provision of protection from events or situations that the parent perceives as dangerous or stressful. This system, like the child’s attachment system, is associated with strong emotions. Mothers are intensely satisfied and pleased when they are successful at protecting their children and similarly intensely negatively aroused when protective efforts are unsuccessful. The system is activated or terminated by infant cues, internal processes, and/or environmental events. Optimal caregiving as an outcome of a behavioral system would by definition be organized by caregiver cognitive processes, involve interactions with other behavioral systems both within the caregiver and between the caregiver and others, and incorporate complex transactions be-
between biologic and experiential factors. The organization of a maternal caregiving system that
promotes the formation of secure attachments would thus include infant participation in the
feedback loops that activate and terminate the system, the caregiver’s mental representations
of attachment experiences, the influences of the family system on the mother–child relation-
ship, and the broader context of cultural beliefs and values. Whereas Ainsworth’s definition of
sensitivity views caregiving behavior only from the child’s perspective, George and Solomon
challenge us to examine optimal caregiving from the perspective of the caregiver using the
same behavioral control systems approach which forms the foundation of attachment theory.

Physical Control and Maternal Sensitivity

Attachment research has traditionally focused on the dimensions of warmth and sensitive re-
sponsiveness with little attention given to issues of discipline and control (De Wolff & van
IJzendoorn, 1997). The Ainsworth et al. (1978) maternal sensitivity scales include the dimen-
sion of “cooperation versus interference.” The operational definitions of sensitivity thus include
reference to offering acceptable alternatives to infant requests that cannot be accommodated.
Efforts to control the infant’s behavior or to shape interactions based upon the mother’s wishes
are rated as interfering and insensitive. Thus maternal sensitivity has come to include the value
of “following the child’s lead,” or allowing the child to guide maternal behavior and make a
variety of choices. This aspect of sensitivity has been highlighted and oversimplified in the
context of the middle-class Anglo-American cultural emphasis on individual autonomy. [The
term “Anglo” has been chosen to describe the white American women of non-Hispanic Eu-
ropean ancestry who participated in this study. Alternative labels such as “Euro-American” or
“U.S.” ignore the fact that many Puerto Ricans are of (Spanish) European ancestry and are also
all U.S. citizens. The cultural term “Anglo” has a long history of use to distinguish the English-
speaking Americas from the Spanish-speaking Americas, and is far more parsimonious than
“white American women of non-Hispanic European ancestry” (Harwood, Schölmerich, Ven-
tura-Cook, Schulze, & Wilson, 1996).] Without regard to Ainsworth’s (1967) caution about
understanding the cultural and historic contexts of caregiving, the belief that control is always
intrusive and associated with negative outcomes appears to have been accepted as a universal
truth in Anglo-American parental ethnotheories.

This conceptualization of maternal control as interfering and insensitive is supported by
some studies using the Strange Situation which link high levels of maternal control with low
emotional availability or rejection to explain the child’s avoidant behavior when the attachment
system is activated. These studies find that high levels of maternal control in interactions are
experienced as overstimulating and intrusive and are associated with avoidant Strange Situation
behavior at 12 months (Ainsworth et al., 1978). In an investigation of the interface of attachment
theory and differential emotions theory, Malatesta, Culver, Tesman, and Shepard (1989) found
that infants classified as insecure-avoidant demonstrate expressions of heightened vigilance and
suppressed anger during Strange Situation reunions. These emotions are interpreted as infant
responses to aversive and overstimulating maternal interactions.

However, in studies among a variety of cultural groups which emphasize interdependence
over individual autonomy, there is evidence that the concept of sensitive maternal care includes
the expectation that mothers will structure and guide the infant’s environment and behavior to
enhance appropriate social behaviors and family relationships (Harwood, Schölmerich,
Schulze, & González, 1999; Jones & Rao, 1998; Knight, Virdin, & Roosa, 1994; Leyendecker
& Lamb, 1999; Yang & Chang, 1999). In a cultural group that strongly values respectful,
appropriate behavior in the eyes of the community, the sensitive mother will consistently direct
her child’s attention to the needs of others and carefully guide or control his/her behavior in a
variety of social contexts (Harwood et al., 1995). Persistent physical control and strong limita-
tions placed on infant behavior might be seen in this context not as interfering with the
infant’s development of autonomy, but as positive evidence of efforts to raise a well-behaved,
respectful child (Harwood, 1992). This type of maternal control, when combined with warm
and responsive parent–child relationships, appears to be associated with positive developmen-
tal outcomes among cultural groups characterized as more sociocentric than mainstream Amer-
ican culture (Barnett et al., 1998; Grusec, Hastings, & Mammone, 1994; Smith & Krohn, 1995).
It would thus appear that maternal control in the context of cultural meaning systems is an
important element of maternal sensitivity.

Parenting and Control

The relations between parental management and control strategies and child socio-emotional
outcomes are also examined in parenting research. These studies primarily utilize Baumrind’s
(1989, 1991) model of authoritarian, authoritative, permissive, and rejecting/neglecting par-
tenting. Baumrind’s description of the optimal balance of responsiveness and demandingness
closely parallels Ainsworth’s (1974) definition of appropriate responsiveness as neither over-
stimulating nor understimulating in terms of the infant’s needs. This conceptual overlap be-
tween sensitivity and parenting style is the basis for much similarity among studies of the
antecedents and child outcomes of parenting styles and the antecedents and child outcomes of
sensitive caregiving. Indeed, parenting researchers have called for similar systemic approaches
to the investigation of cultural and individual beliefs and attributions in relation to parenting
practices as are found in the current attachment literature (Brody & Flor, 1998; Darling &
Steinberg, 1993; Deater-Deckard & Dodge, 1997; Greif & D’Agostino, 1999; Jones & Rao,
1998; Smetana, 1994; Speker, Larson, Lewis, Keller, & Gilchrist, 1999).

