

Annotated Bibliography on Early Childhood Research  
with Puerto Rican Children, Families, and Programs

*Building Human Services Research Partnerships in Puerto Rico*

Sandra Barrueco, Ph.D.  
Anna E. Davis  
Jean G. Agosto

The Catholic University of America  
Washington, D.C.

2014



Disclaimer

The views expressed in this article do not necessarily reflect the views or policies of the Office of Planning, Research and Evaluation, Administration for Children and Families, or the U. S. Department of Health and Human Services.

### Overview

This annotated bibliography identifies and summarizes pertinent early childhood research that has been conducted with the Puerto Rican community on the mainland and the island. As evidenced in the bibliography, the topics cover a wide range of topics, such as infant, toddler, and preschool development; health, linguistic, and cognitive development; parenting practices; programmatic influences; and more.

Utilizing a thorough identification process, sources were sought that included the following five characteristics:

- 1) Research was identified that has been conducted with young Puerto Rican families, particularly those served by the Head Start program;
- 2) the products included articles, chapters, books, papers, governmental and non-governmental reports, theses, and dissertations;
- 3) the products included both English- and Spanish-language sources;
- 4) the research could have been conducted in Puerto Rico, the United States, or elsewhere, and
- 5) suggestions were solicited by members of the “Building Human Services Research Partnerships in Puerto Rico” Initiative and other colleagues.

The second step involved a team review process. Each identified source was analyzed for its overall content, methodology, results, and implications.

The final step involved writing the annotated bibliography for the 133 documents. The abstract is presented, followed by a summary of each source. The annotations highlight pertinent findings for the “Building Human Services Research Partnerships in Puerto Rico” Initiative and the field as a whole.

A listing of all 133 documents is first presented beginning on page 3. Starting on page 14, each annotation is presented in alphabetical order.

List of Research Articles, Chapters, and Relevant Documents Reviewed  
(Annotations begin on Page 14)

- Achenbach, T.M., Bird, H.R., Canino, G., Phares, V., Gould, M.S., & Rubio-Stipec, M. (1990). Epidemiological comparisons of Puerto Rican and US mainland children: Parent, teacher, and self-reports. *Journal of the American Academy of Child and Adolescent Psychiatry*, 29(1), 84-93.
- Achhpal, B., Goldman, J. A., & Rohner, R. P. (2007). A comparison of European American and Puerto Rican parents' goals and expectations about the socialization and education of pre-school children. *International Journal of Early Years Education*, 15(1), 1-13.
- Adkins, D. C., Payne, F. D., & Ballif, B. L. (1972). Motivation factor scores and response set scores for ten ethnic-cultural groups of preschool children. *American Educational Research Journal*, 9(4), 557-572.
- Almodóvar, M. (2010). Integrating music, drama, and the visual arts in the early childhood curriculum: A study of early childhood teachers in a metropolitan area of Puerto Rico. (Unpublished dissertation). University of Massachusetts-Amherst, Amherst, MA.
- Alvarez, V., & Albizu-Miranda, C. (1985). Un instrumento visomotor para niños de 4 a 6 años de edad. *Revista latinoamericana de Psicología*, 17(2), 181-192.
- Alvarez-Ortiz, L. A. (1996). *Relationship between home and school mediation, parental perception, and the school functioning of preschool mainland Puerto Rican children* (Unpublished doctoral dissertation). Temple University, Philadelphia, PA.
- Anastasi, A., & DeJesús, C. (1953). Language development and nonverbal IQ of Puerto Rican preschool children in New York City. *The Journal of Abnormal and Social Psychology*, 48(3), 357-366.
- Anderson, R. T., & Souto, S. M. (2005). The use of articles by monolingual Puerto Rican Spanish-speaking children with specific language impairment. *Applied Psycholinguistics*, 26(4), 621-647.
- Arnold, D. H., Fisher, P. H., Doctoroff, G. L., & Dobbs, J. (2002). Accelerating math development in Head Start classrooms. *Journal of Educational Psychology*, 94(4), 762-770.
- Aponte, R., French, R., & Sherrill, C. (1990). Motor development of Puerto Rican children: Cross-cultural perspectives. *Perceptual and Motor Skills*, 71(3f), 1200-1202. doi:10.2466/pms.1990.71.3f.1200
- Archilla, S.O. (1992). Families in Puerto Rico. In J. L. Roopnarine & D.B. Carter (Eds.), *Parent-child Socialization in Diverse Cultures*. Norwood, NJ: Ablex Publishing Co.
- Baker, C. N., Arnold, D. H., & Meagher, S. (2011). Enrollment and attendance in a parent training prevention program for conduct problems. *Prevention Science*, 12(2), 126-138. doi:10.1007/s11121-010-0187-0

- Bauermeister, J. J. (1992). Factor analyses of teacher ratings of attention-deficit hyperactivity and oppositional defiant symptoms in children aged four through thirteen years. *Journal of Clinical Child Psychology*, 21(1), 27-34.
- Berea, J. E., Atrash, H. K., Pérez, N., & Saliceti, J. A. (1993). Low birthweight and infant mortality in Puerto Rico. *American Journal of Public Health*, 83(11), 1572–1576.
- Bestard, J. E. (1990). *Validation of the "Instrumento de Cernimiento Para Edad Pre-Escolar (ICEPE)" on Head Start children in Puerto Rico* (Unpublished doctoral dissertation). Temple University, Philadelphia.
- Bird, H. R., & Canino, G. (1982). The Puerto Rican family: Cultural factors and family intervention strategies. *Journal of the American Academy of Psychoanalysis*, 10(2), 257–268.
- Bird, H.R., Canino, G., Rubio-Stipec M., Gould, M.S., Ribera, J., Sesman, M. ... Moscoso, M. (1988). Estimates of the prevalence of childhood maladjustment in a community survey in Puerto Rico: The use of combined measures. *Archives of General Psychiatry*, 45(12), 1120–1126. doi:10.1001/archpsyc.1988.01800360068010
- Bird, H. R., Davies, M., Duarte, C. S., Shen, S., Loeber, R., & Canino, G. J. (2006). A study of disruptive behavior disorders in Puerto Rican youth: II. Baseline prevalence, comorbidity, and correlates in two sites. *Journal of the American Academy of Child and Adolescent Psychiatry*, 45(9), 1042–1053. doi:10.1097/01.chi.0000227879.65651.cf
- Bird, H. R., Gould, M. S., Yager, T., Staghezza, B., & Canino, G. (1989). Risk factors for maladjustment in Puerto Rican children. *Journal of the American Academy of Child and Adolescent Psychiatry*, 28(6), 847–850. doi: 10.1097/00004583-198911000-00006
- Bravo, M., Ribera, J., Taboas, A. M., Rubio-Stipec, M., Canino, G., Shrout, P., et al. (2001). Test-retest reliability of the Spanish version of the Diagnostic Interview Schedule for Children (DISC-IV). *Journal of Abnormal Child Psychology*, 29(5), 433-444.
- Bryant, C. A. (1982). The impact of kin, friend and neighbor networks on infant feeding practices: Cuban, Puerto Rican and Anglo families in Florida. *Social Science & Medicine*, 16(20), 1757-1765. doi:10.1016/0277-9536%2882%2990269-6
- Campos, M., García, L., García, I. E., Rivera, C., & Valcárcel, M. I. (2008). Rate of weight gain in very-low birth weight Puerto Rican neonates. *Puerto Rico Health Sciences Journal*, 27(2), 141-145.
- Canino, G., Shrout, P.E., Rubio-Stipec M., Bird, H., Bravo, M., Ramírez, R. ... Martínez-Taboas, A. (2004). The DSM-IV rates of child and adolescent disorders in Puerto Rico: Prevalence, correlates, service use, and the effects of impairment. *Archives of General Psychiatry*, 61(1), 85–93. doi:10.1001/archpsyc.61.1.85
- Canino, G. (2007). 25 years of child and adult psychiatric epidemiology studies in Puerto Rico. *Puerto Rico Health Sciences Journal*, 26(4) 385-394.
- Carlson, V. J., & Harwood, R. L. (2003). Attachment, culture, and the caregiving system: The cultural patterning of everyday experiences among Anglo and Puerto Rican

- mother–infant pairs. *Infant Mental Health Journal*, 24(1), 53–73. doi:10.1002/imhj.10043
- Cherlin, A., Frogner, B., Ribar, D. & Moffitt, R. (2009). Welfare reform in the Mid-2000s: How African American and Hispanic Families in three cities are faring. *The ANNALS of the American Academy of Political and Social Science*, 621, 178-201. DOI: 10.1177/0002716208324851
- Chew, A. L. (1993). Concurrent validation and regression line comparison of the Spanish edition of the Lollipop Test (La Prueba Lollipop) on a bilingual population. *Educational and psychological measurement*, 53(1), 173-182. doi: 10.1177/0013164493053001019
- Clark, S. L., Burton, L. M., & Flippen, C. A. (2011). Housing dependence and intimate relationships in the lives of low-income Puerto Rican mothers. *Journal of Family Issues*, 32(3), 369–393. doi:10.1177/0192513X10379712
- Correa, V. I., Bonilla, Z. E., & Reyes-Macpherson, M. E. (2011). Support networks of single Puerto Rican mothers of children with disabilities. *Journal of Child and Family Studies*, 20(1), 66-77.
- Cristofaro, T. N., & Tamis-LeMonda, C. S. (2008). Lessons in mother-child and father-child personal narratives in Latino families. In A. McCabe, A. L. Bailey, & G. Melzi (Eds.), *Spanish-language narration and literacy: Culture, cognition, and emotion* (pp. 54-91). New York, NY: Cambridge University Press.
- Currie, J., & Thomas, D. (1999). Does Head Start help Hispanic children? *Journal of Public Economics*, 74(2), 235-262.
- de la Vega, A., & López-Cepero, R. (2009). Seasonal variations in the incidence of congenital anomalies in Puerto Rico based on the timing of conception. *Puerto Rico Health Sciences Journal*, 28(2), 121-125.
- de la Vega, A., & Verdiales, M. (2002). How does maternal age affect pregnancy planning in Puerto Rico? *Puerto Rico Health Sciences Journal*, 21(2), 127-128.
- de von Figueroa-Moseley, C., Ramey, C. T., Keltner, B., & Lanzi, R. G. (2006). Variations in Latino parenting practices and their effects on child cognitive developmental outcomes. *Hispanic Journal of Behavioral Sciences*, 28(1), 102–114. doi: 10.1177/0739986305284036
- del Toro Delgado, L. & Alvarez, V. (1990). Validity of the Kaufman Assessment Battery for Children (K-ABC) in the diagnosis of cognitive deficits in preschool children. *Avances de Psicología Clínica Latinoamericana*, 8, 99-114.
- Delgado, M. (1998). Puerto Rican elementary school-age children: Assistance with homework as an indicator of natural support strengths. *Social Work in Education* 20(1), 49-54.
- Dobbs, J., Arnold, D. H., & Doctoroff, G. L. (2004). Attention in the preschool classroom: The relationships among child gender, child misbehavior, and types of teacher attention. *Early child development and care*, 174(3), 281-295. doi: 10.1080/0300443032000153598
- Fagan, J. (1998). Correlates of low-income African American and Puerto Rican fathers'

- involvement with their children. *Journal of black psychology*, 24(3), 351-367. doi: 10.1177/00957984980243006
- Fagan, J. (2000). African American and Puerto Rican American parenting styles, paternal involvement, and Head Start children's social competence. *Merrill-Palmer Quarterly*, 46(4), 592-612.
- Feldman, J., Ortega, A., Koinis-Mitchell, D., Kuo, A., & Canino, G. (2010). Child and family psychiatric and psychological factors associated with child physical health problems. *Journal of Nervous and Mental Disease*, 198(4), 271-279.
- Feng, X., Harwood, R. L., Leyendecker, B., & Miller, A. M. (2001). Changes across the first year of life in infants' daily activities and social contacts among middle-class Anglo and Puerto Rican families. *Infant Behavior and Development*, 24(3), 317-339.
- Ferrer-Medina, V. (2008). *Maternal perceptions of attachment: A study of the experience of Puerto Rican mothers* (Unpublished doctoral dissertation). Chicago School of Professional Psychology, Chicago, IL.
- Fomby, P., & Cherlin, A. J. (2004). Public assistance use among U.S.-born children of immigrants. *International Migration Review*, 38(2), 584-610. doi:10.1111/j.1747-7379.2004.tb00210.
- Fracasso, M. (1994). The relationship of maternal behavior and acculturation to the quality of attachment in Hispanic infants living in New York City. *Hispanic Journal of Behavioral Sciences*, 16(2), 143-154. doi: 10.1177/07399863940162004
- Frazer de Lladó, T. E., González de Pijem, L., Hawk, B., & The Puerto Rican IDDM Coalition (1998). Incidence of IDDM in children living in Puerto Rico. *Diabetes Care*, 21(5), 744-6.
- Garcia, G. & Levin, M. (2001). *Latino children in Head Start: Family characteristics, parent involvement and satisfaction with the Head Start Program*. Poster presented at the Society for Research in Child Development Biennial Meeting. Minneapolis, MN.
- Giambruno, C., Cowell, C., Barber-Madden, R., & Mauro-Bracken, L. (1997). The extent of barriers and linkages to health care for Head Start children. *Journal of Community Health*, 22(2), 101-114. doi:10.1023/A:1025160705362
- Gillete, N. Y. (1989). *Evaluation of the use of a systematic training for effective parenting program modified for low-income Puerto Rican parents of preschoolers* (Unpublished doctoral dissertation). University of Massachusetts.
- Goldstein, B.A., & Cintrón, P. (2001). An investigation of phonological skills in Puerto Rican Spanish-speaking 2-year-olds. *Clinical Linguistics and Phonetics*, 15(5), 343-361.
- Goldstein, B. A., & Iglesias, A. (1996). Phonological patterns in Puerto Rican Spanish-speaking children with phonological disorders. *Journal of Communication Disorders*, 29(5), 367-387. doi:10.1016/0021-9924(95)00022-4

