

Fathers' care-giving and nurturing: The role of ethnicity and acculturation in European-American and Hispanic-Americans

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Abstract

To understand ethnic differences and the role of acculturation, this study compared a model of fathers' care-giving across European American and Hispanic fathers. The model included Care-giving, Nurturing, Play, and Cognitive Stimulation and used Structural Equation Modelling and Confirmatory Factor Analysis. Analyses included: a) model comparison (i.e. four factors against single factor); b) measurement invariance; and c) latent mean differences. Four variable model reached best fit; low acculturated fathers were less engaged in cognitive stimulation compared with European American and high acculturated Hispanics; European American were found to be less engaged in nurturing than both Hispanic groups with no moderation effect by acculturation. It seems inaccurate to assume that engaged fathers are equally engaged; fathers vary depending on ethnicity and acculturation.

Keywords: Father Care-giving, Nurturing, Acculturation, *European Americans, Hispanics.*

Cuidados paternos y responsividad: El rol de etnicidad y aculturación en Europeo-Americanos e Hispano-Americanos Resumen

Se compara modelo de cuidados paternos entre Europeo Americanos e Hispano Americanos para conocer el rol de la etnicidad y aculturación. El modelo incluyó Cuidado Básico, Responsividad, Juego, y Estimulación Cognitiva, y se utilizaron Modelamiento de Ecuaciones Estructurales y Análisis Factorial Confirmatorio. Se realizaron: a) comparación entre modelos (i.e cuatro factores versus un factor); b) equivalencia de medida; y c) diferencia de medias de variables latentes. El modelo de cuatro factores alcanzó mejor bondad de ajuste; los Hispano Americanos menos aculturados estimulan cognitivamente menos a sus infantes; los Europeo Americanos resultaron menos responsivos que los Hispano Americanos independientemente del nivel de aculturación de los últimos. Resulta impreciso asumir que los padres participan en la crianza por igual, la participación varía según grupo étnico y aculturación.

Palabras clave: Cuidados Paternales, Responsividad, Aculturación, Europeo Americanos, Hispanos.

Almost every study on father involvement has supported the hypothesis that fathers are much more than providers; they also are good caregivers and playmates (Cabrera, Hofferth, & Chae, 2011; Castillo, Welch, & Saver, 2011; Mullins, 2011). Most research has used Lamb, Pleck, & Levine's (1985) model of fathering to explore the ways in which fathers are involved in their children's lives. Fathers' engagement with their children (i.e. pampering, playing, etc.) has been one of the most studied behaviors along with responsibility and accessibility, given the effects that direct contact has on the child's cognitive and socio-emotional development.

Studies have progressed from exploring levels to the content or nature of father's involvement in part due to the interest in father-child attachment. Authors have argued that, as it is with mothers, fathers have the ability to be sensitive and responsive to children's needs (Bernard & Dozier, 2011; Caldera, 2004) and that father-child interaction, usually through care-giving tasks and play may be the context to explore the nurturing quality of fathering. Lately, this literature has started to highlight the need to study the role that variables such as culture may play in explaining father-child quality of interactions (Piccinini, Tudge, Marin, Bitencourt & Sobreira, 2009).

The sensitive-responsive nature of parenting was explored with mothers since the early studies of

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Ainsworth, Bell, & Stayton (1971). Sensitivity was defined as the mother's interpretation of child signals and her contingent and appropriate response to her child's need (Sumner & Spietz, 1994). Fathering research also supports the nurturing nature of fathering as the ability to be sensitive and responsive to their children's expressions or demands. In their study, Brown, Neff, & Mangelsdorf (2012) found that father involvement in care giving tasks as well as paternal sensitivity predicted father-child attachment security at 13 months of age, which in turn predicted paternal sensitivity at child's third year of age. In the longitudinal study of Grossmann, Grossmann, Fremmer-Bombik, Kindler, Scheuerer-Englisch and Zimmermann (2002) they found that sensitive play, defined as cooperation and acceptance as opposed to intrusiveness during father-infant interaction play, was a better predictor of the child's long term attachment representation than the early infant-father security of attachment. These studies highlighted the importance of father sensitive and nurturing content of their involvement.

