

*Predicting early developmental patterns
among Latino infants and their families in
the United States*



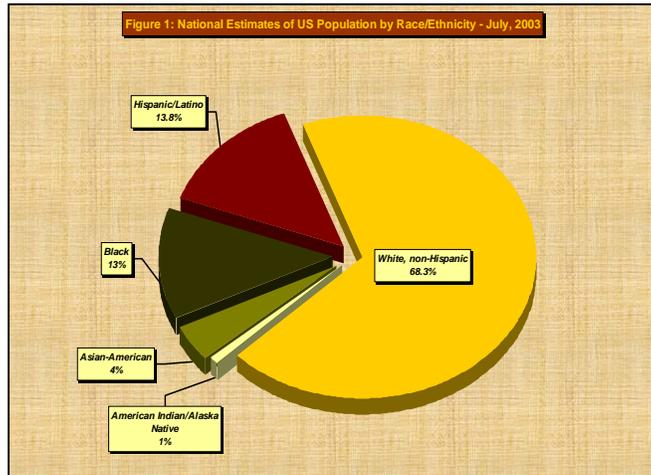
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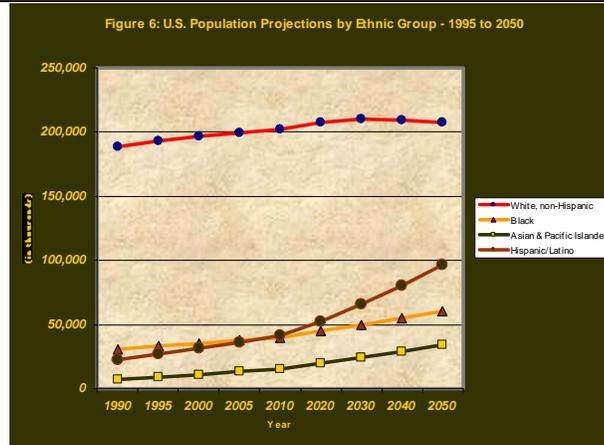
The growing Latino population currently comprises 13.8 percent of the total population in the United States, and now represents the largest minority population group.

Figure 1: National Estimates of US Population by Race/Ethnicity - July, 2003



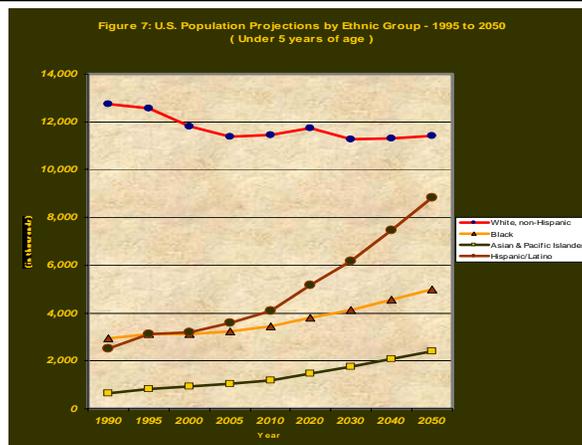
Source: Table 4: Annual estimates of the population by sex and age for the United States: April 1, 2000 to July 1, 2003. Population Division, U.S. Census Bureau.

- Overall, the Latino population is one of the fastest growing populations in the United States.
- Population projections suggest that the rate of growth for Latinos will dramatically increase between 2005 and 2050, with a substantially higher rate of increase than any other subgroup.



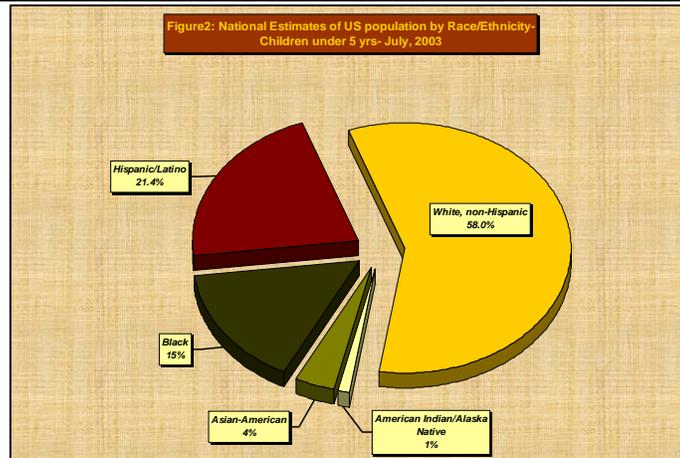
Source: Population projections of the United States by age, sex, race and Hispanic origin: 1995 to 2050. Current Population Reports; Bureau of the Census.

- For Children under the age of 5 years, the projected rate of growth for Latino children is greater than all the other minority groups of children.
- Between 2005-2050, the population of Latino children is expected to increase by 146 percent, as compared to increases of 131 percent and 54 percent for the population of Black & Asian-Americans, respectively.