In particular, Smetana (1994) has advocated adding the domains of warmth, coerciveness,
firm control, and communicative quality to Baumrind’s responsiveness-demandingness typol-
ylogy. The addition of these domains gives a broader context to descriptions of parenting styles
and leads to a wider variety of possible combinations of characteristics. One such combination
of parenting domains receiving attention in both the attachment and parenting literature is the
warm, communicative, but highly controlling parenting found among a variety of cultures
characterized as more interdependent than mainstream American culture. This style of parenting
combines the responsive, positive relationships typical of Baumrind’s authoritative style with
the high levels of control found in the authoritarian style. Jones and Rao (1998) use the term
“training” parenting to describe this style among Chinese parents. Brody and Flor (1998) use
“no nonsense” parenting to describe a similar style observed among African American parents.
Deater-Deckard and Dodge (1997) also offer evidence that the effects of physical discipline
on children are variable based upon the cultural context of the parent–child relationship. In
particular, these authors find that authoritarian discipline, when combined with a warm parent-
child relationship, does not predict behavior problems among their African American partici-
pants. A recent report by Spieker et al. (1999) supports these findings among African Americans
and extends them to include negative verbal control strategies as well as harsh physical dis-
cipline. Rohner, Bourque, and Eldred (1996) also find that physical discipline is related to
maladjustment among White and African American low-income children only in the context
of a rejecting parental relationship.

Organizing these findings into an integrative model in which the emotional quality of the
parent–child relationship moderates parental control practices and child developmental out-
comes has been addressed in the parenting literature (Darling & Steinberg, 1993). These authors
propose that understanding the ways in which parenting style moderates practices and child
outcomes requires careful investigation of socialization goals, parenting practices, and the overall quality of the parent-child relationship. In this model, parenting style is defined as the overall, expressed emotional climate of the family, and parenting practices are seen as specific, goal-directed behaviors. Use of such an integrated, contextual model will assist in future explorations of the ways in which parenting styles and child outcomes vary among different cultural groups, and how the influence of parenting styles and practices vary across the life span.

Culture
Cultural meanings influence the interpretation of events and experiences, provide direction for behavior, and evoke particular feelings (D'Andrade, 1984). The cultural meaning systems of caregivers could thus be expected to include mental representations of ideal parent and child behaviors and desirable child developmental endpoints, as well as to direct daily caregiving behaviors, and evoke strong emotions in relation to childrearing beliefs and practices. Current cultural research has also led to an increased understanding of culture as multidimensional as opposed to a single contextual variable (García Coll & Magnusson, 1999; Harwood, Handwerker, Scholmerich, & Leyendecker, 2000).

Investigations of the development of attachment have only recently begun to attend to the caregiving system from a control systems perspective, including cultural variations in parental control strategies. Of these, very few investigations have focused on culture and parenting among Latinos, who are projected to become 25% of American citizens by the year 2050 (Census Bureau, 1993). Understanding normative developmental pathways, childrearing beliefs, and parenting practices among Latinos is of definitive importance to this growing segment of our future citizens.

In addition, many studies designed to investigate Puerto Rican and other Latino cultures have focused on participants whose experiences are confounded by issues of immigration, poverty, low educational levels, and unsafe living conditions (Fisher et al., 1998; García Coll, Meyer, & Brillon, 1995; González-Ramos, Zayas, & Cohen, 1998; Harwood, Leyendecker, Carlson, Asencio, & Miller, 2002). Few investigations exist of normative, middle-class Puerto Rican cultural beliefs and parenting practices.

Previous research (Harwood, 1992; Harwood et al., 1995) among lower and middle-class Anglo and Puerto Rican mothers has suggested that mothers from these cultural groups perceive and evaluate infant behaviors differently based on differential cultural emphases on self-maximization versus proper demeanor. In addition, these cultural beliefs have been related to differences among Anglo and Puerto Rican mothers in the structuring of mother–infant interactions in a variety of everyday contexts. In particular, Harwood et al. (1999) offer evidence that middle-class island Puerto Rican mothers spend more time actively structuring the behavior of their 12–15-month-old children than do middle-class Anglo mothers. This interactional style is consistent with a greater cultural emphasis on proper demeanor and interdependence among Puerto Rican mothers, but may appear to be controlling or intrusive when viewed from a middle-class Anglo perspective.

Contributions of the Present Investigation
This study is expected to clarify some of the pathways by which the cultural patterning of early experiences contribute to the development of maternal control strategies and mother–infant attachment among a normative, middle-class group of Anglo and Puerto Rican mother–infant
pairs. In particular, the Puerto Rican mothers are expected to evidence higher levels of physical control in the context of daily mother–infant interactions during the first year of life compared to the Anglo mothers in this low-risk, middle-class sample. In addition, it is anticipated that high ratings of physical control will be associated with different patterns of sensitivity, emotional expression, 12-month attachment classifications, and maternal reports of toddler socio-emotional competence between the two cultural groups.