- González-Martínez, J. C. (2002). *Neonatal behavior & maternal representations over the first month postpartum: A short-term longitudinal study with Puerto Rican infants and their mothers* (Unpublished doctoral dissertation). University of Massachusetts-Amherst, Amherst, MA.
- González-Ramos, G., Zayas, L. H., & Cohen, E. V. (1998). Child-rearing values of low-income, urban Puerto Rican mothers of preschool children. *Professional Psychology: Research and Practice*, 29(4), 377-382.
- Gorman, B. K. (2001). *Early childhood development among mainland and island Puerto Ricans: The roles of birth outcomes, socioeconomic status, and social support*. (Unpublished doctoral dissertation). Pennsylvania State University, State College, PA.
- Gorman, B. K. (2002). Developmental well-being among low and normal birth weight U.S. Puerto Rican Children. *Journal of Health and Social Behavior*, 43(4), 419.
- Guarnaccia, P. J., Martinez, I., Ramirez, R., & Canino, G. (2005). Are ataques de nervios in Puerto Rican children associated with psychiatric disorder? *Journal of the American Academy of Child and Adolescent Psychiatry*, 44(11), 1184–1192. doi: 10.1097/01.chi.0000177059.34031.5d
- Gullón-Rivera, A. L. (2008). *Puerto Rican kindergarteners' representation of the self within family relationships: Are they related to their self-worth, child-mother relationship and behavioral adjustment?* (Unpublished doctoral dissertation). University of Wisconsin – Madison, Madison.
- Hammer, C. S., Lawrence, F., Rodríguez, B., Davison, M. D., & Miccio, A. W. (2011). Changes in language usage of Puerto Rican mothers and their children: Do gender and timing of exposure to English matter? *Applied Psycholinguistics*, 32(2), 275–297. doi:http://dx.doi.org.proxycu.wrlc.org/10.1017/S014271641000041X
- Hammer, C. S., Nimmo, D., Cohen, R., Draheim, H. C., & Johnson, A. A. (2005). Book reading interactions between African American and Puerto Rican Head Start children and their mothers. *Journal of Early Childhood Literacy*, 5(3), 195–227. doi: 10.1177/1468798405058683
- Hammer, C. S., Rodríguez, B. L., Lawrence, F. R., & Miccio, A. W. (2007). Puerto Rican mothers' beliefs and home literacy practices. *Language, Speech, and Hearing Services in Schools*, 38(3), 216–224.
- Harwood, R., & Miller, J. (1991). Perceptions of attachment behavior: A comparison of Anglo and Puerto Rican mothers. *Merrill-Palmer Quarterly*, 37(4), 583-599.
- Harwood, R. L., Schölmerich, A., & Schulze, P. A. (2000). Homogeneity and heterogeneity in cultural belief systems. *New Directions for Child and Adolescent Development*, 87, 41-57.
- Harwood, R. L., Schoelmerich, A., Ventura-Cook, E., Schulze, P. A., & Wilson, S. P. (1996). Culture and class influences on Anglo and Puerto Rican mothers' beliefs regarding long-term socialization goals and child behavior. *Child Development*, 67(5), 2446–2461. doi:10.2307/1131633
- Hakuta, K. (1987). Degree of bilingualism and cognitive ability in mainland Puerto Rican children. *Child Development*, 58(5), 1372-1388.

- Hernández-Candelas, M. (2007). Policies for early childhood music education in Puerto Rico. *Arts Education Policy Review*, 109(2), 27–32.
- Hertzog, M. E., & Birch, H. G. (1971). Longitudinal course of measured intelligence in preschool children of different social and ethnic backgrounds. *American Journal of Orthopsychiatry*, 41(3), 416–426. doi:10.1111/j.1939-0025.1971.tb01128.x
- Hertzog, M. E., Birch, H. G., Thomas, A., & Méndez, O. A. (1968). Class and ethnic differences in the responsiveness of preschool children to cognitive demands. *Monographs of the Society for Research in Child Development*, 33(1), 1-69.
- Higgins, B. (2000). Puerto Rican cultural beliefs: Influence on infant feeding practices in western New York. *Journal of Transcultural Nursing*, 11(1), 19–30. doi: 10.1177/104365960001100105
- Hollestelle, K., & Koch, P. D. (2003). *2003 Family Child Care Licensing Study*. Washington, DC: The Children's Foundation.
- Jiménez Castro, M. IL. J. & Connell, P. (2001). Early morphological development and case marking in Spanish monolingual Puerto Rican children. In A. H. J. Do & L. Domínguez (Eds.), *Proceedings of the 25th Annual Boston University Conference on Language Development, Volumes 1 and 2*. (pp. 377-388). Somerville, MA: Cascadilla Press.
- Johnson-Beykont, B. & Beykont, Z. F. (2010). Against the assimilationist tide: Nurturing Puerto Rican children's bilingual, bicultural, and academic development in preschool. In U. Okulska & P. Cap (Eds.), *Discourse approaches to politics, society and culture* (pp. 359-384). Amsterdam, Netherlands: John Benjamins Publishing Company.
- Korn, S. J. & Gannon, S. (1983). Temperament, cultural variation, and behavior disorder in preschool children. *Child Psychiatry and Human Development*, 13(4), 203-212.
- Landale, N. S., Gorman, B. K. & Oropesa, R. S. (2006). Selective Migration and Infant Mortality Among Puerto Ricans. *Maternal and Child Health Journal*, 10(4), 351-360.
- Landale, N. S. & Oropesa, R. S. (2001). Father involvement in the lives of mainland Puerto Rican children: Contributions of nonresident, cohabiting and married fathers. *Social Forces*, 79(3), 945-968.
- Landale, N. S. & Oropesa, R. S. (2005). What does skin color have to do with infant health? An analysis of low birth weight among mainland and island Puerto Ricans. *Social Science & Medicine*, 61, 379–391.
- Landale, N. S., Oropesa, R. S. & Gorman, B. K. (2000). Migration and infant death: Assimilation or selective migration among Puerto Ricans? *American Sociological Review*, 65(6), 888-909.
- Landale, N. S., Oropesa, R. S., Llanes, D. & Gorman, B. K. (1999). Does Americanization have adverse effects on health?: Stress, health habits, and infant health outcomes among Puerto Ricans. *Social Forces*, 78(2), 613-641.
- Lara, M., Akinbami, L., Flores, G., & Morgenstern, H. (2006). Heterogeneity of childhood asthma among Hispanic children: Puerto Rican children bear a disproportionate burden. *Pediatrics*, 117(1), 43–53. doi:10.1542/peds.2004-1714



- Leadbeater, B. & Bishop, S. (1994). Predictors of behavior problems in preschool children of inner-city Afro-American and Puerto Rican adolescent mothers. *Child Development (Special Issue: Children and Poverty)*, 65(2), 638-648.
- Lester, B. M., García-Coll, C. T., & Sepkoski, C. (1982). Teenage pregnancy and neonatal behavior: Effects in Puerto Rico and Florida. *Journal of Youth and Adolescence*, 11(5), 385-402. doi:10.1007/ BF01540376
- Lewis, K. (2012). *Family Early Literacy Practices Questionnaire: A validation study for a Spanish-speaking population*. (Unpublished doctoral dissertation). University of Delaware, Newark, DE.
- López del Valle, L. M. (2010). Dental and periodontal health and treatment needs in a mother/child rural Puerto Rican population. *Puerto Rico Health Sciences Journal*, 29(1), 36-39.
- López del Valle, L. M., Dave-Singh, G., Feliciano, N., & Machuca, M. D. C. (2006). Associations between a history of breast feeding, malocclusion and parafunctional habits in Puerto Rican children. *Puerto Rico Health Sciences Journal*, 25(1), 31-34.
- Malgady, R. G., Rogler, L. H., & Costantino, G. (1990). Culturally sensitive psychotherapy for Puerto Rican children and adolescents: A program of treatment outcome research. *Journal of Consulting and Clinical Psychology*, 58(6), 704-712.
- Mather, M. (2003). *Children in Puerto Rico: Results from the 2000 Census*. Baltimore, MD: The Annie E. Casey Foundation and the Population Reference Bureau.
- Martinez, I. M., & Shatz, M. (1996). Linguistic influences on categorization in preschool children: A crosslinguistic study. *Journal of child language*, 23(3), 529-545.
- Martinez, I. M. (2001). *The effects of language on children's understanding of agency and causation*. (Unpublished doctoral dissertation). University of Michigan, Ann Arbor, MI.
- Matias, B. (1990). *Getting things done: A naturalistic study of the kinds and functions of directive language in a Puerto Rican early childhood classroom* (Unpublished doctoral dissertation). New York University, New York, New York.
- Matos, M., Torres, R., Santiago, R., Jurado, M., & Rodríguez, I. (2006). Adaptation of Parent-Child Interaction Therapy for Puerto Rican families: A preliminary study. *Family Process*, 45(2), 205-222. doi:10.1111/j.1545-5300.2006.00091.x
- McCarton, C. M., Brooks-Gunn, J., & Tonascia, J. (1994). The cognitive, behavioral, and health status of mainland Puerto Rican children in the Infant Health and Development Program. In G. Lamberty & C. García Coll (Eds.), *Puerto Rican women and children: Issues in health, growth, and development* (pp. 161-189). New York, NY: Plenum Press.
- Mendoza F.S., Ventura S.J., Valdez R.B, Castillo, R.O., Saldivar, L.E., Baisden, K., & Martorell, R. (1991). Selected measures of health status for Mexican-American, mainland Puerto Rican, and Cuban-American children. *Journal of the American Medical Association (JAMA)*, 265(2), 227-232. doi:10.1001/jama.1991.03460020081033

- Molins, C., Martinez Martinez, C. J., & Villanueva Rodriguez, S. (2009). 428: Child car seat safety knowledge among caregivers in Puerto Rico: Is more education needed? *Annals of Emergency Medicine*, 54(3, Supplement), S135. doi:10.1016/j.annemergmed.2009.06.468
- National Council of La Raza. (2012). *2012 kids count: Puerto Rico data book*. Washington, DC: National Council of La Raza.
- O'Carroll, K. L. (2012). Beyond barriers: The relationship between Head Start parents' social capital, their involvement, and children's academic school readiness. Doctoral dissertation, Harvard Graduate School of Education.
- Oropesa, R. S., Landale, N. S., & Dávila, A. L. (2001). Poverty, prenatal care, and infant health in Puerto Rico. *Social Biology*, 48(1/2), 44–66.
- Ortiz-Colón, R. (1985). *Acculturation, ethnicity and education: A comparison of Anglo teachers' and Puerto Rican mothers' values regarding behaviors and skills for urban Head Start children* (Unpublished doctoral dissertation). Harvard Graduate School of Education, Boston.
- Otero-González, M., & García-Fragoso, L. (2008). Prevalence of overweight and obesity in a group of children between the ages of 2 to 12 years old in Puerto Rico. *Puerto Rico Health Sciences Journal*, 27(2), 159-161.
- Páez, M., Tabors, P., & López, L. (2007). Dual language and literacy development of Spanish-speaking preschool children. *Journal of Applied Developmental Psychology*, 28(2), 85-102.
- Pillai, S. S. (1998). *Association between externalizing behavior in preschool children and factors related to insecure attachment: An exploratory study* (Unpublished doctoral dissertation). Bryn Mawr College, Bryn Mawr, PA.
- Peña, E. D. (2000). Measurement of modifiability in children from culturally and linguistically diverse backgrounds. *Communication Disorders Quarterly*, 21(2), 87-97.
- Peña, E. D., & Quinn, R. (1997). Task familiarity: Effects on the test performance of Puerto Rican and African American children. *Language, Speech and Hearing Services in Schools*, 28(4), 323-332.
- Pérez, S. M. (2000). *U.S. Latino children: A status report*. Washington, DC: National Council of la Raza.
- Planos, R., Zayas, L. H., & Busch-Rossnagel, N. A. (1995). Acculturation and teaching behaviors of Dominican and Puerto Rican mothers. *Hispanic Journal of Behavioral Sciences*, 17(2), 225-236.
- Planos, R., Zayas, L. H., & Busch-Rossnagel, N. A. (1997). Mental health factors and teaching behaviors among low-income Hispanic mothers. *Families in Society*, 78(1), 4-12.
- Quirk, M., Ciottone, R., Minami, H., Wapner, S., Yamamoto, T., Ishii, S., Lucca-Irizarry, N.... Pacheco, A. (1986). Values mothers hold for handicapped and nonhandicapped preschool children in Japan, Puerto Rico, and the United States mainland. *International Journal of Psychology*, 21(1-4), 463–485. doi: 10.1080/00207598608247602