Studies often explored father-infant interaction using observational strategies while other researchers used fathers' self-report and child recall of their fathers' involvement. In their study, Ashbourne, Daly, & Brown (2011) approached responsive fathering through fathers' qualitative reports of their experiences, and found that fathers' valued as a critical feature of fathering the capability to respond to children's expression of needs "in the moment". They also suggested that fathers' responsiveness was not only rooted in the child's need, but in fathers' priorities and goals which influenced the perception and evoked the appropriate parental response.

In the same vein, Finley and colleagues developed and tested measures that distinguished between involvement, measured as level of father participation in different domains of child development (i.e. cognitive, moral, emotional, etc.), from nurturing, defined as the affective quality of fathering based on child's recall during young adulthood. The authors found that the two constructs were different domains of fathering and that both were important to describe the role of fathers (Finley, Mira, & Schwartz, 2008; Finley & Schwartz, 2004).

Rationale for the study. While previous manuscripts have provided valuable understanding around father engagement, there are always questions that remain (Hawkins & Palkovitz, 1999). Most studies have focused on understanding levels of care-giving, play, and/or cognitive stimulation (see Cabrera, Hofferth, & Chae, 2011; Cabrera, Shannon, West, & Brooks-Gunn, 2006). Fewer studies (Bronte-Tinkew, Carrano, & Guzman, 2006) have included nurturing as a domain

of fathering to explore the role of ethnicity and acculturation as an important piece of father engagement.

In this study we assume that routine care-giving tasks such as feeding and pampering are different from tasks that require sensitive responses by the father to their child's expression of needs. We propose to test the idea of "the nurturing father" who exhibits behaviors such as soothing an upset child, getting up at night to care for an awakened child, taking the child to the doctor, and staying at home with an ill child. We believe these are good examples of what the authors have called "nurturing fathering" (Ashbourne et al. 2011; Finley et al. 2004; 2008); and that it needs to be included along with routine care-giving, play, and cognitive stimulation. Therefore, in the current study, we seek to extend our knowledge regarding the multidimensionality of fathering and to test the role of ethnicity and acculturation over such distinction.

Hispanic fathering. In his review article, Campos (2008) highlighted several theoretical and methodological limitations in father involvement research. He proposed that gaining a better understanding of fathers' contribution to child development requires taking into account variables such ethnic background. Ethnicity integrates attitudes and evaluations relative to one's group, thus, it is common to say that as a group we share ethnic knowledge and commitment, and that we behave under the values of "one's ethnic culture" (Phinney, 1995, p.58). Some studies suggest that fathers from different ethnic backgrounds may vary in their interactions with their children while still fostering development (Greenfield, Keller, Fuligni & Maynard, 2003).

Hispanics' strong orientation toward interdependence and family cohesion (Harwood, Leyendecker, Carlson, Asencio & Miller, 2002), may predispose fathers to be involved with their infants in ways they value as adequate for their goals (i.e. interdependence vs. independence). Previous studies have found that European American fathers are more involved in play and intellectually-oriented activities and less in carrying children when the child is in bad mood for instance (Grossmann et al. 2002); but further explorations are needed to uncover whether fathers evidence preferences on the types of contact they establish with their infants, and if these preferences vary based on ethnicity and acculturation (Campos, 2008). Despite potentially limited research on the impact of acculturation on father behavior, it is an important consideration (Phinney & Flores, 2002). Coltrane et al.' (2004) study found that less acculturated Mexican-American fathers were more likely to supervise their children and to engage with their children in more housekeeping-typed activities than more acculturated fathers.

The objective of this paper is to better understand the potential influence of ethnicity and acculturation on father engagement and the domains of engagement with their infants. To do so, first we tested the goodness of fit of a multidimensional model of fathering (i.e. *Care-giving, Nurturing, Play, and Cognitive Stimulation*; Schoppe-Sullivan, McBride, & Ringo, 2004), against to a model that consider fathering engagement as being a single construct. If supported by the data, the four latent variables model will help to seek for ethnic and acculturation influences on fathers' levels of engagement across types of practices.