Evidence in support of these expected findings will provide additional documentation for the necessity of further investigating the interface of culture and development. Research has found evidence that cultural meanings are differentially assigned to attachment behaviors and caregiving responses among a variety of diverse cultures (Friedlineier & Trommsdorff, 1998; Jackson, 1986; Morelli, Tronick, & Beeghly, 1999; Posada et al., 1995; Volker, Yovsi, & Keller, 1998; Yang & Chang, 1999). In particular, cultural groups that differ along the continuum of sociocentric versus individualistic values demonstrate significant differences in parenting behaviors, patterns of attachment classifications, and child outcomes. Such differing cultural meanings are likely to lead to differences in perceptions regarding what constitutes sensitive, responsive caregiving, and optimal child outcomes.

Practically, this study seeks to identify alternate pathways to developmental competence among Puerto Ricans compared to the familiar pathways based upon mainstream Anglo-American cultural values. Knowledge and understanding of desirable developmental end points, normative parental expectations and practices, and their association with child socio-emotional outcomes among these middle-class Puerto Ricans will enrich our ability to negotiate successful interactions in schools and communities as well as inform understandings of our own cultural limitations. Such knowledge will assist human service professionals in their efforts to provide culturally competent programming that is respectful of cultural values, affirming of ethnic identities, and supportive of inclusive participation in modern American life.

METHOD

In light of the fact that understanding the cultural context requires a complex investigation of both culture-specific (emic) and theoretically universal (etic) concepts, this study utilizes a “derived etic” approach (Berry, 1989). In other words, multiple methods and measures are employed in an iterative effort to illuminate emerging commonalities and differences among study participants (see also Harwood, Scholmerich, & Schulze, 2000).

Sample

This study is part of a larger investigation of childrearing beliefs and practices across the first year of life among middle-class Anglo-American mothers living in eastern Connecticut, and middle-class Puerto Rican mothers living in San Juan, Puerto Rico. Middle-class Connecticut Anglo (n = 32) and island Puerto Rican (n = 28) mothers and their infants were included in the investigation. Because both socio-economic status and culture contribute to differences in mothers’ childrearing beliefs and practices, the population includes only middle-class mothers. Socio-economic status was defined using the Hollingshead (1975) four-factor scale, which weights maternal and paternal education and occupational prestige into scores ranging from 8 (e.g., unskilled laborer, elementary school education only) to 66 (e.g., major professional with graduate training). In this study, “middle-class” status was defined as maternal education beyond high school, with a household Hollingshead score above 40 (i.e., within Levels I and II of the Hollingshead scale). Anglo mothers (n = 32) were born, reared, and educated in the
Puerto Rican mothers. Among the Puerto Rican mothers, 46.4% identified themselves as bilingual Spanish-English. Seven of the mothers had spent some time in the mainland U.S. (mean = 2.9 years, range one to seven years). To gain an index of psychologic acculturation to the United States, Puerto Rican mothers completed a standardized instrument developed specifically for Puerto Ricans by García-Coll and her colleagues (Tropp, Erkut, Alarcón, García-Coll, & Vázquez, 1994). The instrument contains 31 items measuring cultural competence, behaviors, preferences, and identification. The possible range for the total scale is a low of 31 (high Puerto Rican identity) to a high of 279 (high Anglo identity). The Puerto Rican mothers

Table 1. Mean Values for Sociodemographic Variables

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<th>Anglo</th>
<th>Puerto Rican</th>
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<tr>
<td>Mother’s age (years)</td>
<td>32.2</td>
<td>30.1</td>
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<tr>
<td>Father’s age (years)</td>
<td>33.6</td>
<td>31.9</td>
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<td>Mother’s education (years)</td>
<td>15.8</td>
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<td>Father’s education (years)</td>
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<td>Percent mothers employed outside home</td>
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<td>4 Months</td>
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<td>78.6</td>
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<td>8 Months</td>
<td>62.5</td>
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<td>12 Months</td>
<td>62.5</td>
<td>85.7</td>
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<td>Hours worked per week among employed mothers</td>
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<tr>
<td>4 Months</td>
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<tr>
<td>8 Months</td>
<td>27.3</td>
<td>35.5</td>
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<td>12 Months</td>
<td>26.5</td>
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** p < .01

"TABLE 1. Mean Values for Sociodemographic Variables"
in this study fell into the lower half of this scale (mean = 84.4, range 41–142), indicating high Puerto Rican identity.

Procedure
All mothers were interviewed in their homes by ethnically matched interviewers when their target infant was 4, 8, and 12 months of age. Mothers were interviewed in their native language: Puerto Rican Spanish or American English. At each time point, mothers were interviewed regarding a variety of parental beliefs and practices, and videotaped for about 45 minutes interacting with their infants in five everyday situations (feeding, bathing/dressing, social play, object-oriented teaching, and free play). A standardized laboratory-based Strange Situation procedure was performed within a week following the 12-month home visit.

Procedures to promote crosscultural validity. Translations of the English protocols into Spanish were provided by bilingual, bicultural Puerto Rican graduate research assistants at the University of Connecticut and reviewed by the principal investigator of the original study in consultation with two Puerto Rican cultural consultants. All protocols were examined for cultural suitability by the primary investigator of the original study and the Puerto Rican cultural consultants. The Spanish translations were then checked for preservation of meaning and cultural appropriateness by the bicultural, bilingual Puerto Rican graduate assistants and the original primary investigator. All protocols were pilot tested with members of each cultural group to ensure that they were readily comprehensible and ethnographically valid.