- Rivera Díaz, M. R. (2011). Niñez ciudadana: Un abordaje socioconstruccionista a la política de salud mental infanto-juvenil en Puerto Rico. *Revista Puertorriquena de Psicología*, 22, 122-146.
- Rodríguez, J. M. (1984). *The effect of modifying curriculum and instruction on the acquisition of expressive vocabulary by Puerto Rican preschool deaf children* (Unpublished doctoral dissertation). The Pennsylvania State University, University Park, PA.
- Román Oquendo, J.B., & Pérez, S.M. (2004). TANF implementation in Puerto Rico: A summary of data on leavers. Washington, DC: National Council of La Raza.
- Román-Oyola, R., & Reynolds, S. (2013). Prevalence of Sensory Modulation Disorder among Puerto Rican preschoolers: An analysis focused on socioeconomic status variables. *Occupational Therapy International*, 20(3), 144-154.
- Roopnarine, J. & Ahmeduzzaman, M. (1993). Puerto Rican fathers' involvement with their preschool-age children. *Hispanic Journal of Behavioral Sciences*, 15(1), 96-107. doi:10.1177/07399863930151005
- Rowley, D. L., & Hogan, V. (2012). Disparities in infant mortality and effective, equitable care: Are infants suffering from benign neglect? *Annual Review of Public Health*, 33(1), 75-87.
- Saavedra, F. M., Pastrana, E. A., Jiménez, L. M., Fernández, M., Billoch, J., Sosa, I., & Vigo, J. (2011). Pediatric brain tumors in Puerto Rico. *Puerto Rico Health Sciences Journal*, 30(4), 195-197.
- Saenz, T. I., Iglesias, A., Huer, M. B., & Parette, H. P. (1999). Culturally and linguistically diverse preschoolers' verbal and nonverbal requests. *Communication Disorders Quarterly*, 21(1), 39-48.
- Scholl, T. O., & Chen, X. (2009). Vitamin D intake during pregnancy: Association with maternal characteristics and infant birth weight. *Early Human Development*, 85(4), 231-234.
- Schulze, P. A., Harwood, R. L., & Schoelmerich, A. (2001). Feeding practices and expectations among middle-class Anglo and Puerto Rican mothers of 12-month-old infants. *Journal of Cross-Cultural Psychology*, 32(4), 397-406.
- Shatz, M., Diesendruck, G., Martinez-Beck, I. & Akar, D. (2003). The influence of language and socioeconomic status on children's understanding of false belief. *Developmental Psychology*, 39(4), 717-729.
- Shellenberger, S., & Lachterman, T. (1979). Cognitive and motor functioning on the McCarthy Scales by Spanish-speaking children. *Perceptual And Motor Skills*, 49(3), 863-866.
- Silberg, J. L., Febo San Miguel, V., Murrelle, E. L., Prom, E., Bates, J. E., Canino, G., et al. (2005). Genetic and environmental influences on temperament in the first year of life: The Puerto Rico infant twin study (PRINTS). *Twin Research and Human Genetics*, 8(04), 328-336.

- Soto, L. D. & Negron, L. (1994). Mainland Puerto Rican children. In J. L. Roopnarine, J. E. Johnson, & F. H. Hooper (Eds.). *Children's play in diverse cultures* (pp. 104-122). Albany, NY: State University of New York Press.
- Staghezza-Jaramillo, B., Bird, H. R., Gould, M. S., & Canino, G. (1995). Mental health service utilization among Puerto Rican children ages 4 through 16. *Journal of Child and Family Studies*, 4(4), 399-418.
- Stile, S.W., Abernathy, S. M., Pettibone, T. J., & Wachtel, W. J. (1984). Training and certification for early childhood special education personnel: A six-year follow-up study. *Journal of Early Intervention*, 8(1), 69-73. doi: 10.1177/105381518400800108
- Szalacha, L.A., Erkut, S., Garcia Coll, C., Fields, J.P., Alarcon, O., & Ceder, I. (2003) Perceived discrimination and resilience. In S.S. Luthar (Ed.), *Resilience and vulnerability: Adaptation in the context of childhood adversities* (414-435). Cambridge UK: Cambridge University Press.
- Thomas, P. H., Chinsky, J. M., & Aronson, C. F. (1973). A preschool educational program with Puerto Rican children: Implications as a community intervention. *Journal of Community Psychology*, 1(1), 18-22.
- Torres, A.M. (2009). *The ecology of threat: A life history perspective on proximate mechanisms of stress in Head Start children from two Puerto Rican communities* (Unpublished doctoral dissertation). Yale University, New Haven.
- Torres-Crespo, M. N. (2009). *Exploring gender roles through children's play episodes in an early childhood setting, as part of Puerto Rican culture: A qualitative study*. (Unpublished doctoral dissertation). The Pennsylvania State University, State College, PA.
- Trawick-Smith, J. (2010). Drawing back the lens on play: A frame analysis of young children's play in Puerto Rico. *Early Education and Development*, 21(4), 536-567.
- U.S. Department of Health and Human Services (DHHS), Administration for Children and Families (2010). Head Start Impact Study. Final Report. Washington, DC: DHHS.
- Vargas, M., & Busch-Rossnagel, N. A. (2003). Teaching behaviors and styles of low-income Puerto Rican mothers. *Applied Developmental Science*, 7(4), 229-238.
- Vélez, N. M., García, I. E., García, L., & Valcárcel, M. (2008). The use of illicit drugs during pregnancy among mothers of premature infants. *Puerto Rico Health Sciences Journal*, 27(3), 209-212.
- Walsh, J. F., & D'Angelo, R. Y. (1971). IQs of Puerto Rican Head Start children on the Vane Kindergarten Test. *Journal of School Psychology*, 9(2), 173-176. doi: 10.1016/0022-4405(71)90011-2
- Walsh, J. F., D'Angelo, R. & Lomangino, L. (1971). Performance of Negro and Puerto Rican Head Start children on the Vane Kindergarten Test. *Psychology in the schools*, 8(4), 357-358. doi:10.1002/1520-6807
- Zambrana, R. E., & Capello, D. (2003). Promoting Latino child and family welfare:

- Strategies for strengthening the child welfare system. *Children and Youth Services Review*, 25(10), 755-780.
- Zill, N., Resnick, G., Kim, K., McKey, R.H., Clark, C., Pai-Samant, S., et al. (2001). *Head Start FACES: Longitudinal findings on program performance. Third progress report*. Washington, DC: Office of Research and Evaluation, Administration for Children, Youth, and Families.
- Zorrilla, C. D., Tamayo-Agrait, V., Febo, I., Santiago, L. E., Díaz, C., Salabarría, I., ... Hillyer, G. V. (2007). Reduction in the perinatal HIV transmission: the experience at the Maternal Infant Studies Center and Gamma Projects at the University of Puerto Rico School of Medicine. *Puerto Rico Health Sciences Journal*, 26(4).

Achenbach, T.M., Bird, H.R., Canino, G., Phares, V., Gould, M.S., & Rubio-Stipec, M. (1990). Epidemiological comparisons of Puerto Rican and US mainland children: Parent, teacher, and self-reports. *Journal of the American Academy of Child and Adolescent Psychiatry*, 29(1), 84-93.

**Abstract:**

U.S. mainland and Puerto Rican nonreferred samples were compared via the Child Behavior Checklist (ages 4 to 16), Teacher's Report Form (ages 6 to 16), and Youth Self-Report (ages 12 to 16). Problem scores were significantly higher in parent and teacher ratings of Puerto Rican than mainland subjects, but were significantly lower in self-ratings by Puerto Rican adolescents. Adolescents in both cultures reported significantly more problems than their parents or teachers did. Most of the significant cross-cultural differences in parent, teacher, and self-ratings of competencies showed more favorable scores for the mainland subjects. High referral rates, a high prevalence of *DSM* diagnoses, and low scores on the Children's Global Assessment Scale are consistent with the high problem rates reported by Puerto Rican parents and teachers but not with the lower rates reported by adolescents. Different clinical cutoffs may be needed for all assessments in the mainland versus Puerto Rico.

**Annotation:**

The authors sought to understand whether the Child Behavior Checklist (CBCL) a standardized parent-report assessment of child behavior and competencies, was a valid measure for children in Puerto Rico. They also examined the Teacher's Report Form and Youth Self-Report, which is for older children (ages 6 to 16). To ensure similar meaning in English and Spanish, the CBCL was translated, modified after consultation with bilingual psychologists, back-translated, and re-reviewed. The mainland U.S. sample consisted of 1,442 predominantly Caucasian 4- to 16-years-olds who had not been referred for mental health services. The mainland U.S. sample was obtained for a previous examination of the CBCL and considered nationally representative. A multistage probability sample was used in Puerto Rico; parents completed CBCLs for 777 children throughout Puerto Rico. To avoid a major confound, the two samples were matched for socioeconomic status (SES). Results revealed that problem behavior scores for Puerto Rican children were significantly higher than U.S. mainland scores. No cross-cultural effects of sex or age on problem ratings were identified, and the proportion of externalizing vs. internalizing item scores was consistent across the U.S. mainland and Puerto Rican samples. Future studies are needed that clarify true population differences in child psychopathology as well as the degree to which culture influences parental report on the CBCL.

Achhpal, B., Goldman, J. A., & Rohner, R. P. (2007). A comparison of European American and Puerto Rican parents' goals and expectations about the socialization and education of pre-school children. *International Journal of Early Years Education*, 15(1), 1-13.

**Abstract:**

This article identifies similarities and differences between Head Start parents of European American and Puerto Rican backgrounds regarding their socialization goals and expectations concerning the early educational experiences of their pre-school children. Semi-structured interviews were conducted with 60 parents (30 European American and 30 Puerto Rican) in their homes. The results show that both groups of parents valued pro-social skills, school readiness skills, and skills related to good behavior. Both sets of parents considered creative and physical skills to be least important. However, differences between groups were found regarding the relative importance of skills in the different developmental domains. The findings suggest that to maximize the effects of early childhood programs and interventions it is important that educators and policy makers recognize and respond to differences in parents' goals and expectations.

**Annotation:**

This study sought to compare and contrast the expectations and goals that European American and Puerto Rican parents hold for their children's early education. The sample consisted of 60 parents, mostly mothers, whose children attended one of three Head Start programs in mainland U.S. 30 participants were European American, and 30 were Puerto Rican; of the Puerto Rican parents, some were born in Puerto Rico, and others were born on the mainland with one or both of their parents were of Puerto Rican ancestry. The researchers gathered data using a ranking task and two interviews – a demographic interview and the Parent Belief Interview (PBI). The PBI was developed for this study and it consisted of open-ended questions about parents' beliefs about childrearing and education. The ranking task required parents to sort cards that listed major domains of preschool development (e.g. emotional-affective skills, physical skills) in order of importance. Results revealed both similarities and differences in the values of the two groups of parents. Based on their interview responses and rankings, both groups of parents desired their children to be pro-social and well behaved, above other competencies. Both sets of parents considered creative and physical skills to be least important. However, differences between groups were found regarding the relative importance of skills in the different developmental domains. Compared to European American parents, Puerto Rican parents expressed greater value for competencies related to future betterment and family cohesiveness: namely, educational attainment, future success, obedience and respect, closeness to family and siblings, and to listening to parents, teachers, and grandparents. European American parents expressed greater value for emotional-affective competency in their preschool children. The authors caution that, even though parents rated certain competencies below others, they still may value them highly.

Adkins, D. C., Payne, F. D., & Ballif, B. L. (1972). Motivation factor scores and response set scores for ten ethnic-cultural groups of preschool children. *American Educational Research Journal*, 9(4), 557-572.

**Abstract:**

A test of motivation to achieve in school, "Gumpgookies", was administered to 10 "ethnic-cultural" groups of preschool children. The test consists of 75 dichotomous items, for each of which one alternative is keyed as indicative of greater motivation. Children who are uncertain of answers to items resort to response sets, which may depend upon position of the answer or the order in which it is presented. Such response sets do not systematically affect total score but may distort scores on separate factors determined by ordinary methods. Hence a new method of factor analysis that yields factors uncorrelated with response sets was applied to data for a total group of 1813 children. Comparisons were then made of scores on such factors and of total scores for the 10 groups: Mormons, Catholics, Jews, Puerto Ricans, urban Negroes, rural whites, "Hawaiians," West Coast Orientals, Mexican-Americans, and American Indians. Response-set scores were also compared for the eight largest groups.