Method

Participants

Participants for the current study were fathers of infants born in 2001 from every state comprising the nationally representative dataset called the Early Childhood Longitudinal Study-Birth Cohort (ECLS-B). The entire sample included 10,688 infants. A secondary analysis was conducted using data collected on families for the "9-month" wave of data collection (data collection occurred as early as 8 months to as late as 13 months). In order to narrow down the potential effect of residential status of the father and to control for differences in engagement based on time availability due to work-status differences, the selected sample for this study included only co-resident fathers who lived in the same household with the child. We also selected our sample to be only full time employees (i.e. 35 hours a week or more). We selected cases where fathers identified themselves as European Americans or Hispanics resulting in a sample of 2,712 European American, 333 high acculturated (English speaking) Hispanic fathers, and 506 low acculturated (Spanish speaking) Hispanic fathers.

The age range for European American fathers was between 30 and 34 years. Both Hispanic groups of fathers were slightly younger ranging between 25 to 29 years. Nearly 40% of European American parents reported having a college degree, and another 30 % reporting some college. Nearly 25% of highly acculturated Hispanic parents had some college, and 31% of the fathers and 26% of the mothers had a high school degree. Among low acculturated Hispanic parents, nearly 70% reported having a 12th grade education or less and approximately 15% had high school diploma. Annual income for European Americans ranged between \$50,000 and \$75,000; for high-acculturated Hispanics income ranged between \$30,000 and \$35,000, whereas for low acculturated Hispanics the range was between \$20,000 and \$25,000. 46% of the European American mothers were not in the work force. Similarly, 50% of

highly acculturated Hispanic mothers were not in the work force; whereas 71% of low acculturated mothers were not in the work force. Regarding child's sex, this variable was evenly distributed with no significant differences across groups ($F = 2.17; p = .12$).

Because previous studies have found indicators of socio-economic status (such as educational level, see Hoffert, 2003) to predict father's involvement, our analysis included a control of education. First, however, we performed a series of ANOVAS comparing the three groups to determine if there were significant differences in educational level. Results confirmed the significant differences across all groups so we included both father and mother education level as a second order factor as a control for possible influence of socio-economic status.

Procedure

The research team for the ECLS-B dataset administered primary data collection. Our use of the dataset was through secondary analysis only. ECLS-B dataset include, among others, the *Respondents' Computed Assisted Questionnaire* to be filled out by the primary caregiver of the child, in the current study 100% of the cases it was the mother. We use the demographic information from the questionnaire to describe our sample. ECLS-B also included *Questions for Fathers and Other Important People Survey (NCES, 2005)* to be responded by the co-resident father in the home, the data used in our model was taken from this questionnaire. For a full review of the data and measures collected, please refer to the website <http://nces.ed.gov/ecls/Birth.asp>.

In order to know the magnitude of missing data, first we computed the percentages of missing data at item level. The original ECLS-B dataset has low rates of missing values, ranging from 0.4 to 4.0% across variables. Once we recoded the options "Not ascertained", "Do not know", "Refused" "Not applicable" –not originally considered missing data in the ECLS-B coding - there was still a low rate of missing data (ranging from 2.5 to 4.1 %, with a mean of 2.9% across items.). Given this low number of missing participants and the large sample available, we analyzed only cases with complete data.

Measures

Level of English Proficiency as Indicator for Acculturation. English proficiency was measured by a set of four items asking parents how well they speak, write, read, and understand English with a 4-point Likert response set from "Very Well" to "Not Well at All". A mean Language Proficiency score was computed rang-

ing from one to four with higher scores reflecting higher proficiency. To facilitate multi-group comparison, we split the Hispanic sample into two groups based on father level of acculturation. Following the procedure reported by Cabrera et al. (2006), the highly acculturated group included those fathers who reported that English was their primary language as well as those who had a mean score of four, and the low acculturated group included those Hispanic fathers with Language Proficiency scores of less than four.