Ratings of maternal behavior. The 4-, 8-, and 12-month videotapes of mother–infant interactions were used to rate maternal behavior on three scales: maternal sensitivity, emotional expression, and physical control. The maternal behavior rating scales utilized Ainsworth’s (1978) nine-point maternal sensitivity scale. In addition, emotional expression and physical control scales were developed by the first author after an extensive literature review and in consultation with the principal investigator and a graduate student colleague. Because of their predictive power in previous meta-analytic studies (DeWolff & van IJzendoorn, 1997; Goldsmith & Alansky, 1987), maternal sensitivity and emotional expression were selected as variables to assess the traditional relationships between sensitive caregiving and Strange Situation classifications in this normative sample. Physical control was included as a means of assessing the potentially different cultural relations among control, sensitivity, positive affect, and attachment outcomes. The emotional expression and physical control scales use the same nine-point Likert scale format as Ainsworth’s maternal sensitivity scales, with a rating of one as the negative or lowest expression of the trait and a rating of nine as the most positive or highest rating possible. Every effort was made to operationalize the author-developed scales using observable physical and vocal behaviors and to limit the need for observer judgments regarding “appropriateness” based on contextual cues. The emotional expression scale includes observations of facial expression, voice quality, and body language (Ainsworth et al., 1978; Biringen & Robinson, 1991; Field, 1994; Jones, Davalos, & Lundy, 1999) in ratings that range from “negative” (one) to “delighted” (nine). Physical control observations rate the mother’s observed use of physical contact to manipulate, limit, or control the infant’s movements on a scale ranging from “almost no physical control” (one) to “nearly constant physical control” (nine).

Strange Situation. The Strange Situation (Ainsworth & Wittig, 1969) is a laboratory-based procedure developed to assess security of attachment. The setting is a waiting room area with
adult chairs and infant toys. The room is videotaped through a one-way mirror as the mother and a stranger enter the room, leave the room, and interact with the infant. Attachment security classifications are based upon the infant’s reunion behaviors when the mother returns after two brief separations. The second author, who attended a week-long Strange Situation workshop at the University of Minnesota taught by Alan Sroufe, trained graduate students in Connecticut and Puerto Rico with regard to the proper administration of the Strange Situation.

Reliability. The maternal behavior rating scales were coded by ethnically matched graduate assistants trained to criterion by the first author. Ratings of maternal behavior during individual activity segments (feeding, bathing/dressing, social play, free play and teaching) at each time point (4, 8, and 12 months) were recorded on forms developed for this study. These graduate assistants were blind to the study hypotheses and achieved a final intrarater reliability correlation of \( r = .91 \) (\( p < .01 \)) (range = .86 to .94) using equal numbers of randomly chosen Anglo and Puerto Rican tapes to establish initial reliability and to recheck reliability during the coding at the 4-, 8-, and 12-month time points for a total of 20% of the sample. The Strange Situation videotapes were coded by external coders at the University of Washington, trained to criterion and blind to the study hypotheses.

Telephone follow-up survey. A follow-up study of a subgroup of these mothers explored potential group differences in toddler socio-emotional outcomes of 12-month Strange Situation classifications. A standardized telephone interview using a modified version of the Infant-Toddler Social and Emotional Assessment (ITSEA) maternal report scale (Carter & Briggs-Gowan, 1997) was conducted with 27 of the Anglo and 15 of the Puerto Rican mothers. The ITSEA was shortened in consultation with its authors to include those child behaviors most salient to attachment status.

RESULTS

Strange Situation Classifications

Strange Situation classification results indicated similar percentages of securely attached infants among both cultural groups (59% Anglo, 52% Puerto Rican). Insecurely attached infants, however, showed unexpected percentages in both groups. Thirty percent of the Puerto Rican infants were classified as insecure avoidant and 22% of Anglo infants were classified as insecure ambivalent (see Table 2). Attachment research among middle-class Anglo infants usually reports an avoidant classification rate of about 20% and an ambivalent classification rate of about 10%.

<table>
<thead>
<tr>
<th>Classification</th>
<th>Anglo ( (n = 32) )</th>
<th>Puerto Rican ( (n = 27) )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avoidant (A)</td>
<td>12.5% (4)</td>
<td>29.6% (8)</td>
</tr>
<tr>
<td>Secure (B)</td>
<td>59.4% (19)</td>
<td>51.9% (14)</td>
</tr>
<tr>
<td>Ambivalent (C)</td>
<td>21.9% (7)</td>
<td>7.4% (2)</td>
</tr>
<tr>
<td>Disorganized (D)</td>
<td>6.3% (2)</td>
<td>11.1% (3)</td>
</tr>
</tbody>
</table>

TABLE 2. Percent Strange Situation Classifications at 12 Months
Socio-Demographic Variables and 12-Month Attachment Classification

To explore the possible contribution of socio-demographic factors to these unexpected patterns of 12-month attachment classifications, analyses of variance for the continuous scale variables and chi-square analyses for the nominal variables were performed across both cultural groups and for each group. Nine scale demographic variables (maternal and paternal age, education, and Hollingshead scores; household Hollingshead; total number of children; and total number of people in the household) were entered together into ANOVAs to explore potential differences between avoidant/not avoidant, ambivalent/not ambivalent, and secure/insecure attachment status. These comparisons yielded no significant relations. Chi-square analyses of the six nominal demographic variables (child gender, birth order, marital status, religious affiliation, child care, and geographic stability) by avoidant/not avoidant, ambivalent/not ambivalent, and secure/insecure attachment status also yielded no significant relations.