**Annotation:**

In order to examine variations in achievement motivation, an objective-projective assessment entitled "Gumpgookies" was administered to 1,588 children who were primarily attending Head Start programs. 90 children were Puerto Rican (52 boys and 38 girls). The 10 ethnic groups differed significantly in their Gumpgookies performance, while boys and girls scored similarly. Overall, middle class communities in the sample (comprised largely of children of Catholic, Jew, and Mormon faith backgrounds) had higher mean total scores compared to those with lower socioeconomic (SES) backgrounds. The ethnic composition of the middle class sample is not described. Within the lower SES, "Negro-Urban", White-Rural, and Puerto Rican children living in the United States scored higher than "Hawaiians," "West Coast Orientals", Mexican-Americans, and American Indians. On the instrumental activity subscale, the Puerto Rican sample obtained the 2<sup>nd</sup> highest score of all the communities. In contrast, Puerto Rican boys scored amongst the lowest on the School-Enjoyment subscale. The authors also examined ethnocultural differences in the response sets of children. They noted that the groups with the lowest overall test scores utilized different strategies to complete the task than other groups. The authors concluded the article with a discussion of the importance to attend to response set categories when developing assessments for ethnocultural communities.



Almodóvar, M. (2010). Integrating music, drama, and the visual arts in the early childhood curriculum: A study of early childhood teachers in a metropolitan area of Puerto Rico. (Unpublished dissertation). University of Massachusetts-Amherst, Amherst, MA.

**Abstract:**

The purpose of this study was to explore, describe and examine how early childhood teachers utilize and integrate the arts (music, drama, and visual arts) in teaching children ages 3 to 5. It also examined the formal and informal arts education background of early childhood teachers, the relationship between teacher training and educational practice and the role it plays in teachers' use of music, drama and visual arts in their curriculum. Data was collected through the use of the Arts Integration Questionnaire (AIQ) and by observations, Arts Integration observation Protocol (AIOP). A total of 91 early childhood teachers completed the questionnaire; it included background information as well as general aspects of teacher's knowledge about the arts, an exploration of the use of the arts in their classrooms, and an exploration of arts integration with other academic subjects. From those participants, 20 teachers were randomly selected to participate in the observations. The results of the study indicated that the majority of teachers have received formal and informal training in music, followed closely by visual arts, and very little in drama. Overall teachers were found to use music more than visual arts and drama in their classrooms; more time is spend on musical activities than in any other form. Again teachers preferred music because they considered it to be more beneficial than drama and the visual arts. This study revealed an array of reasoning behind the arts use in the classroom including addressing different learning styles, students' preference, and stimulating students' creativity. There was no statistical significant difference between a teacher's background training and experience and their use of music and drama into their early childhood classroom. In the case of visual arts there is a statistical significant difference meaning that teachers need training and experience to help them develop an understanding of the visual arts. And finally teachers do integrate the arts with other academic subjects with the purpose of developing skills, explore roles, and to assess learning and understanding of concepts. Recommendations for professional development, teacher education, and further research are discussed.

**Annotation:**

This study examined: 1) how arts are incorporated into early childhood classrooms in Puerto Rico, and 2) the role of teacher background, attitudes, and beliefs in influencing the use of the arts in class practices. The investigation took place in two regions of Puerto Rico (San Juan and Caguas) in collaboration with a Head Start program and the Puerto Rican Family Institute. Self-report and observational measures were utilized. A random selection process was utilized to first circulate the questionnaire; about half of participants complete it (n=91). 20 respondents were then randomly selected for observations, which took place at one time point for 3-4 hours. Most respondents to the questionnaire

reported some level of formal or informal experience with the arts, such as singing and arts/ crafts (87%). About half had formal training in music, drama, and visual arts. About 85% of classrooms were observed to engage in song-singing, while free drawing was much less prevalent (5%). However, the frequencies were not as extreme in the self-reported measures by teachers, where 85-90% reported using both music and visual arts. After describing the arts attitudes and beliefs espoused by the teachers, the author describes potential benefits of early childhood arts education and provides future recommendations.

Alvarez, V., & Albizu-Miranda, C. (1985). Un instrumento visomotor para niños de 4 a 6 años de edad. *Revista latinoamericana de Psicología*, 17(2), 181-192.

**Abstract:**

The construction and validation of a visual-motor developmental test is presented. Subjects were 374 children from Puerto Rico, of low socio-economic status, of the Head Start Program, from 4 to 6 years old. Split-half reliability was found using the total normative population. The design controlled for sex and age, in order to evaluate the discriminative capacity of the test. Differences between normal and deficient subjects were found. Age is the main variable in visual-motor development.

**Annotation:**

The authors sought to develop an assessment examining visual-motor development appropriate for early childhood, as well as for low-income Latino children. The sample consisted of 374 Puerto Rican children between the ages of 4 and 6 from low socio-economic backgrounds in Head Start programs. Results revealed high internal reliability, and positive results in initial validity analyses examining age and diagnostic differences across young children. The authors included recommendations for future studies at the time such as longitudinal methodology, analyses of external validity, as well as investigations with special needs children.

Alvarez-Ortiz, L. A. (1996). *Relationship between home and school mediation, parental perception, and the school functioning of preschool mainland Puerto Rican children* (Unpublished doctoral dissertation). Temple University, Philadelphia, PA.

**Abstract:**

This study investigated the relationship between caregiver-child and teacher-child interactions and the children's school functioning in a sample of preschool Puerto Rican children living in the United States. In addition, it explored the caregivers' childrearing attitudes and its relationship to the quality of their interaction and the children's functioning in school. Caregiver-child and teacher-child interactions were conceptualized in terms of mediated learning experience theory. The concept of Mediated Learning Experience (MLE) was introduced by Feuerstein and his colleagues to account for the behaviors occurring between a primary caretaker and the child that appear to facilitate the child's cognitive development (Feuerstein, Rand, & Hoffman, 1979; Feuerstein, Rand, & Miller, 1980). The MLE Rating Scale was used to assess the caregiver-child and teacher-child interactions. Parental beliefs were measured with the Parent as a Teacher Inventory (PAAT). The Vineland Adaptive Behavior Scales - Classroom Edition (VABS-CE) was used as a measure of the child's functioning in the classroom. Participants were twenty four preschool mainland Puerto Rican children, their caregivers, and their teachers. Caregiver-child and teacher-child dyads were videotaped individually during two situations (free play/non-structured and teaching/structured) of ten minutes each. After the filming, the caregivers completed the PAAT and teachers rated each child on the VABS-CE. Results showed significant differences between caregivers' and teachers' mediation. Overall, the teachers group mediated at higher levels. However, when the differences between home and school mediation are correlated to the child's school functioning, home mediation appears more influential. Findings also support the importance of considering parental beliefs and attitudes when assessing children's school functioning. For these Puerto Rican families, the more favorable the caregivers' childrearing attitudes and beliefs, the more socially competent their children were perceived by their teachers. Intriguing negative correlations between teachers' MLE and the VABS-CE and between caregivers' MLE and their beliefs are discussed. Further evidence for the reliability of the MLE Rating Scale is offered. This is the first research that documents the interrater reliability of the MLE Scale when it is used with teachers. In addition, results from subsidiary analyses are discussed.

**Annotation:**

This dissertation focused on the relationship between parent-child and teacher-child interactions, caregiver attitudes, and school functioning among Puerto Rican preschoolers in the mainland. The author framed her research in terms of Mediated Learning Experience (MLE) theory, which posits that children's interactions with caregivers facilitate their cognitive development. The sample included 24 preschool Puerto Rican children, their teachers, and their parents. Parent-child and teacher-child dyads were videotaped

and their interactions were coded for MLE content. Parental beliefs were measured with the Parent as a Teacher Inventory (PAAT), and children's classroom functioning was measured with the Vineland Adaptive Behavior Scales - Classroom Edition (VABS-CE). Results revealed that teachers demonstrated more MLE behaviors than parents. However, higher parental mediation of competence through challenge was correlated with higher ratings of child school social functioning. Support for the importance of parental beliefs was provided, since positive parental beliefs were associated with better teacher-rated social competency. Interestingly, there was an inverse relationship between the PAAT and the MLE scale, such that parents with potentially more desirable parenting beliefs demonstrated less mediating behaviors. Furthermore, after controlling for mediated behaviors, there was a positive relationship between parental beliefs and children's adaptive behavior in school. In light of the large population of Puerto Rican mainland children and the potential for parent-teacher cross-cultural misunderstanding, these results are informative in efforts to understand the impacts of parent and child variables on children's academic success.

Anastasi, A., & DeJesús, C. (1953). Language development and nonverbal IQ of Puerto Rican preschool children in New York City. *The Journal of Abnormal and Social Psychology*, 48(3), 357-366.

**Abstract:**

Measures of language development and Goodenough Draw-a-Man IQ's were obtained on 25 Puerto Rican boys and 25 Puerto Rican girls attending day nurseries in New York City's Spanish Harlem, all Ss being within six months of their fifth birthdays. Comparisons were made with the performance of 50 white and 50 Negro five-year-old children tested by the same procedure... Although the Puerto Rican sample was inferior to the Negro and white samples in educational and occupational level of parents, the Puerto Rican children did not differ significantly from the white or Negro groups in IQ and they excelled both groups in mean sentence length and maturity of sentence structure.

**Annotation:**

**In order to better understand the development of young** Puerto Rican children, linguistic and non-linguistic measures were administered to 50 Puerto Rican children who were approximately 5 years of age. Background information was collected by administering a Spanish survey to the children's parents. The child assessments were conducted by a Puerto Rican examiner with the child in a quiet room. Linguistic development was examined by studying the responses of children to a collection of 22 small toys; 60 sentences or "responses" were recorded and subsequently categorized into six different types of sentences, according to the work of McCarthy and Davis. After the linguistic task was performed, the children were then administered the Goodenough Draw-a-Man Test, which was considered a non-linguistic indicator of IQ score. The authors found comparable IQ scores among Puerto Rican, "Negro" and White children. Puerto Rican children comparatively produced significantly longer and elaborate sentence structures. The authors conclude with a discussion about the relative development of Puerto Rican children to other ethnocultural groups in the U.S., and the importance of familial characteristics.

Anderson, R. T., & Souto, S. M. (2005). The use of articles by monolingual Puerto Rican Spanish-speaking children with specific language impairment. *Applied Psycholinguistics*, 26(4), 621-647.

**Abstract:**

The present investigation sought to evaluate patterns of article use in a group of monolingual Spanish-speaking children with specific language impairment (SLI). In particular, because of conflicting results reported in previous studies, it was of interest to discern specific types of nontarget responses and how these corresponded to what has been reported in other Spanish-speaking children with SLI. Eleven children with SLI and 11 age-matched peers participated in the study. Three different spontaneous speech samples were gathered from each child. In addition, an experimental task that assessed the children's use of articles with a variety of nouns was also administered to the children. The results of the study for both spontaneous speech and experimental data indicated that the children with SLI performed significantly poorer in their use of Spanish articles than their age-matched peers. Most of the nontarget responses consisted of omission of the target article. In contrast to a previous study by Restrepo and Gutiérrez-Clellen, the children did not present with deficits in noun phrase gender agreement. The gender errors that were observed appeared to be due to difficulties accessing the correct article form and not due to deficits in knowledge of the gender agreement paradigm. Possible theoretical explanations were explored suggesting that both processing and linguistic explanations, in particular optionality of determiners, could explain the observed patterns. Reasons for cross-study differences in error patterns are suggested, including relative phonological skill and language learning environment.

**Annotation:**

Cross-linguistic studies of Specific Language Impairment (SLI) have proliferated in attempts to identify the central problem underlying the disorder. This study focused on the use of articles by Spanish-speakers. The rates of errors in gender agreement in noun phrases were examined. Participants were 22 monolingual Puerto Rican 4- and 5-year-olds (11 with SLI diagnosed by a speech-language pathologist and 11 matched controls) living in San Juan and attending Head Start. Speech samples were recorded, analyzed for article errors, and the errors were compared between groups. Further, article errors were also analyzed in an experimental task in which children identified noun phrases depicted on cards that research assistants showed them. Children with SLI made more errors than controls, and showed greater within group variability; controls' accuracy ranged from 95% to 100%, with mean accuracy of 98.4%, while children's accuracy with SLI ranged from 56.4% to 98.4%, with mean accuracy of 85.4%. Across groups, omission of the article was more common than stating an incorrect article. The authors framed their findings in terms of previous research on SLI. They suggested that, as other researchers have, SLI may be capable of producing accurate articles but consider it optional. This insight can be

used to inform interventions for young Spanish-speaking children with SLI, although with such a small sample, results may not be widely generalizable before replication.



Arnold, D. H., Fisher, P. H., Doctoroff, G. L., & Dobbs, J. (2002). Accelerating math development in Head Start classrooms. *Journal of Educational Psychology*, 94(4), 762-770.