Source: Population projections of the United States by age, sex, race and Hispanic origin: 1995 to 2050. Current Population Reports; Bureau of the Census.

Latinos comprise 21.4 percent of the total population of children under age 5, which is larger than all the other minority groups of young children.



Source: Table 4: Annual estimates of the population by sex and age for the United States: April 1, 2000 to July 1, 2003. Population Division, U.S. Census Bureau.

Present State of Early Latino Research

- Body of Latino early developmental and educational research remains limited, both in absolute number and scope
 - Small local convenience samples
 - Focus on the low-income population
- Examinations of potential racial, ethnic, and cultural variations often do not fully take into account full breadth of relationships among race/ethnicity, poverty status, maternal education, etc.

National Task Force on Early Childhood Education for Hispanics

La Comisión Nacional para la Educación de la Niñez Hispana

www.ecehispanic.org

National Task Force:

- [Eugene E. Garcia](#), Chair, ASU
- [Jeff Bingaman](#), U.S. Senator
- [Susan Castillo](#), Oregon Dept of Ed
- [Ivelisse Estrada](#), UniVision
- [Sonia Green](#), General Motors
- [Fernando Guerra, MD](#), San Ant. Health Dist.
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- **Commissioned Papers**
 - Young Hispanic Children in the U.S.: A Demographic portrait based on Census 2000; [Donald J. Hernandez](#)
 - Latino Infants and Their Families: A National Perspective of Protective and Risk Factors for Development; [Sandra Barrueco](#), [Michael L. Lopez](#), & [Jonathan Miles](#)
 - Hispanic Students' Educational Experiences and Opportunities During Kindergarten; Patterns of Hispanic Students' Math and English Literacy Test Scores in the Early Elementary Grades [Claudia Galindo](#) & [Sean Reardon](#)
 - Comprehensive School Reform for Latino Elementary-School Students: A Meta-Analysis; [Steven Alvarado](#), [Geoffrey Borman](#), [Gina Hewes](#), & [Moira Reilly](#)
- **Main Report & Executive Summary: *Para Nuestros Niños: Expanding and Improving Early Education for Hispanics***
- National and Congressional **Briefings**

Aim and Research Questions

Using a sociocultural approach, the present study was developed to contribute to a more contextualized and complete understanding of Latino infant development using a nationally-representative sample of young children and families.

- Overall and across racial/ethnic groups, which child and family characteristics best predict
 - Infant cognitive, motor and reported regulatory development?
 - Parent's reports of the frequency of reading, telling stories, and singing songs with their infants?
- Within the Latino community, in what way do maternal immigration status, relative use of English and Spanish in home, and primary language of non-parental care provider relate with these child and family characteristics and outcomes?

Early Childhood Longitudinal Study, Birth Cohort (ECLS-B)

- Nationally representative sample (n=10,688) of children born between January & December 2001.
- First data collection: about 9 months of age
- Procedures
 - Parent/primary caregiver interview,
 - Direct child assessments,
 - Resident and non-resident father questionnaires and
 - Videotaped parent-child interaction task.



Variables

Of particular interest for the current study were ECLS-B variables from the following categories:

- Child demographics
- Parent demographics
- Household characteristics
- Parenting variables
- Developmental outcomes



Analyses

- Multivariate Regressions and Descriptive Statistics
- Replicate weighted analyses with AM Statistical Software using Paired jackknife replication method (JK2).
- Continuous variables standardized
- Alpha: $p < .01$; Bonferroni Corrections

- Interaction terms
 - Examined whether the impact of some predictors may be larger or smaller for some ethnic groups as compared to the Latino group.
 - Overall, the results strongly suggest the generalizability and relevance of the pattern of findings across racial/ethnic groups comparative to Latinos.

9 Month Development: Unadjusted Results

	Europ.- Amer.	Multi- racial	Asian	Amer. Indian	African- Amer.	Latino
Bayley Mental Scale	51.57	51.36	49.71	49.91	50.72	50.57
Bayley Motor Scale	49.55	51.31	50.16	49.90	52.54	49.05
ITSC	16.74	17.12	17.74	17.30	17.65	17.14

Note: Boxes shaded in yellow are significantly different from the Latino number highlighted in blue on the same row.