Ratings of Maternal Physical Control

To reduce the large number of independent variables (three rating scales × five settings × three time points) in relation to the sample size (Anglo n = 32; Puerto Rican n = 27), the observational settings were grouped into goal-oriented activities that require high levels of mother–child cooperation (i.e., feeding and teaching) and open-ended situations (i.e., free play, social play, and bathing/dressing). Bathing/dressing was included in the open-ended group because the middle-class mothers in this study all approached the bathing/dressing task in a playful, unstructured manner requiring minimal cooperation from the infant. Mean ratings for these structured and open-ended situations were computed for each mother at each time point. The correlation matrix for these grouped rating scales indicates that no correlations met the .90 criteria for variable exclusion based on multicollinearity issues (Tabachnick & Fidell, 1996, p. 84).

To test the hypothesis that, Puerto Rican mothers would evidence higher overall rates of physical control, but similar overall ratings of maternal sensitivity and emotional expression when compared to Anglo mothers, means were computed for each mother’s ratings of sensitivity, emotional expression, and physical control across both situations and all time points. Dually multivariate repeated measures analyses of variance were conducted for open and feed/teach emotional expression, maternal sensitivity, and physical control at each time point by cultural group. When maternal sensitivity, emotional expression, and physical control are examined together, results show significant differences between cultural groups, $F(6, 52) = 3.51$, $p < .01$, and a significant time by group interaction, $F(12, 46) = 2.13, p < .05$. There were no main effects of time. Tests of between subjects effects indicate that only open-ended and feed/teach physical control differed significantly by cultural group, $F(1, 57) = 7.86, p < .01; F(1,57) = 21.4, p < .001$, respectively. The time by group interaction was significant only for open-ended physical control, $F(2, 114) = 6.27, p < .01$, and open-ended emotional expression, $F(2, 114) = 3.43, p < .05$.

Follow-up one-way ANOVA’s examined the influence of cultural group membership on ratings of open-ended and feed/teach physical control at each of the three time points. Puerto Rican mothers were rated as significantly higher in the use of feed/teach physical control at 4 months, $F(1, 57) = 8.13, p < .01$, at 8 months, $F(1, 57) = 10.27, p < .01$, and at 12 months, $F(1, 57) = 17.27, p < .001$, compared to Anglo mothers. Puerto Rican mothers were rated as significantly higher in the use of open-ended physical control at 8 months, $F(1, 57) = 29.43, p < .001$, and at 12 months, $F(1, 57) = 4.19, p < .05$, compared to Anglo mothers. A follow-
up ANOVA showed no significant differences by cultural group for open-ended emotional expression at any of the time points.

**Maternal Physical Control, Sensitivity, Emotional Expression, and Infant Attachment Classifications**

Similar rates of secure attachment combined with evidence of significant differences in maternal physical control, but not maternal sensitivity or emotional expression between these groups, suggests potentially differential patterning of these attributes among the Puerto Rican and Anglo mother–infant pairs. In particular, the traditional links between high control, low sensitivity, and insecure avoidant attachment may not be applicable to the Puerto Rican mothers and their infants.

Tests of the second hypothesis, that associations between maternal physical control, maternal sensitivity, emotional expression, and 12-month infant attachment classifications would be different for each cultural group, were conducted using discriminant function analyses (DFA). DFA is appropriate for use with naturally occurring groups of unequal size (i.e., attachment classification groups) and allows in depth exploration of the nature of group differences as opposed to identifying statistically significant differences (as in MANOVA).

MANOVAs were used to select variables for inclusion in the discriminant function analyses for each separate cultural group. This process included all 18 of the open and feed/teach ratings on the three maternal behavior scales at 4, 8, and 12 months (three rating scales × three time points). These data were entered as independent variables to examine their potential association with the 12-month attachment classification groups (avoidant, secure, ambivalent, and disorganized). The analyses were conducted separately for each cultural group.

Variables showing significance, or a trend for significance in relation to the attachment classifications were noted for each group: 12-month open physical control, $F(3, 23) = 2.71, p < .10$, 4-month open emotional expression, $F(3, 23) = 2.57, p < .10$, and 12-month feed/teach maternal sensitivity, $F(3, 23) = 3.01, p < .05$ for the Puerto Rican group; and 8-month feed/teach emotional expression, $F(3, 28) = 2.30, p < .10$ and 12-month open physical control, $F(3, 28) = 3.36, p < .05$ for the Anglo group. Twelve-month feed/teach physical control was also selected for the Anglo group based upon knowledge of its shared variance with the previously selected 12-month open physical control variable, the theoretical salience of contiguous variables, and the current study emphasis on the role of physical control.

DFAs were then computed for the Anglo group using the three selected variables (physical control in open-ended and feed/teach tasks at 12 months; and emotional expression in feed/teach tasks at 8 months) to discriminate three attachment classification groups. The two infants classified as disorganized for the Anglo group resulted in one cell of this DF with fewer cases than independent variables and were eliminated from the analysis. This analysis produced two functions, significant at the $p < .05$ level. The first function accounted for 52.4% of the variance. Box’s M test was not significant at the .05 alpha level, providing evidence that the assumption of homogeneity of variance had not been violated in this analysis. Classification results for the 30 Anglo (two cases eliminated as discussed above) dyads indicate that 77% were classified correctly when prior probabilities for functions were calculated based on actual group size for each attachment classification (see Table 3).