**Abstract:**

Teachers implemented a 6-week classroom intervention designed to promote emergent math skills and math interest in preschool-aged children. Teachers in experimental classrooms incorporated math-relevant activities into their daily routine during circle time, transitions, mealtime, and small-group activities. Control classrooms engaged in their typical activities. After the program, experimental children scored significantly higher than control children on a standardized test of math ability and enjoyed math activities more than the control children, as measured by both teacher and self-report. Teachers rated the program as highly satisfactory and reported that they increased their own enjoyment and skill in implementing math activities in their classrooms. The intervention effects were largely accounted for by substantial gains by boys, whereas girls showed much smaller program response.

**Annotation:**

This study sought to evaluate the effectiveness of an intervention designed to promote both skill and interest in mathematical tasks among preschoolers. The intervention provided teachers with math activities that could be incorporated into the daily classroom structure over a 6-week period. The activities were designed to be engaging for young children, allow for flexible implementation by teachers, and to use a variety of approaches that were sensitive to a wide range of developmental levels. Four Head Start classrooms in the U.S. mainland received the intervention, and they were compared to four control Head Start classrooms. The sample consisted of 112 preschool children, 45 of whom were Puerto Rican. Before and after the intervention, children's emergent math skills and interest in math were assessed. In addition, Head Start teachers completed questionnaires reporting their students' and their own attitudes about the math lessons. Children in the intervention condition showed significantly more improvement in emergent math skills than the control condition, as well as increased interest in math. Teachers reported that the experimental children enjoyed math activities more than the control children. Males showed greater treatment effects than females, and Puerto Rican and African American children showed greater treatment effects than European American children. The authors recommend evaluating the long-term effects of this intervention, as well as its generalizability to other types of programs besides Head Start.

Aponte, R., French, R., & Sherrill, C. (1990). Motor development of Puerto Rican children: Cross-cultural perspectives. *Perceptual and Motor Skills*, 71(3f), 1200–1202. doi:10.2466/pms.1990.71.3f.1200

**Abstract:**

The Test of Gross Motor Development was administered to 300 children, ages 5 to 7 yr., attending public schools in Puerto Rico. Statistical comparisons indicated that the test-manual norms for US children were applicable to Puerto Rican children except for 7-yr.-old girls. A 2 x 3 x 2 factor analysis of intercorrelations of Puerto Rican scores indicated no significant difference between rural and urban children, expected age group differences, and sex differences favoring boys.

**Annotation:**

The authors were interested in assessing whether young children in Puerto Rico showed trajectories of motor development similar to those of young children in the U.S. mainland. They administered the Test of Gross Motor Development to 300 5- to 7-year-old public school children in Puerto Rico. The test, which assesses skills such as skipping, catching, and kicking, was initially normed with a sample of children in the U.S. mainland. Across domains, the Puerto Rican sample showed scores similar to the norms obtained from the U.S. sample, with the exception of scores for 7-year-old girls. For 7-year-old girls, scores for the sample from mainland U.S. exceeded those from the Puerto Rican sample by .78 of a standard deviation. Among Puerto Rican children's scores, there was no significant difference between rural and urban children. Age differences were evidenced, as predicted; older children obtained higher scores. Gender differences were also observed, such that Puerto Rican boys scored higher than girls (effect size = .39). Gender differences were not observed in the U.S. sample. These results indicated that the gross motor development of children in Puerto Rico was generally similar to that of children in mainland U.S., with some differences noted.

Archilla, S.O. (1992). Families in Puerto Rico. In J. L. Roopnarine & D.B. Carter (Eds.), *Parent-child Socialization in Diverse Cultures*. Norwood, NJ: Ablex Publishing Co.

**Abstract:**

N/A (book chapter)

**Annotation:**

This chapter describes the familial structure and values traditional to Puerto Rico, as well as how these have changed or endured in modern society. While there is variability within any group, these descriptions aim to highlight the most commonplace, widely accepted familial norms at the time. Traditionally, family was one of the main motivating and organizing factors for life in Puerto Rico. Extended families came together in times of need and showed strong loyalty to one other. Within families, there was a clear-cut role differentiation, with the father as the breadwinner. To outsiders, maternal parenting styles among low-income Puerto Rican families may have seemed "permissive." Among middle-income Puerto Rican families, children's dependence on their mothers may have been emphasized. The well-being of children was a highly important goal, and much energy was invested in their raising. Girls were socialized with more indoor activities such as cooking, whereas boys were socialized with outdoor activities and raised in a framework of *machismo*. All children were expected to be obedient to their parents and to be a cohesive member of their family, reflecting the value of *familismo*.

While these traditional ways of life were still prevalent at the writing of this book in 1992, some changes have taken place and some values have been attenuated. These changes occurred as Puerto Rico shifted from an agricultural to an industrial society, and the concomitant problems of crime, poverty, unemployment, and mental illness. Societal shifts were manifested in changes such as an increased teen and/or single motherhood and a surge of women in the labor force. Breastfeeding became less common. Marriage was still customary, but divorce and consensual unions (cohabitations) increased. Males were still socialized within a *machismo* framework, but this tradition reduced in a time of increasingly egalitarian gender roles. The influence of traditional Puerto Rican values on family life was still strong, but new realities led to altered family structures and childrearing practices.

Baker, C. N., Arnold, D. H., & Meagher, S. (2011). Enrollment and attendance in a parent training prevention program for conduct problems. *Prevention Science, 12*(2), 126–138. doi:10.1007/s11121-010-0187-0

**Abstract:**

Low levels of enrollment and attendance in parent training programs present major problems for researchers and clinicians. The literature on enrollment and attendance in prevention programs is especially limited, and these constructs may be particularly difficult to address in this context. Further, most previous research has not made the distinction between enrollment and attendance. This study describes predictors of enrollment and attendance in a behavioral parent training program intended to prevent conduct problems in preschoolers. Information was gathered from 106 preschoolers, their parents, and their teachers. Parent socioeconomic status (SES), single parent status, ethnicity, child externalizing behavior, parent depressive symptoms, and parent social support were investigated as possible predictors of families' enrollment and attendance. Only 48% of the families that had already provided informed consent and completed demographic questionnaires actually enrolled in the parent training program; parents with lower incomes and lower levels of social support were less likely to enroll. In addition, African-American and Puerto Rican families were less likely to enroll than Caucasian families. The average attendance rate for enrolled parents was 61%; dual parents and parents with children evidencing externalizing behavior problems attended more parent training sessions. Parent depression was not associated with enrollment or attendance. Significant relationships were maintained when controlling for other predictors including SES and when accounting for center-level variance. In addition, three distinct patterns of attendance were observed, which may have practical implications related to retention strategies.

**Annotation:**

Parent training programs can be effective in the treatment of child conduct problems as they provide parents with tools for consistent discipline and strengthening parent-child relationships. Yet, the utility of parent training programs can be adversely affected by low enrollment and attendance. The authors sought to understand the impact of socioeconomic status (SES), minority status, marital status, parental depression, and social support on enrollment and attendance in Webster-Stratton's Incredible Years parent training program. One hundred and six families were recruited from preschool classrooms in New England and represented a range of SES. 31% of children were Puerto Rican, 30% were Caucasian, 25% were African American, and 14% were mixed or other ethnicity. Mean child age was 4-and-a-half years of age. 19% of families were Spanish-English bilingual, and parent trainers were also bilingual. SES, enrollment, and single parenthood were dichotomized, externalizing behaviors were measured with the Teacher Report Form (TRF), parental depression was measured with the Brief Symptoms Inventory (BSI), social support was measured with the Social Support Appraisals Scale (SSAS), and attendance was calculated as the percentage of classes attended. Results indicated that only

48% of parents who consented to the intervention attended one or more classes. Of the 51 families who attended at least one class, average attendance was 61%. Attendance patterns were analyzed and families were categorized into three types: perfect attendees, drop outs, and mixed attendees. Low SES families were less likely than high SES families to enroll, but once enrolled, attendance did not relate to SES. Enrollment differed by ethnicity, with Caucasian families as the most and Puerto Rican families as the least likely to enroll; however, ethnicity was unrelated to attendance, once enrolled. The authors note that ethnicity and SES were confounded, and conclusions should be drawn cautiously. The following results statistically controlled for SES in regression analyses. Single parent status was unrelated to enrollment, but single parents attended fewer classes than married parents. There was no relationship between child behavior problems and enrollment, but scores on the rule-breaking subscale were positively associated with attendance. No relationship was found between parental depression and enrollment or attendance. Social support was higher for enrolled families than those who did not enroll, but social support did not relate to attendance. Overall, the low rate of attendance in this parent training program was sobering given its potential to alleviate child conduct problems. Results indicated which family variables were related to enrollment and attendance, and this information may be useful in future efforts to tailor programs so that they minimize the impact of these risk factors and thereby increase enrollment and attendance.

Bauermeister, J. J. (1992). Factor analyses of teacher ratings of attention-deficit hyperactivity and oppositional defiant symptoms in children aged four through thirteen years. *Journal of Clinical Child Psychology*, 21(1), 27-34.

**Abstract:**

Compared factor analyses of teacher ratings of attention-deficit hyperactivity disorder (ADHD) and oppositional defiant disorder (ODD) symptoms in Puerto Rican children, aged 4 and 5 ( $n = 665$ ) and 6 through 13 years ( $n = 680$ ), referred or identified as in need of referral for psychoeducational services. Factor analyses of the 4- and 5-year-old sample yielded Attention-Deficit-Hyperactivity and Oppositional Defiant factors that encompass all but one of the ADHD and ODD symptoms, respectively. Factor analyses for children aged 6 through 13 years yielded Hyperactivity-Impulsivity, Inattention-Distractibility and Oppositional Defiant factors. Factor structures obtained for boys and girls were similar at both age groups. Findings suggest that a unidimensional conceptualization of teacher ratings of ADHD, as implied in the Diagnostic and Statistic Manual of Mental Disorders (3rd ed., rev.; DSM-III-R; American Psychiatric Association, 1987) is appropriate for preschool children but not for children aged 6 through 13 years. A bidimensional (hyperactivity and inattention) conceptualization of ADHD for the latter age group seems appropriate. Finally, a unidimensional conceptualization of ODD seems appropriate for both samples. The conceptual and clinical implications of these findings for the nosology of ADHD are discussed.

**Annotation:**

In order to better understand the clinical presentations of mental disorders and how best to classify them in a nosology such as the *DSM*, the question of dimensionality was explored. Some disorders are unidimensional, with each symptom being roughly equally likely to co-occur, whereas some disorders are multidimensional and have several subcategories into which symptoms typically fall. This study used factor analysis to identify whether symptoms of attention-deficit hyperactivity disorder (ADHD) and oppositional defiant disorder (ODD) in children were unidimensional or multidimensional. The authors performed separate factor analyses for two age groups: preschool children (4- and 5-year-olds) and school children (6- to 13-year-olds). Participants lived in San Juan, Puerto Rico and were referred by their teachers for psychoeducational services. Teachers completed assessments with items that mapped onto the symptoms for ADHD and ODD as presented in the *DSM-III-R* for each referred student (preschool  $N = 665$ , school  $N = 680$ ). A unidimensional conceptualization of ODD was supported because symptoms loaded on a single factor in both age groups. A unidimensional conceptualization for ADHD was supported in preschool. For older children, ADHD loaded on two factors: hyperactivity-impulsivity and inattention-distractibility. The factor structures did not vary by gender within age groups. The authors suggest that a bidimensional nature of ADHD in older children be considered in assessment and treatment, so that 1) it is properly detected and

identified, and 2) tailored interventions are created and disseminated to appropriate clients.

Becerra, J. E., Atrash, H. K., Pérez, N., & Saliceti, J. A. (1993). Low birthweight and infant mortality in Puerto Rico. *American Journal of Public Health*, 83(11), 1572–1576.

**Abstract:**

**Objectives.** The purpose of this study was to quantify the relative contributions of maternal age, education, marital status, hospital of birth, and use of prenatal care to the high incidence of low birthweight and infant mortality in Puerto Rico.

**Methods.** An analysis was conducted of 257,537 live births that occurred from 1986 through 1989 among Puerto Rico residents and the 3373 corresponding infant deaths. Binomial multiple regression models were used to calculate the adjusted population attributable risks for each variable.

**Results.** Our estimates indicate that approximately 6 of every 10 infant deaths on the island are potentially preventable if low birthweight were eradicated, regardless of other associated factors. Eliminating risks associated with sociodemographic and socioeconomic factors (including hospital of birth) would potentially decrease the incidence of low birth-weight in Puerto Rico by one third. Specifically, the elimination of risks associated with the socioeconomic disadvantage of women delivering in public hospitals alone would potentially decrease Puerto Rico's low birthweight incidence by 28%, regardless of other factors considered in our study.

**Conclusions.** Efforts to prevent low birthweight and infant mortality in Puerto Rico should focus on reducing the gap between the private and public sectors.