Linguistic Engagement: Unadjusted Results

	White	Multi- racial	Asian	America n Indian	Black	Latino
Reading Books	2.99	2.86	2.52	2.53	2.52	2.41
Telling Stories	2.63	2.54	2.38	2.44	2.40	2.31
Sing Songs Daily (Y/N)	.75	.82	.71	.67	.73	.71

Bayley Mental Scores: Multiple Regression

Significant

- Age (-.15)
- Sex (.07)
- Observed Parenting Behavior (.08)
- Parental Linguistic Engagement (.05)
- Asian V. Latino (-.07)



Not Significant

- Parental Highest Education
- Maternal Employment
- Household Income
- Number of Parents in Household
- Maternal Depression
- Partner Conflict
- Hours of Non-parental Care
- Religious Service Attendance
- Infant Development Knowledge

Bayley Motor Scores : Multiple Regression

Significant

- Age (-.15)
- Parental Linguistic Engagement (.03)
- Parental Highest Education (-.07)
- Partner Conflict (-.04)
- Asian V. Latino (.08)
- African-American v. Latino (.11)



Not Significant

- Maternal Employment
- Household Income
- Number of Parents in Household
- Maternal Depression
- Hours of Non-parental Care
- Religious Service Attendance
- Infant Development Knowledge
- Observed Parenting Behavior

Infant Behavioral Regulation: Multiple Regression



Significant

- Age (.05)
- Parental Linguistic Engagement (-.08)
- Maternal Depression* (.16)
- Partner Conflict* (.08)

Not Significant

- Maternal Employment
- Household Income
- Parental Highest Education
- Number of Parents in Household
- Hours of Non-parental Care
- Religious Service Attendance
- Infant Development Knowledge
- Observed Parenting Behavior

* Ethnic statistical interaction present.

Shared Book Reading: Multiple Regression

Barrueco, Lopez, & Miles (in press)

Significant

- European-American v. Latino (.17)
- Multiracial v. Latino (.08)
- Age* (.05)
- Number of Parents in Household* (-.06)
- Parental Highest Education (.13)
- Household Income (.07)
- Partner Conflict (.07)
- Hours of Non-parental Care (-.06)
- Religious Service Attendance (.08)
- Infant Development Knowledge (.06)
- Observed Parenting Behavior (.08)

Not Significant

- Sex
- Maternal Employment
- Maternal Depression*



* Ethnic statistical interaction present.

Storytelling: Multiple Regression

Barrueco, Lopez, & Miles (in press)



Significant

- European-American v. Latino (.09)
- Age* (.04)
- Parental Highest Education (.08)
- Partner Conflict (-.09)
- Religious Service Attendance (.05)
- Observed Parenting Behavior (.04)

Not Significant

- Sex
- Number of Parents in Household*
- Household Income
- Hours of Non-parental Care
- Infant Development Knowledge
- Maternal Employment
- Maternal Depression

* Ethnic statistical interaction present.

Daily Singing: Multiple Regression

Barrueco, Lopez, & Miles (in press)

Significant

- American Indian/Alaskan Native v. Latino (-.08)
- Parental Highest Education (.09)
- Partner Conflict (-.11)
- Religious Service Attendance* (.10)
- Infant Development Knowledge (.07)
- Observed Parenting Behavior (.08)

Not Significant

- Sex
- Age*
- Number of Parents in Household
- Household Income
- Hours of Non-parental Care
- Maternal Employment
- Maternal Depression



* Ethnic statistical interaction present.

Latino-Focused Analyses

- Similar pattern evidenced within the Latino-only results.
- Neither maternal immigration nor degree of Spanish versus English use in the home significantly related to infant developmental characteristics.
- Primary difference in results related to parent-reported infant self-regulatory behavior:
 - Among Latinos, infants of parents with less education and whose mothers reported more depression had more reported regulatory difficulties

Discussion



- Few developmental differences at 9 months between Latino infants and those of other racial/ ethnic groups, when controlling for other relevant characteristics.
- Specific skills and behaviors of American parents consistently and directly relate to infant development in the first nine months of life, rather than familial resource variables such as maternal education, maternal employment, or household income or characteristics specific to Latinos that are often focused on (e.g., use of Spanish and English, immigrant status)

Discussion



- Family Resources and Activities relate to the Synergy of Parenting Linguistic Behaviors
- Frequency of Latinas' reading and storytelling with their infants persists to be significantly lower than that of European American mothers', even after controlling for maternal education and a large group of other predictor variables (e.g., Nord et al, 1999; Raikes et al. 2006)
 - Development and delivery of culturally-responsive interventions to target these practices are indicated.
- Strength of ECLS-B for examining early predictors of child development as it lent itself to intensive analysis and unpacking of often-confounded relationships with its large, nationally-representative sample.

Limitations & Future Directions

- Non-experimental design and construct validity
- Cross-sectional analysis of 9-mos data → Longitudinal examination of 2+ year data
- Examination of additional relevant characteristics:
 - Years since immigration and generational level (e.g., Ortega et al, 2000; Schwartz et al, 2006).
 - Country of origin (Mexican-American vs other Latino) significantly related to parent–infant interactions within an ECLS-B sample of intact Latino families (Cabrera et al, 2006)

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