The patterns of prediction evident in these discriminant functions for the Anglo variables show the expected consistent association between high levels of control, high levels of emotional expression in goal-oriented tasks, and avoidant attachment (Table 4).

The DFA for the Puerto Rican group using the three selected rating scale variables (open-ended emotional expression at 4 months; open-ended physical control at 12 months; and feed/
TABLE 3. Strange Situation Discriminant Function Analysis Classification Rates for the Anglo Group (n = 30)

<table>
<thead>
<tr>
<th>Actual Child Classification</th>
<th>Secure (B)</th>
<th>Avoidant (A)</th>
<th>Ambivalent (C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secure (B)</td>
<td>18</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Avoidant (A)</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Ambivalent (C)</td>
<td>3</td>
<td>0</td>
<td>4</td>
</tr>
</tbody>
</table>

Correct classifications: 77%.

TABLE 4. DFA Anglo (n = 30) Patterns of Attachment Prediction: Rating Variable Means

<table>
<thead>
<tr>
<th></th>
<th>High</th>
<th>Moderate</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open-ended physical control 12 Months</td>
<td>(A) avoidant</td>
<td>(B) secure</td>
<td>(C) ambivalent</td>
</tr>
<tr>
<td>Feed/teach physical control 12 Months</td>
<td>(A) avoidant</td>
<td>(B) secure</td>
<td>(C) ambivalent</td>
</tr>
<tr>
<td>Feed/teach emotional expression 8 Months</td>
<td>(A) avoidant</td>
<td>(C) ambivalent</td>
<td>(B) secure</td>
</tr>
</tbody>
</table>

Patterns of prediction evident in the Puerto Rican discriminant function variables showed an association between high levels of 12-month physical control and secure attachment; high levels of four-month emotional expression and avoidant attachment; and high levels of 12-month sensitivity and ambivalent attachment (see Table 6).

A follow-up study of a subgroup of these mothers explored potential group differences in toddler socio-emotional outcomes of 12-month Strange Situation classifications. A standardized telephone interview using a maternal report scale (Infant-Toddler Social and Emotional Assessment (ITSEA); Carter & Briggs-Gowan, 1997) was conducted with 27 of the Anglo and 15 of the Puerto Rican mothers. Puerto Rican mothers reported significantly more internalizing behaviors across all attachment classifications as compared to the Anglo mothers (respective means = 8.00, 5.07, p < .05). High levels of reported internalizing behaviors were associated with ambivalent attachment among the Anglo, but not the Puerto Rican toddlers. In addition, regression models of this data find that the Depression/Social Withdrawal and Aggression/Defiance maternal report subscales significantly predict avoidant/not avoidant status for the Anglo group, F(3, 23) = 4.92, p < .01; however, no subscales significantly predict avoidant/not avoidant status for the Puerto Rican group. A study examining the concurrent validity of the ITSEA measure among mainland U.S. middle-class mother–infant pairs found patterns of
TABLE 5. Strange Situation Discriminant Function Analysis Classification Rates for the Puerto Rican Group (n = 27)

<table>
<thead>
<tr>
<th>Actual Child Classification</th>
<th>Secure (B)</th>
<th>Avoidant (A)</th>
<th>Ambivalent (C)</th>
<th>Disorganized (D)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secure (B)</td>
<td>12</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Avoidant (A)</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Ambivalent (C)</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Disorganized (D)</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
</tbody>
</table>

Correct classifications: 74%

TABLE 6. DFA Puerto Rican (n = 27) Patterns of Attachment Prediction: Rating Variable Means

<table>
<thead>
<tr>
<th></th>
<th>High</th>
<th>Moderate</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open-ended physical control</td>
<td>12 Months</td>
<td>(B) secure (D)</td>
<td>(A) Avoidant (C) ambivalent</td>
</tr>
<tr>
<td>Open-ended emotional expression</td>
<td>4 Months</td>
<td>(A) avoidant (D)</td>
<td>(C) ambivalent (B) secure</td>
</tr>
<tr>
<td>Feedback maternal sensitivity</td>
<td>12 Months</td>
<td>(C) ambivalent (D)</td>
<td>(B) secure (A) avoidant</td>
</tr>
</tbody>
</table>

DISCUSSION

These results call into question the use of a single, universal definition of maternal sensitivity, instead providing evidence that sensitive caregiving behaviors may be culturally constructed, incorporating the socialization goals, values, and beliefs of the family and community. In particular, the expected link between high levels of maternal control and insecure attachment is not found among these Puerto Rican participants. The Puerto Rican mothers, compared to the Anglo mothers, used significantly more physical control overall in their interactions with their infants during the first year of life. These mothers persistently and actively structured interactions with their infants in a manner consistent with their long-term socialization goals (Harwood et al., 1999). Typically, attachment theory has conceptualized this type of control as interfering and has rated such behavior as insensitive (Ainsworth et al., 1974). However, our findings suggest that the highest ratings of physical control were associated with secure 12-month attachment status for these middle-class Puerto Rican dyads. This apparently paradoxical finding highlights the need for culturally specific definitions of sensitive caregiving. In contrast, attachment theory predictions based upon the traditional (middle-class Anglo) definition of sensitive caregiving are supported by the results among our Anglo mother–infant association between ITSEA scales and attachment quality similar to these Anglo results (Carter, Little, Briggs-Gowan, & Kogan, 1999).
pairs—that is, high use of maternal physical control was associated with insecure avoidant attachment.