**Annotation:**

To understand the sociodemographic contributions to the high incidence of low birthweight and infant mortality in Puerto Rico, the authors analyzed data for 257,537 live births between 1986 and 1989 on the island. Results revealed that 60% of infant mortalities among Puerto Rican islanders could be avoided if low birth-weight was eliminated, regardless of other factors. The prevalence of low birthweight could be decreased by one-third by eliminating the sociodemographic risks (such as hospital of birth, a proxy for socioeconomic status). This article provides sobering information about the disproportionate burden of neonatal problems faced by low-income mothers in Puerto Rico, and offers valuable insight into the role of income and personal demographic features on health disparities, beginning before birth.



Bestard, J. E. (1990). *Validation of the "Instrumento de Cernimiento Para Edad Pre-Escolar (ICEPE)" on Head Start children in Puerto Rico* (Unpublished doctoral dissertation). Temple University, Philadelphia.

**Abstract:**

The purpose of this study was to determine the construct and concurrent validity of the ICEPE in the early identification of children "at risk" of emotional problems. Samples of 302 preschool children were screened by 26 teachers. Forty of these children were referred to six Head Start psychologists according to the criteria for referral of the ICEPE ("critical score" and "scan items"). Based on these criteria, the children were assigned to experimental and control groups. Both groups were compared in terms of the psychologist's evaluation on three dimensions: diagnosis, consideration for psychological services, and teacher's request for consultation.

Concurrent validity was determined through correlational measures with another behavior rating scale, the "Inventario de Comportamiento Escolar (IDCE)". Correlation between the ICEPE and the IDCE were found to be moderate to low but significant. No significant differences were found at the .05 level between the mean score of the ICEPE for the experimental and control groups. However, the groups differed in: 1- the frequency with which the psychologists formulated diagnoses in each group; 2- determined the need for psychological services, and; 3- teachers' request for consultation. A discriminant analysis of the "scan items" yielded non-significant results.

It was concluded that the results support, in part, the notion that use of the ICEPE allows the identification of children "at risk" of emotional disorders, thus contributing to the construct and concurrent validity of the instrument. The sensitivity of the ICEPE as a screening device will be enhanced through additional research. The usefulness of including the "scan items" in the ICEPE is questionable and the desirability of retaining them in the scale should be evaluated. Since the referrals by "scan items" were excluded from the analysis of this investigation, the sample of 40 referred children was reduced to 21. Further studies should include a larger number of subjects so that more precise statistical procedures may be employed.

**Annotation:**

This study was designed to validate the Instrumento de Cernimiento para Edad Pre-Escolar (ICEPE), an instrument for the early identification of children with potential socio-emotional difficulties. The researchers tested its construct and concurrent validity in a random sample of 302 Puerto Rican children from the San Juan metropolitan area. Scores on the ICEPE were compared to scores on the Inventario de Comportamiento Escolar (IDCE), a scale used to identify behavior problems in children ages 5 to 13. The two

scales were positively correlated, suggesting the ICEPE had concurrent validity. Furthermore, participants who met clinical cut-off criteria on the ICEPE (considered the experimental group) were more likely to be referred for services, and to be diagnosed with a disorder by a psychologist than those at non-clinical levels on the measure (considered the control group). This provides support for the measure's construct validity. Thus, the ICEPE may be a potential tool for identifying children who need psychological services.

Bird, H. R., & Canino, G. (1982). The Puerto Rican family: Cultural factors and family intervention strategies. *Journal of the American Academy of Psychoanalysis*, 10(2), 257–268.

**Abstract:**

Presents what are considered to be the salient features characteristic of the Puerto Rican family. The composition of the family, the role of the extended family, the impact of machismo, the authoritarian pattern of childrearing, and the religious practices of the Puerto Rican family have been documented through the findings reported by other researchers. It is noted that the high rate of back-and-forth migration between Puerto Rico and the Mainland, as well as the colonial status of the society, creates a situation of accelerated change and shifting cultural patterns. Structural family therapy as a particularly useful treatment modality is discussed, and its applicability and the justification for its use in families under stress are elaborated.

**Annotation:**

The authors' goal was to enhance understanding of Puerto Rican families in order to conduct family therapy in a culturally sensitive way with this group. Investigations from various disciplines, such as anthropology, and a variety of methodologies, such as experimental, were reviewed. Common themes in Puerto Rican families across the literature base were identified: a male-dominant family structure, a passive-aggressive interpersonal style, an emphasis on religion, and cohesion within the extended family.

At the time of this article's publication, more rigorous studies within Puerto Rico were becoming the norm. Trends were also changing in Puerto Rico as immigration increased and the society industrialized. The chapter shared the results of an unpublished study on childrearing practices, which used a random, stratified sampling approach (Rodríguez, González, & Muñoz, 1978). 391 parents with children under 4-years-old across the island participated. 85% of the island families were intact, a higher percentage than among mainland families. The survey data also confirmed the conventional wisdom that extended family was central in Puerto Rico; of the families surveyed, 21% reported an extended family member living in their home, and 61% reported that other family members (like aunts, sisters, and mothers) were involved in raising their children. Interview data on the familial division of labor and childrearing practices suggested that the tradition of *machismo* was still influential. However, joint spousal decision-making was prevalent as well as paternal involvement in household chore and caring for infants. An authoritarian parenting style was suggested by survey responses, with mothers placing a high value on obedience, and the majority using physical punishment (95%), including with children 4 or younger (78%). Of the families surveyed, 60% had a member who had lived in the mainland at some point. This study was presented in the book chapter to inform the practice of family therapy with this population.

The authors noted that, for Puerto Ricans, seeking mental health services may often be accompanied by a sense of shame, and families may initially doubt or distrust their therapist. Structural family therapy has been proven effective in Puerto Rico; it focuses on changing contextual factors such as family functioning rather than individual behavior, involves the extended family, and considers concurrent life stressors. The authors concluded that therapies that align with cultural values, along with informed and sensitive therapists, were necessary in clinical practice with Puerto Rican families.

Bird, H.R., Canino, G., Rubio-Stipec M., Gould, M.S., Ribera, J., Sesman, M. ... Moscoso, M. (1988). Estimates of the prevalence of childhood maladjustment in a community survey in Puerto Rico: The use of combined measures. *Archives of General Psychiatry*, 45(12), 1120–1126. doi:10.1001/archpsyc.1988.01800360068010

**Abstract:**

A two-stage epidemiologic survey was carried out on a probability sample of the population aged 4 through 16 years in Puerto Rico. The survey used the Child Behavior Checklist as a screening instrument, and prevalence rates were estimated on the basis of clinical diagnoses and other measures provided by child psychiatrists during the second stage. Maladjustment was operationally defined through the use of combined measures, including *DSM-III* diagnosis and a scale of functional impairment. Data were provided on the demographic correlates of maladjustment and on the comorbidity of *DSM-III* diagnostic domains. The prevalence rates obtained vis-a-vis the availability of mental health services on the island reflected a major public health problem.

**Annotation:**

The authors conducted an island-wide epidemiological study of mental health issues among children in Puerto Rico to enhance understanding of the prevalence of maladjustment and to motivate funding increases for needed services. They were interested in assessing whether Puerto Rico's societal risk factors, such as high rates of unemployment and criminality, related to elevated incidences of psychopathology. A probability sample was obtained by dividing the island into representative clusters and selecting households within each cluster. A representative sample of 777 children between the ages of 4 and 16 participated. Parents completed the Child Behavior Checklist (CBCL) as a screener; those who scored above the normative cutoff on the CBCL were clinically evaluated by a psychologist. The psychologists used 1) the Diagnostic Interview Schedule for Children (DISC) to identify which children may have a mental health disorder, according to the *DSM-III*, and 2) the Children's Global Assessment Scale (CGAS) to assess children's adaptive functioning and level of impairment. A percentage of those who scored normatively on the CBCL were also further evaluated.

Overall, the sample obtained higher ratings on the CBCL compared to the norms established on the mainland for the measure; this may be attributable to true population differences in problem behaviors, cultural differences in reporting, linguistic/ administration differences, or other explanations. Results revealed that 17.9% of children were identified as potentially experiencing a mental health disorder, based on a *DSM-III* diagnosis and functional impairment. The two most prevalent disorders were oppositional disorder (9.9%) and attention deficit disorder (ADD; 9.5%). Males were more likely than females to have a diagnosis. Compared to older children, 4- and 5-year-olds were less likely to experience separation anxiety, depression, and ADD. Prevalence rates are comparable to

those found in other populations, indicating that although Puerto Rico has increased risk factors, it does not have proportionally higher mental illness. However, the presence of a diagnosis was correlated with low socioeconomic status, indicating that disorders disproportionately affects those with fewer resources to address them.

Bird, H. R., Davies, M., Duarte, C. S., Shen, S., Loeber, R., & Canino, G. J. (2006). A study of disruptive behavior disorders in Puerto Rican youth: II. Baseline prevalence, comorbidity, and correlates in two sites. *Journal of the American Academy of Child and Adolescent Psychiatry*, 45(9), 1042–1053. doi:10.1097/01.chi.0000227879.65651.cf

**Abstract:**

**Objective:** This is the second of two associated articles. The prevalence, correlates, and comorbidities of disruptive behavior disorders (DBDs) in two populations are reported.

**Method:** Probability community samples of Puerto Rican boys and girls ages 5-13 years in San Juan, and the south Bronx in New York City are included ( $n = 2,491$ ). The Diagnostic Interview Schedule for Children-IV and measures of correlates were employed to look at the association between DBDs and potential correlates, taking comorbidity into account. Data presented in this report were collected primarily between 2002 and 2003 but spanned a 3-year period from August 2000 to August 2003.

**Results:** There were no significant age or site differences among males in rates of DBDs, but rates among females increased with age in the south Bronx and decreased with age in Puerto Rico. The salient comorbidity of DBDs was with attention-deficit/hyperactivity disorder. Multiple regression showed lack of parental warmth and approval, poor peer relationships, and parental report of aggressive behavior during the toddler years to be the most significant correlates of DBDs in this population.

**Conclusions:** Cultural factors, such as level of acculturation, were not associated with DBDs. The results suggest that clinical and preventive efforts need to emphasize interpersonal factors such as parent-child relationships and peer interactions.

**Annotation:**

A large-scale study was reported in two articles: one that detailed background information and methodology, and this article that reported the results. The authors investigated the prevalence of disruptive behavior disorders (DBDs), namely conduct disorder and oppositional defiant disorder, among Puerto Rican children. Among those with DBDs, the researchers were interested in assessing comorbidity and correlates of the disorders. The participants were recruited from San Juan and New York City, and sampling methods ensured that each sample was representative of the Puerto Rican population in each area. The final sample consisted of 1,138 children from the South Bronx and 1,353 children from Puerto Rico. Participants in the two sites had similar scores on most demographic variables, but differed significantly for two variables: maternal education was higher in Puerto Rico, and single parent households were more common in the Bronx. Parents reported on children's disruptive behavior via the Diagnostic Interview Schedule for Children - IV. Results indicated similar prevalence rates of DBDs in both sites: 5.6% in the

Bronx and 5.9% in San Juan. For male children, there were no significant DBD prevalence differences based on age or site, but for female children, the data revealed that DBD prevalence increased with age in the Bronx and decreased with age in Puerto Rico. The disorder most often comorbid with a DBD was AD/HD. In regards to correlates of the diagnosis, lack of parental warmth and approval, poor peer relationship quality, and aggression during toddler years were associated with DBD diagnosis. Cultural factors, such as level of acculturation, were not associated with DBDs. These findings have implications for the treatment of DBDs; specifically, treatment may need to focus on family factors, and it may need to be adjusted for ADHD treatment as well.



Bird, H. R., Gould, M. S., Yager, T., Staghezza, B., & Canino, G. (1989). Risk factors for maladjustment in Puerto Rican children. *Journal of the American Academy of Child and Adolescent Psychiatry*, 28(6), 847–850. doi: 10.1097/00004583-198911000-00006

**Abstract:**

Data are presented on risk factors for childhood psychopathology derived from a study of an island-wide probability sample of children in Puerto Rico aged 4 through 16 years. Analyses estimated the effects of 12 demographic, health, and family variables on the probability of being a “case,” using two different operational definitions of caseness, as well as on the probability of receiving the diagnoses of oppositional disorder, attention deficit disorder, separation anxiety, depression, functional enuresis, and adjustment disorder. When compared to other findings, the results from these analyses indicate that the relationship between maladjustment and the risk factors evaluated does not appear to be culturally specific.

**Annotation:**

This study was designed to identify background variables predictive of child psychopathology in Puerto Rico, and to analyze if the risk factors for children in Puerto Rico were the same or different than those for children in mainland U.S. The representative sample of 4- to 16-year-olds was described in Bird et al. (1988). All 777 participants were screened with the Child Behavior Checklist (CBCL); those above a clinical cutoff were evaluated by a psychologist for the presence of a mental health diagnosis (using the Diagnostic Interview Schedule for Children, or DISC) and functional impairment (using the Children’s Global Assessment Scale, or CGAS). A “case” was defined two ways. One definition was simply to meet criteria for a *DSM-III* diagnosis, which 49% of the sample did. Another definition of a case was to require both meeting criteria for a *DSM-III* diagnosis and having impaired functioning (as measured by the CGAS). 17.8% of the sample met criteria on both instruments. Correlates of being potentially identified with a mental health disorder based solely on *DSM-III* criteria included male, health problems, low-income, poor family relationships, and more stressful life events. For the more stringent definition of a “case,” maternal psychopathology was also a significant correlate. Regardless of the definition of a “case,” age was not a significant predictor. These risk factors were similar to those observed in the U.S. mainland in previous studies, implying that risk factors for child psychopathology may not be culturally specific.