Father engagement. This study uses a portion of items from *Questions for Fathers and Other Important People Survey* (NCES, 2005) as follow. A set of eight items asked fathers to rate on a 6-point Likert scale, 1 = more than once a day to 6 = not at all (reversed so that high scores represent more involvement) how frequently during the past month they were involved in child care-giving tasks. Cronbach's alpha for the set of items was = .83 for European American and high acculturated Hispanic, and .80 for low acculturated Hispanic fathers. A latent variable named *Care-giving* was modeled with the five items asking about feeding, preparing meal, putting to sleep, bathing and dressing the child. We parceled these five items in three indicators. Parceling is a procedure to group manifest variables (items) into indicators that results in better psychometric properties of the measurement model by increasing the reliable component of each indicator on the latent variable (Little, 1997). The latent variable *Play* was modeled using the three remaining items asking for playing activities (i.e. peek-a-boo, tickle, and play with the child) as indicators. The use of these items to model the latent variables *Care-giving and Play* is mostly based on previous evaluations of their factor structure (Cabrera et al. 2011; 2006).

Fathers were also asked to rate 4 items on a 5-points Likert scale, 1 = always to 5 = never (reversed) how often they are who do the following things when they need to be done: get up with the child when he/she wakes up during the night, soothe the child when he/she is upset, take the child to the doctor, and stay home to care for the child when he/she is ill. Cronbach's alpha for the set of items was = .71 for European American, .77 for high acculturated Hispanic, and .65 for low acculturated Hispanic fathers. Consistent with a prior evaluation of their factor structure (Bronte-Tinkew et al. 2006), these four items were the indicators of the latent variable *Nurturing*.

Additionally, fathers were asked to rate on a 4-points Likert scale, 1 = not at all to 4 = every day, how frequently they engaged with their infants in a typical week in the following activities: reading books, telling stories, and singing songs; Cronbach's alpha for the set of items was = .62 for European American, .59 for high

acculturated Hispanic, and .70 for low acculturated Hispanic fathers. A latent variable named *Cognitive Stimulation* was constructed with these three items as indicators (Cabrera et al. 2006; 2011).

Results

Confirmatory Factor Analysis Model

As stated previously, to test a model of fathers' involvement that proposes four types of fathering interactions (i.e. *Care-giving, Nurturing, Play, and Cognitive Stimulation*), we performed a Confirmatory Factor Analysis (CFA) using SEM framework. High and statistically significant factor loadings ($p < .001$) connecting each indicator with their corresponding factor suggests convergent construct validity in the assessment (see Figure 1). The model reaches good fit indices [$\chi^2(195) = 1460$; RMSEA = .07; CFI = .95; NNFI = .94], which seems to indicate that the data support the hypothesized four factor model of fathering.

Second-order Factor Model

For the one-factor (i.e. overall engagement construct) versus four factors hypothesis we test a model where the four first-order factors are explained by a second order-factor named father engagement (not shown in Figure 1). This is a more restricted therefore parsimonious model of fathering that restrains the first-order factors of the previous model to load into a single second-order factor. The goodness of fit indices suggest the model is a poor fit to the data [$\chi^2(201) = 4773$; RMSEA = .14; CFI = .82; NNFI = .79]; with a large and highly significant change in model fit [$\Delta \chi^2(6) = 3313$, $p < .001$] indicating that we cannot hold the hypothesis of the one-factor model.

Latent Means Model

Previous to evaluate mean differences across groups, we test for measurement invariance using equality constrains in a two-step procedure. First, we restrict the pattern of factor loadings to be equal, then, the indicators' intercept are restricted to be equal (i.e. strong invariance). Results supported measurement invariance as evidenced by adequate goodness of fit indexes [$\chi^2(375) = 3044$; RMSEA = .07; CFI = .90; NNFI = .91]; suggesting that father types of engagement are defined similarly across the three groups. Then, we proceed to evaluated group differences in latent means. To do so, we imposed an additional constraint in which the four latent variables' means are constrained equal across the three groups. This omnibus test resulted in a significant change in χ^2 [$\Delta \chi^2(8) = 62$, $p < .001$]. Therefore, we conclude there are differences in levels of father engagement across groups once socio-economic contributions