Previous research demonstrates a coherent relationship between childrearing beliefs and behaviors in everyday contexts for these middle-class Anglo and Puerto Rican mothers (Harwood, et al., 1999). Teaching infants to be attentive, calm, and well-behaved requires considerably more physical prompting and control than teaching infants to be assertive and self-confident. Thus, it appears that maternal use of physical control may be regulated by maternal socialization goals in a meaningful, predictable manner among these Puerto Rican and Anglo participants.

In response to the DeWolf and van IJzendoorn (1997) meta-analytic findings that ratings of emotional expression among low-risk, middle class samples are nearly equal in effect size to ratings of maternal sensitivity, this study uses global ratings of emotional expression to measure warmth in maternal–infant interactions. Dividing these everyday interactions into goal-directed tasks that require considerable infant cooperation for successful completion versus more open-ended, playful interactions enables clearer distinctions between “appropriate” levels of maternal emotional expression. The highest ratings of emotional expression in structured tasks at eight months are associated with avoidant attachment among the Anglo dyads. The infant may experience this high level of emotional expression as intrusive and distracting in the context of a routine, structured task, leading to an association with avoidant strategies as predicted by previous research (Belsky, Rovine, & Taylor, 1984; Isabella & Belsky, 1991; Malatesta et al., 1989; Pederson & Moran, 1996). High use of emotional expression by the Puerto Rican mothers in open-ended tasks at 4-months is also associated with avoidant attachment at 12-months. The very limited self-regulation capacities of a four month old would indicate the need for a calm, soothing maternal demeanor in playful interactions. Intense emotional expression directed toward such a young infant may be experienced as disruptive and may thus tend to promote infant withdrawal and preference for self-directed regulation strategies. Some support may be found for this interpretation in the findings reported by Kogan and Carter (1996) showing an association between infant negativity in the four-month still-face procedure and maternal intrusiveness. Malatesta et al. (1989) also hypothesize that high levels of maternal emotional contingency in close interactions are experienced as aversive by the infant and tend to promote disengagement. In addition, Cohn, Campbell, and Ross (1991) find that infant negativity during the still-face procedure predicts avoidant attachment at 12 months.

No ratings of maternal sensitivity were included as significant predictors of attachment status for the Anglo group. Variability in maternal sensitivity ratings is quite limited among these middle-class, low risk, Anglo dyads. Indeed, both feed/teach and open maternal sensitivity mean ratings show only small effect sizes in relation to secure/ insecure attachment status ($r^2 = .03$ and .04, respectively) for this small Anglo sample (Cohen, 1988). The maternal sensitivity and emotional expression ratings are moderately intercorrelated ($r = .37$ to .49, $p < .01$), but show no significant correlations with physical control ratings. For these participants, the greater variability in use of physical control and emotional expression (as discussed above) appear to provide stronger predictions of attachment status than maternal sensitivity ratings.

One 12-month maternal sensitivity rating was included as a significant predictor in the discriminant function analysis for the Puerto Rican group. Interestingly, the highest ratings of maternal sensitivity in structured tasks at 12 months are associated with ambivalent attachment among the Puerto Rican dyads. A similar finding is reported by Schöllmerich, Lamb, Leyendecker, and Fracasso (1997) in an examination of mother–infant teaching interactions and
attachment security. Ambivalent dyads were found by Schölerich et al. to have the highest levels of coordination of social attention in teaching tasks, particularly in the person-oriented category. Although the authors do not speculate about possible reasons for this finding, it may be that these infants are already exhibiting early forms of high social vigilance in response to inconsistent maternal responsiveness. The lowest ratings of maternal sensitivity among the Puerto Rican mothers are associated with avoidant attachment, consistent with attachment theory predictions.

An additional puzzle exists in the unexpected pattern of attachment classifications across the two cultural groups in this study. These results, showing nearly 30% of Puerto Rican infants classified as avoidant, are counterintuitive given the Puerto Rican emphasis on interdependence and familial closeness. In a comparison of attachment classification across cultures, Fracasso, Busch-Rossnagel, and Fisher (1994) report a similar 30% avoidant classification rate among low-income Puerto Rican and Dominican participants living in New York City. These authors speculate that such unexpected distributions of infant attachment classifications are related to low socio-economic status, gender effects (with males showing a more typical pattern of attachment classifications), and cultural differences in parenting behaviors (security was associated with more sensitivity and more abrupt pickups). Avoidant classification has been traditionally interpreted as a psychologic defense for coping with a lack of maternal warmth (Ainsworth et al., 1974). For participants in this study, overall mean ratings of maternal sensitivity and emotional expression across the first year of life do not differ significantly by cultural group, and no gender effects are found, providing evidence that the higher incidence of avoidant attachments among Puerto Rican infants is not significantly related to these factors.