Bravo, M., Ribera, J., Taboas, A. M., Rubio-Stipec, M., Canino, G., Shrout, P., et al. (2001). Test-retest reliability of the Spanish version of the Diagnostic Interview Schedule for Children (DISC-IV). *Journal of Abnormal Child Psychology*, 29(5), 433-444.

**Abstract:**

The test-retest reliability of the Spanish Diagnostic Interview Schedule for Children (DISC-IV) is presented. This version was developed in Puerto Rico in consultation with an international bilingual committee, sponsored by NIMH. The sample (N = 146) consisted of children recruited from outpatient mental health clinics and a drug residential treatment facility. Two different pairs of nonclinicians administered the DISC twice to the parent and child respondents. Results indicated fair to moderate agreement for parent reports on most diagnoses. Relatively similar agreement levels were observed for last month and last year time frames. Surprisingly, the inclusion of impairment as a criterion for diagnosis did not substantially change the pattern of results for specific disorders. Parents were more reliable when reporting on diagnoses of younger (4–10) than older children. Children 11–17 years old were reliable informants on disruptive and substance abuse/dependence disorders, but unreliable for anxiety and depressive disorders. Hence, parents were more reliable when reporting about anxiety and depressive disorders whereas children were more reliable than their parents when reporting about disruptive and substance disorders.

**Annotation:**

Researchers assessed the reliability of the Spanish translation of the Diagnostic Interview Schedule for Children (DISC-IV) by administering the interview to both parents and children twice, with different interviewers each time. The sample consisted of 181 Puerto Rican 4- to 17-year-olds who had received mental health services from either an outpatient mental health clinic or a residential drug treatment center. For younger children (4-11), only the parents were interviewed, and for older children (12-17) both parent and child were interviewed. Results revealed that reports were fairly reliable across time frames and informants for most disorders, and reports of symptoms present within the last month agreed with reports about the last year. Reliability coefficients were higher on the DISC-IV for parents reporting on younger children (4-10) than for parents reporting on older children (11-17). Parents of older children were more reliable informants than their children of anxiety and depression, whereas older children (11-17) were more reliable informants about themselves than their parents when reporting about disruptive or substance abuse disorders. The authors recommend that future studies assess the psychometric properties of the Spanish version of the DISC-IV in a community sample, to add to the current findings from a clinical sample.

Bryant, C. A. (1982). The impact of kin, friend and neighbor networks on infant feeding practices: Cuban, Puerto Rican and Anglo families in Florida. *Social Science & Medicine*, 16(20), 1757-1765. doi:10.1016/0277-9536%2882%2990269-6

**Abstract:**

This paper uses social networks as the major conceptual device to examine the impact of relatives, friends and neighbors on infant feeding practices. Kin, friend and neighbor networks of Cuban, Puerto Rican and Anglo families in Dade County, Florida, are described, noting inter-ethnic differences in network members who provide respondents with infant feeding advice and assistance. The geographical proximity of influential network members is shown to effect the impact that health care professionals have on mothers' decisions about feeding practices. Network influences on specific feeding practices also are discussed. Kin, friend and neighbor networks are shown to have a significant impact on decisions surrounding breastfeeding, bottle-feeding, use of sucrose supplements and the time to introduce solid foods into the baby's diet. Network member's advice and encouragement appears to contribute to a successful lactation experience. Applying the Fisher's exact test to a small subsample, however, does not yield a significant association between presence or absence of network support and lactation outcome.

**Annotation:**

The study examined the social influences on breastfeeding practices using a sample of Puerto Rican (n=28), Cuban (n=28), and Anglo families (n=20) enrolled in a country child care program. It utilized both qualitative and quantitative methodologies; the sample size varied depending on analysis. Puerto Rican and Cuban families reported higher levels of reliance on their families for breastfeeding advice; Puerto Rican women reported using both their mothers' and their mother-in-laws' suggestions. The engagement of female kin in early care was also described among the Latina groups. Less reliance on friend or neighbor breastfeeding advice (and even less on that provided by healthcare professionals) was reported by Puerto Rican and Cuban women. This was affected by the degree of physical proximity to networks. At the time, breastfeeding levels were lower among the Hispanic samples.

Campos, M., García, L., García, I. E., Rivera, C., & Valcárcel, M. I. (2008). Rate of weight gain in very-low birth weight Puerto Rican neonates. *Puerto Rico Health Sciences Journal*, 27(2), 141-145.

**Abstract:**

**Background.** Small for gestational age neonates have a higher risk of growth delay. The purpose of the study is to determine if there are differences in their early weight gain patterns that persist after adjusting for confounding variables.

**Methods.** Two-hundred sixteen neonates born between 1999 and 2003 were included. The group for analysis was derived by matching all the SGA infants with AGA infants by sex, year of birth, and birth weight. The period of observation was from birth to date of discharge. Weight gain rate was defined as grams gained per kilogram of birth weight per day. Two sample T-test was used to determine the difference in growth rate between the groups. Simple regression was used to establish the effect of morbidities on weight gain rate.

**Results.** The total mean birth weight was 1105 g ( $\pm 223$  g), the mean gestational age was 30 weeks ( $\pm 2.7$  weeks), and the mean weight gain rate was 13.4 g/kg/d ( $\pm 6.8$  g/kg/d). The mean weight gain rate for the adequate for gestational age group was lower (11.9 g/kg/d  $\pm 7.6$ g versus 14.9 g/kg/d  $\pm 5.5$ g) ( $P < 0.001$ ). When all variables were analyzed using the lineal regression model, only having a low APGAR score ( $P = 0.02$ ) and being small for gestational age ( $P = 0.0004$ ) were significant.

**Conclusions.** We conclude that the growth patterns of very low birth weight neonates are different based on the adequacy of their birth weight, and that the disparity in growth rate is not explained by the differences in the incidence of morbidities that affect growth.

**Annotation:**

Low birth weight among neonates in Puerto Rico is described by the authors as an area of problem. The authors tracked the growth trajectories of infants born small for gestational age (SGA) and compared them to infants that were adequate for gestational age (AGA). Data from 216 neonates in Puerto Rico was obtained. Results revealed that the SGA infants grew at an accelerated rate compared to the AGA infants. Thus, initial birth weight relates to subsequent infant development. The authors conclude the article describing nutritional recommendations for families and health care professionals serving infants.

Canino, G., Shrout, P.E., Rubio-Stipec M., Bird, H., Bravo, M., Ramírez, R. ...  
Martínez-Taboas, A. (2004). The DSM-IV rates of child and adolescent disorders  
in Puerto Rico: Prevalence, correlates, service use, and the effects of impairment.  
*Archives of General Psychiatry*, 61(1), 85–93. doi:10.1001/archpsyc.61.1.85

**Abstract:**

**Background.** Few prevalence studies in which *DSM-IV* criteria were used in children in representative community samples have been reported. We present prevalence data for the child and adolescent population of Puerto Rico and examine the relation of *DSM-IV* diagnoses to global impairment, demographic correlates, and service use in an island-wide representative sample.

**Methods.** We sampled 1,886 child-caretaker dyads in Puerto Rico by using a multistage sampling design. Children were aged 4 to 17 years. Response rate was 90.1%. Face-to-face interviews of children and their primary caretakers were performed by trained laypersons who administered the Diagnostic Interview Schedule for Children, version IV (DISC-IV) in Spanish. Global impairment was measured by using the Children's Global Assessment Scale scored by the interviewer of the parent. Reports of service use were obtained by using the Service Assessment for Children and Adolescents.

**Results.** Although 19.8% of the sample met *DSM-IV* criteria without considering impairment, 16.4% of the population had 1 or more of the *DSM-IV* disorders when a measure of impairment specific to each diagnosis was considered. The overall prevalence was further reduced to 6.9% when a measure of global impairment was added to that definition. The most prevalent disorders were attention-deficit/hyperactivity disorder (8.0%) and oppositional defiant disorder (5.5%). Children in urban settings had higher rates than those in rural regions. Older age was related to higher rates of major depression and social phobia, and younger age was related to higher rates of attention-deficit/hyperactivity disorder. Both overall rates and rates of specific *DSM-IV*/DISC-IV disorders were related to service use. Children with impairment without diagnosis were more likely to use school services, whereas children with impairment with diagnosis were more likely to use the specialty mental health sector. Of those with both a diagnosis and global impairment, only half received services from any source.

**Conclusions.** Because we used the DISC-IV to apply *DSM-IV* criteria, the study yielded prevalence rates that are generally comparable with those found in previous surveys. The inclusion of diagnosis-specific impairment criteria reduced rates slightly. When global impairment criteria were imposed, the rates were reduced by approximately half.

**Annotation:**

This study sought to identify the prevalence rates of child psychopathology in Puerto Rico using *DSM-IV* criteria. The first prevalence investigation of childhood mental illness

on the island was conducted by Bird et al. (1988) using *DSM-III* criteria. This study used similar methods but updated *DSM-IV* criteria. A stratified probability sample was obtained by dividing the island into representative clusters and selecting households within each cluster. 1,886 dyads with children between the ages of 4 and 17 participated in the study. Two measures were administered by lay interviewers: the Diagnostic Interview Schedule for Children -IV (DISC-IV) and the Children's Global Assessment Scale (CGAS). The DISC-IV determined whether children met *DSM-IV* criteria for a disorder, and the CGAS assessed children's adaptive functioning and global level of impairment, not specific to a disorder. Prevalence rates were calculated in multiple ways. When prevalence was based on meeting criteria for at least one *DSM-IV* diagnosis without clinical significance (no impairment qualification), 19.8% of the children sampled were implicated. When clinical significance of a diagnosis was added, 16.4% met criteria. If global impairment (CGAS) was considered in addition to a *DSM-IV* diagnosis without clinical significance, 7.6% of the Puerto Rican children were identified with a mental health disorder. Finally, when both a *DSM-IV* diagnosis with clinical significance and impaired global functioning were utilized, the prevalence rate was 6.9%. The most prevalent disorders were attention-deficit/hyperactivity disorder (AD/HD; 8%), oppositional defiant disorder (ODD; 5.5%), separation anxiety (3.1%), and major depression (3.0%). Children in urban settings had higher rates of psychopathology than children in rural settings. Younger children were more likely to experience AD/HD, compared with older children who were more likely to have social phobia and/or depression. Of the children with both a diagnosis and global impairment, only half were receiving any mental health services. No relation was discerned between poverty and rates of disorders, but since 48% of Puerto Ricans live below the poverty level, the authors considered whether perceived poverty might be a more meaningful metric. There was a relationship between parents' ratings of how well their family lived and externalizing (AD/HD, ODD), but not internalizing (anxiety, depression) disorders. An understanding of the epidemiology and correlates of childhood mental illness in Puerto Rico may be useful in expanding policies geared towards providing funding for needed services and raising awareness for childhood mental health.

Canino, G. (2007). 25 years of child and adult psychiatric epidemiology studies in Puerto Rico. *Puerto Rico Health Sciences Journal*, 26(4) 385-394.

**Abstract:**

A review of the psychiatric epidemiology studies of the adult and child population of Puerto Rico carried out in the last 25 years is presented and discussed. Puerto Rico has experienced a plethora of psychiatric epidemiology studies since the decade of the 80's, with 4 adult and 4 child population based studies. The overall results of these studies showed that island Puerto Ricans are not at greater risk for psychiatric disorders as compared to other US or international populations in spite of the fact that the island is besieged by many of the socio-demographic factors associated with high risk populations. If anything, it appears that important protective factors associated with good family relationships and the importance of the family in Hispanic families may be buffering island families from the development of addictive and antisocial disorders.

**Annotation:**

Several psychiatric epidemiological studies have been conducted in Puerto Rico, which are reviewed in this article. Four of the psychopathology prevalence studies in Puerto Rico in the past 25 years focused on children. The first study yielded two articles - Bird et al. (1988) and Bird, Gould, Yager, Staghezza, and Canino (1989) - which are reviewed in this annotated bibliography (see above). The second study, the Methods for the Epidemiology of Child and Adolescents (MECA) study, focused on older children. It found that strong family relationships may be protective for Puerto Rican children, potentially preventing them from developing conduct disorder and antisocial behaviors to the same extent that children in the U.S. mainland do. The third study cited in this review, Canino et al. (2004), is also reviewed in this annotated bibliography. It described finding low rates of mental health service utilization even among children with a diagnosable disorder and impaired global functioning. The final study discussed in this article was Bird et al. (2006), which is also reviewed in this annotated bibliography. They found no major site differences (San Juan vs. New York City) in rates of disruptive behavior disorders (DBDs; e.g. conduct disorder) in children 5- to 13-years-old. In both samples, DBDs were associated with parental warmth. Overall, the four studies converged on the conclusion that Puerto Rican children were not at greater risk for mental health problems than children in mainland U.S. and in the other countries sampled, despite the increased sociodemographic risk for those living on the island.