were taken into account (i.e. structural paths from SES to each latent variable). We then successively evaluated each latent mean by constraining that one mean to be equal across European American, high acculturated Hispanic, and low acculturated Hispanic groups; the values of these comparisons are shown on Table 1. From this table, we see that there were significant differences in two latent means across groups. Whereas the level of father involvement in *Care-giving and Play* is not significantly different for any group, there is a difference in levels of father involvement in the two remaining latent variables, *Nurturing and Cognitive Stimulation*. Follow-up tests (successively constraining

pairs of two groups equal), summarized with subscripts in Table 1, indicate the specific ethnic groups for which latent mean significantly differed.

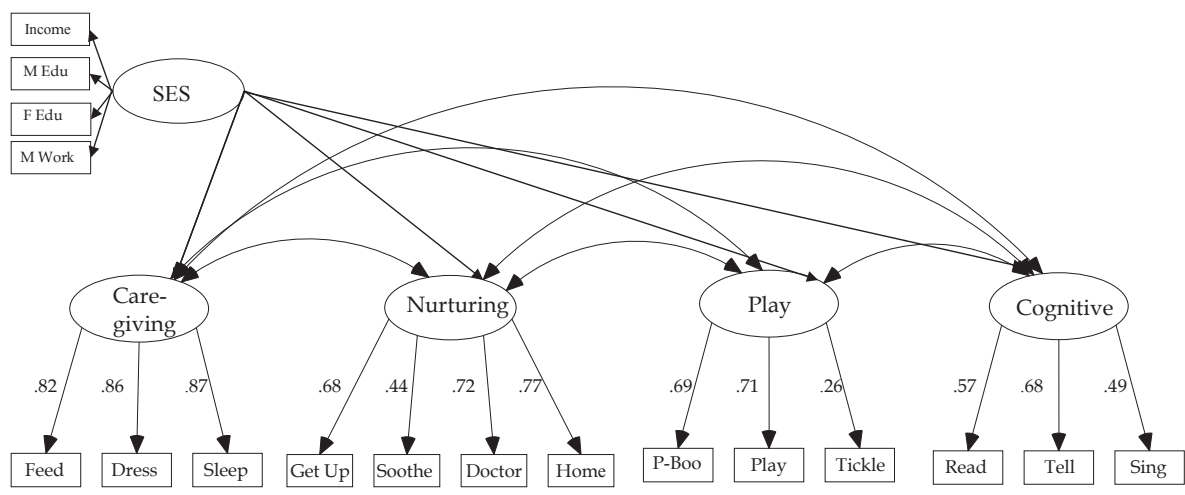
As shown in the table, Hispanic fathers, regardless their level of acculturation, are significantly more engaged in nurturing than their European American counterparts. Results also indicate that fathers are differently involved in providing cognitive stimulation to their infants, with low acculturated Hispanic fathers providing less cognitive stimulation than their European American and high acculturated Hispanic counterparts (who do not significantly differ).

Figure 1.

The Latent Model of Engagement for European American and Hispanic Fathers Goodness of Fit in each model:

CFA Model: $\chi^2(195) = 1460$; RMSEA = .07; CFI = .95; NNFI = .94,

Strong Measurement Invariance Model: $\chi^2(375) = 3044$; RMSEA = .07; CFI = .90; NNFI = .90



Note: All factor loadings are significant $p < .001$

Table 1.
Latent Means of Fathering Model

Latent	White ¹	HA Hispanic	LA Hispanic	Ethnic dif ($\Delta\chi^2_{(2)}$)
Care-giving	0.0	.18*	.10	4.53
Nurturing	0.0 a	.50** b	.64** b	33.54***
Play	0.0	.20*	.00	4.88
Cognitive	0.0 a	-0.4 a	-.77** b	14.24**

Notes: Values controlled for income, mother education, father education, and mother work status.

Estimates with different subscripts are significantly different across ethnic groups.

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

¹The latent means of this group are fixed to 0.0 as it is the reference group.