One possible explanation is that the higher percentage of employed Puerto Rican mothers at 12 months may have increased the incidence of avoidant attachment among the Puerto Rican infants. Research by Clarke-Stewart (1989) and Belsky and Rovine (1988) has shown a weak but significant association between maternal employment and avoidance in the Strange Situation. These studies include meta-analytic data obtained from diverse samples of more than 1200 participants, and thus may be relevant to the cultural contexts examined in the present study. Compared to Anglo mothers, Puerto Rican mothers in this study were significantly more likely to be employed when their infants were 12 months of age. In addition, employed Puerto Rican mothers worked significantly more hours than Anglo mothers at all time points during the first year of life (see Table 1). However, additional analyses show no significant differences for attachment classification by maternal hours worked per week for either cultural group.

To further explore the effects of the family system as well as cultural beliefs and values on the maternal caregiving system, associations among the full range of socio-demographic factors and 12-month attachment classifications were explored. Again, no significant relationships were found. Thus, we find no evidence that the measured socio-demographic factors have a significant impact on attachment relationships among these middle-class mother–infant pairs. This finding most likely reflects the purposeful limitation of socio-demographic variability inherent in the original study design.

It is also possible that some of the avoidant classifications among this group of low-risk, middle-class Puerto Rican infants may represent an avoidance of maternal physical control in preference for unfettered exploration of a new environment. This avoidant response would not necessarily be associated with a rejecting or negative maternal emotional relationship. Some support for this pattern may be found in a study by Lewis and Feiring (1989), in which evidence is presented for an association between avoidance in the Strange Situation at 12 months and a preference for exploration present in early infancy. The fact that there is a 50% incorrect secure classifications rate among the Puerto Rican avoidant infants in this study (see Table 5) may reflect just such an avoidance of maternal control among these four infants. Their mothers’
emotional expression and maternal sensitivity ratings would not be expected to differ from those of mothers with securely attached infants, resulting in the incorrect discriminant function classifications. If further evidence is found for this pattern of response, it may represent a different developmental pathway in the context of normative socialization goals and practices for Puerto Rican mothers and their infants. Such an alternative pathway would not be expected to predict the type of negative outcomes sometimes associated with avoidant attachment among Anglo infants.

Preliminary data from a 28-month follow-up study with a subgroup of these mother–infant pairs finds evidence for cultural differences in caregiver perceptions of ideal child behaviors. Internalizing behaviors such as wanting to be on mother’s lap and crying or clinging when mother leaves are consistent with the Puerto Rican emphasis on appropriate relatedness and interdependence, but inconsistent with the Anglo emphasis on confidence and independence. These data also offer limited support for the finding that avoidant Strange Situation behavior is associated with different developmental outcomes among the Anglo compared to the Puerto Rican toddlers (Carlson & Harwood, 1999). Although this follow-up study is seriously limited by small group size (many families had moved since the 12-month contact and could not be located), these findings are consistent with the hypothesis of a pathway whereby differential cultural patterning of caregiving behaviors affects child socio-emotional development.

Expanding our definitions of maternal sensitivity to include a variety of culture-specific beliefs and practices does not alter the underlying association between sensitive caregiving and secure attachment. Ainsworth et al. (1974) conclude that the most fundamental characteristic of sensitivity is the mother’s ability to establish a harmonious relationship with her infant. It may be that harmonious maternal–infant relationships are best established by caregiving practices designed to produce culturally valued traits in the growing infant. In the case of these Puerto Rican mothers, high levels of control in the context of warm, affectionate relationships may best serve to encourage obedience, respect, and relatedness in their children.

Conceptualizing caregiving as a behavioral system enables understanding of the need for both universality and specificity in our definitions of optimal caregiving. The universal goal of providing protection from perceived threats forms the foundation of optimal caregiving. The nature of perceived threats is universal only in regard to immediate threats to physical well-being and survival. All other less tangible threats are culturally constructed and may vary widely from one culture to the next. For example, child behavior patterns that are inconsistent with culturally valued behaviors are threats to the child’s developing social competence and acceptance in the larger community. Thus, clingy, dependent behavior may elicit protective responses and efforts to control or change these behaviors on the part of Anglo parents who value individual autonomy. On the other hand, clingy, dependent behavior may be accepted by the Puerto Rican mothers as evidence of appropriate familial interdependence.

The caregiving system framework also highlights the need to include a variety of parent, child, and contextual influences in investigations of the development of attachment security. If the caregiving system is investigated using the same behavioral systems approach as attachment theory, then the role of culture must be seen as central to the caregiver’s mental representations and interpretations of relationships and experiences. Although the goal of providing protection from situations the parent views as stressful or dangerous remains universal, perceptions of danger or stress and means of protection will vary widely as a function of cultural meaning systems, contextual, and experiential differences. Evidence of the ways in which caregiver socialization goals and parenting practices differentially influence child developmental outcomes among these Puerto Rican and Anglo mother–infant pairs provides preliminary support for the cultural specificity needed in definitions of optimal caregiving.
Further explorations of the role of culture in early relationship formation, caregiving patterns, and child development will require longitudinal evaluations of child outcomes for each cultural group. In addition, investigations into the ways in which migration and acculturation affect caregiving values and behaviors across generations should also provide more in-depth understanding of the interface between culture and development. Culturally varied precursors of attachment as discussed above require further validation, as do any potential cultural variations in the socio-emotional outcomes of attachment security among different groups. Attention to the caregiving behavioral system from the point of view of the caregiver will enable investigation of both universal caregiving goals and culturally specific definitions of optimal parenting and ideal child outcomes.

REFERENCES