Discussion

The first objective of this study was to test a multidimensional model of father's engagement that included *Nurturing* along with *Care-giving*, *Play*, and *Cognitive Stimulation* practices. We found this model to fit the data better than the unidimensional model of father engagement. This suggests that engaged fathers are not necessarily involved in all types of practices with their infants equally; in fact, fathers may be more involved in some practices than others and still should be considered engaged fathers (Levine-Coley & Hernandez, 2006; Schoppe-Sullivan, McBride & Ringo, 2004).

Our second objective was to assess the influence of ethnicity and acculturation on each type of fathers' engagement. Literature has suggested that there is no difference in the levels of involvement of Hispanic fathers when compared against European American fathers (Adams, Coltrane & Parke, 2007; Hofferth, 2003; Toth & Xu, 1999). Our results support partially this posture. We did not find any significant difference in the level of father engagement on care-giving and play. Nevertheless we did find mean differences in cognitive stimulation and nurturing.

Regarding cognitive stimulation, there were no significant differences between European American and high acculturated Hispanics fathers suggesting that ethnicity makes a difference only when fathers are less acculturated to Western parenting beliefs. This is also consistent with Cabrera et al. (2006) who has suggested that Hispanic fathers may find cognitive stimulation to be less important or even inappropriate for such young children. A moderation effect of acculturation over ethnicity seems to explain why European American and highly acculturated Hispanics are similar in interactions such as reading a book while low acculturated Hispanics do not see these practices to be appropriate for infants younger than 1 year age as in this study.

With regard to nurturing, we found both Hispanic father groups to be more involved than their European American counterparts, irrespective to their level of acculturation. To our knowledge, there is no prior research to support this finding. Despite, we believe it may serve as initial evidence to foster exploration of the nurturing fathering domain in cross-cultural studies. Our Hispanic fathers were more engaged in soothing an upset children, or getting up during the nights responding to child's awakens, or in staying in home during sick times; we believe this resembles what Ashbourne et al. (2010), Fitzpatrick et al. (1999), and Finley et al. (2004; 2008), portrayed as nurturing fathering; it means, being there "in the moment" when the child expresses an affection need or demands attention. Our findings may suggest that Hispanic fathers express their ethnically

defined cultural script of interdependence and cohesion with loved ones or *familismo* by engaging in nurturing their infants in those special moments (Adam, Coltrane & Parke, 2007). This could be the equivalent feature of that of European American fathers who are shown to be sensitive around cognitive and interactive play interaction with their infants (Grossmann et al., 2002). While fathers' preferences might be one explanation, mother's gate keeping could provide an alternative explanation. To overrule that possibility further research should include maternal practices that reflect sharing of care-giving with their partners.

Some limitations of this study merit mention. Two thirds of the Hispanic population in ECLS data was from Mexican-origins (Cabrera et al., 2006). Although Hispanics have been considered a diverse minority group, the fact that they often share common values such as collectivism and familism (Marin & Marin, 1991; Sabogal et al. 1987) both compensate for this reliance on Mexican descendents. Nevertheless, we acknowledge the potential diversity within Hispanics due to other characteristics such a country of origin, which is obscured by our grouping of all Hispanic families into a common group. Another potential limitation was our measure of acculturation; we measured acculturation based only on English proficiency which is a strong indicator of acculturation, as some researchers have claimed (Castella, 2003; Sabogal et al, 1987) but it does not assess the changes of attitudes or behaviors implicit in the meaning of acculturation. This does not allow us to say that the differences we found are due to differences in cultural beliefs or values that distinguish European-American from Hispanic fathers; but we believe these findings may support the future research using more comprehensive measures of cultural variables. Finally, the selective nature of our sample of fathers (i.e. co-resident partners of the child' mother, full-time employees fathers) request for caution when interpreting these findings; while acknowledging that self-selection bias is important for overall research on fathers but more so in minority fathers (Cabrera et al., 2006), the fact that we are controlling for important socio-economic conditions (i.e. income, mother and father educational level and mother work status) make us confident that our findings shed some light in explaining why this specific group of fathers vary in their preferences based on their ethnicity and acculturation.

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