Carlson, V. J., & Harwood, R. L. (2003). Attachment, culture, and the caregiving system: The cultural patterning of everyday experiences among Anglo and Puerto Rican mother–infant pairs. *Infant Mental Health Journal*, 24(1), 53–73. doi:10.1002/imhj.10043

**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.

**Annotation:**

Attachment theory posits that children's first relationships with their primary caregivers greatly impact their future relationships, with responsive, sensitive, nurturing caregiving likely to lead to secure attachment (Bowlby, 1969). However, caregiving is a culturally-based practice, and universal guidelines for optimal parenting based on the Western culture in which attachment theory was formulated may be ineffective or biased. Hence, an understanding of the different caregiving practices across cultures and their impact on attachment formation are warranted. The authors investigated the parenting practices and attachment styles of middle class mothers in Puerto Rico and the U.S. mainland. Thirty-two Caucasian mothers from Connecticut and 27 Puerto Rican mothers from San Juan were recruited in pediatricians' offices. Research visits occurred when their infants were 4-, 8-, and 12-months-old. At each visit, dyadic interactions were videotaped, and maternal behaviors were later coded on three scales: sensitivity, emotional expression, and physical control. The Strange Situation task was also conducted at the 12-month visit to assess attachment security. Results revealed that Puerto Rican mothers demonstrated more physical control, which attachment researchers have previously identified as insensitive and related to insecure attachment. However, among Puerto Rican dyads, mothers with high levels of physical control were more likely to have securely attached infants. This indicated that parenting practices that are associated with secure attachment vary by culture, and highlighted the need for flexible, culture-specific caregiving standards.



Cherlin, A., Frogner, B., Ribar, D. & Moffitt, R. (2009). Welfare reform in the Mid-2000s: How African American and Hispanic Families in three cities are faring. *The ANNALS of the American Academy of Political and Social Science*, 621, 178-201. DOI: 10.1177/0002716208324851

**Abstract:**

This article reports on a sample of 538 African American and Hispanic women who were receiving Temporary Assistance for Needy Families (TANF) in 1999, 416 of whom left the program by 2005. The Hispanic women consisted of a Mexican-origin group and a second group that was primarily Puerto Rican and Dominican. Combining the experiences of the employed and the non-employed welfare leavers, the authors find at best a modest decline in the average poverty rate among African American welfare leavers between 1999 and 2005. Hispanic leavers showed larger average declines in poverty. Among just the welfare leavers who were employed in 2005, the averages for women in all racial- ethnic groups showed increases in household income and declines in poverty. Among those who were not employed, African Americans had experienced a decline in household income and were further below the poverty line than in 1999, whereas Hispanic women had experienced modest declines or slight increases in their household incomes.

**Annotation:**

This study examines the relationship of TANF use and discontinuation with the household income of African-American and Hispanic families. The authors describe the relative need of TANF among Puerto Ricans, due to the poverty rate and other demographics. The article utilized data from the Three-City Study, which followed low-income families over a 6-year period. The Puerto Rican sample was comprised of 84 individuals living in either Boston or Chicago. Results indicated that poverty was alleviated to some extent after leaving TANF for the Puerto Rican/Dominican group.

Chew, A. L. (1993). Concurrent validation and regression line comparison of the Spanish edition of the Lollipop Test (La Prueba Lollipop) on a bilingual population. *Educational and psychological measurement*, 53(1), 173-182. doi: 10.1177/0013164493053001019

**Abstract:**

The need for a Hispanic edition of a culture-fair school readiness test was a major motivation for the development of the Spanish language edition of the Lollipop Test. The purpose of this study was to examine the concurrent validity of the Spanish edition of the Lollipop Test as an appropriate alternative preschool assessment instrument for bilingual Hispanic children using the Developmental Indicators for the Assessment of Learning-Revised (DIAL-R) as the criterion in a concurrent validity assessment. A strong multivariate relationship existed when preschoolers took one test, La Prueba Lollipop, in Spanish and another, the DIAL-R, in English ( $r_{\text{canonical}} = .793$ ). These results support the concurrent validity of La Prueba Lollipop with bilingual Hispanic children. An additional analysis was made of the regression line comparison of the Spanish and English forms of The Lollipop Test using the DIAL as a criterion. No ethnic group bias was detected.

**Annotation:**

This article examines the concurrent validity of the Spanish version of *La Prueba Lollipop: La Prueba Diagnostica y Seleccionadora de la Preparación para La Escuela-Enmendada* [The Lollipop Test: A Diagnostic Screening Test of School Readiness-Revised]. It is comprised of four subtests: 1) Colors and Shapes, 2) Spatial Position and Recognition, 3) Numbers and Counting, and 4) Letters and Writing. The authors recommended that *La Prueba* be administered with a separate language measure. 148 5-year-olds (mean age=62 months) living in Puerto Rico participated in the study. The sample was evenly distributed across the genders. The children were administered *La Prueba Lollipop* at one time point, and the DIAL-R at another time point. *La Prueba Lollipop* was administered primarily in Spanish while the DIAL-R was administered primarily in English since it had not yet been standardized in Spanish. The article noted that the teachers may have presented some Spanish translations of the DIAL-R. The results revealed high concordance between the two measures. Analyses of the subtests reveal higher relationships between *La Prueba Lollipop* subtests with the Concepts subtest of the DIAL-R, than with the Motor or Language subtests. The article concluded with a comparative bias analysis with a sample of English-speaking children in Georgia; they noted similarities in the statistical relationships between the *La Prueba Lollipop* and the DIAL-R across the samples.

Clark, S. L., Burton, L. M., & Flippen, C. A. (2011). Housing dependence and intimate relationships in the lives of low-income Puerto Rican mothers. *Journal of Family Issues*, 32(3), 369–393. doi:10.1177/0192513X10379712

**Abstract:**

Using longitudinal ethnographic data from the Three-City Study, the authors examined the relationship between 16 low-income Puerto Rican mothers' housing dependencies and their intimate partner relations. This study traced mothers' dependent housing arrangements and entrée to marital or cohabiting relationships from their teens through their procurement of independent housing while entering and maintaining intimate partner unions as adults. Findings indicated that various trigger factors led women out of their natal homes and into expedited cohabitation with romantic partners, which frequently resulted in unstable unions in which mothers had little power and autonomy. As mothers became eligible for housing subsidies they obtained housing independent from their male partners, potentially increasing the propensity for greater relationship power. Housing independence, however, was not without problems. Spillover effects, such as shadowing partners, threatened housing stability, and mothers' independence. The relevance of these findings for future research is discussed.

**Annotation:**

Studies have shown that Puerto Rican mothers in the U.S. mainland are often unmarried, living in public housing units, and cohabitating with their intimate partners. Observations of these women's pattern of moving from the natal home to cohabitating with men inspired questions about the intersection of the needs for housing, independence, and love among these mothers. This research used ethnographic data to understand, at a personal level, the interrelation of residential mobility, childbearing, intimate relationships among low-income Puerto Rican women. Data were drawn from the ethnography subsample of the Three-City Study, a study of the well-being of women and their children in San Antonio, Boston, and Chicago. Participants were 16 Puerto Rican women ( $M$  age = 28 years) with children who were unmarried and living in public housing. Ethnographers visited women monthly and discussed a wide range of topics such as parenting, public services, intimate relationships, and residential mobility. Interview responses revealed that most of the women left their natal homes to escape harsh conditions, abuse, and/or oppressive relationships. On their own, women had few resources and opportunities; cohabitating, having children, and public housing were seen as viable options. Once living in public housing, women still struggled to enter the labor force, but they were able to provide a valuable resource to their partners; many couples were able to combine resources to be as financially secure as possible. The authors reported that the choices these women have had to make were driven by fundamental gender inequality that limited their access to needed resources. The conclusion discusses the experience of gender inequity for some

Puerto Rican children. Vulnerabilities to patterns of poverty, cohabitation, and public assistance with limited education, opportunities, and/or intervention are discussed.

Correa, V. I., Bonilla, Z. E., & Reyes-Macpherson, M. E. (2011). Support networks of single Puerto Rican mothers of children with disabilities. *Journal of Child and Family Studies*, 20(1), 66-77.

**Abstract:**

The social support networks of 25 Puerto Rican single mothers of young children with disabilities were examined and compared with current models of family support for children with disabilities. This study was designed to assess the support systems of Latino single mothers in light of dominant models of family support. The Family Support Scale, the ECOMAP, and responses to open-ended questions were employed to describe the characteristics of Puerto Rican single mothers' support systems. Study findings suggest that members of the children's immediate and extended kinship system, including non-blood relatives [e.g., *madrinas* (godmothers)], play a strong role in the support network of the mothers interviewed. Implications for early childhood professionals who work with Latino parents of children with disabilities are examined.

**Annotation:**

This study investigated the role of social support in the family lives of Latino single mothers. The sample consisted 25 single mothers who were born in Puerto Rico, or were second- or third-generation immigrants to the U.S. mainland from Puerto Rico, and had a child under the age of 6 with an intellectual disability or developmental delay. The mothers completed the Family Support Scale (FSS), a visual representation of the family's social network (ECOMAP), and answered open-ended questions. These instruments provided insight into mothers' perceptions of the support network they have access to as they raise a child with disabilities. The interviews were conducted in English, Spanish, or a combination of both, depending on the mother's preference. Results from the FSS and the ECOMAP showed that mothers' primary sources of support often came from immediate and extended family members, as well as professionals providing formal services. Furthermore, many had informal support systems comprised mostly of female friends, such as their children's *madrinas* (godmothers). While this insight could aid the effective design of early interventions for Hispanic children with disabilities, the authors caution against generalizing these findings. Although they found some common themes, they did not find one dominant, coherent pattern of family support, perhaps as a function of the small sample size. Thus, the authors recommended future studies utilizing larger samples, as well as investigations that evaluate the effect that limited social support may have on both maternal and child outcomes.

Cristofaro, T. N., & Tamis-LeMonda, C. S. (2008). Lessons in mother-child and father-child personal narratives in Latino families. In A. McCabe, A. L. Bailey, & G. Melzi (Eds.), *Spanish-language narration and literacy: Culture, cognition, and emotion* (pp. 54-91). New York, NY: Cambridge University Press.

**Abstract:**

Children's early social exchanges, including the oral sharing of personal experiences, play an important role in their development. By talking about personal experiences (i.e., narratives), children come to understand their world and to develop a sense of self within a broader social-cultural context. This chapter describes mother-child and father-child narratives in a sample of 37 low income Puerto Rican, Mexican, and Dominican immigrant families residing in New York City. We provide a qualitative examination of the major cultural lessons that were communicated by mothers and fathers in their shared stories with their preschoolers. Between the spring of pre-kindergarten and fall of kindergarten, 16 girls and 21 boys were observed in their home. They were videotaped sharing 2-minute narratives with their mother and father (separately) about a "special memory." Narratives were transcribed verbatim and the thematic content was explored and coded along three major cultural lessons. First, parents emphasized the central role of family in their children's life, highlighting the importance of children identifying and loving their family members, maintaining ties with the family, and displaying appropriate behaviors toward relatives. Second, shared narratives communicated messages about gender roles, specifically in terms of emotions and activities that are associated with being male and female. Third, parents stressed the value of academic achievement, including the importance of working hard in school and feeling proud about scholastic accomplishments. Both similarities and differences in mother-child and father-child narratives around these themes are discussed. This work has the potential to inform early-childhood programs and intervention affecting social-cultural development and emergent literacy in children from diverse Latino families in the United States.

**Annotation:**

The book chapter begins with an example of a narrative between a mother and 5-year-old son, reflecting themes of interpersonal engagement, temporal sequencing, and important activities to the family. It is followed by a literature discussion highlighting the role of narratives in early childhood, particularly as they relate to cultural lessons and parenting roles. The study participants were engaged in the longitudinal Early Head Start Research and Evaluation project in New York City. 37 families (mothers, fathers, and children) were involved in the narrative analysis. The parents were in their early twenties and the children were approximately 57-months-old. About 60% of the fathers and mothers were Puerto Rican. Observations of mother-child and father-child dyads were completed at separate time points in the home. Parents were prompted to discuss the following: "We'd

like you to get [child's name] to tell us about something exciting that's happened recently. It could be a family outing, a birthday celebration, or any unusual event that involved [him or her]." Most parents elected to engage in the narrative in English. The narratives were qualitatively coded and the following themes arose: the importance of family, messages about gender roles, and educational achievements and academic success in Latino families. While there were extensive similarities in the approach that mothers and fathers undertook in the narrative, some differences were noted. For example, fathers were more likely to speak about extended families. Girls and boys generally received similar discourse about academic achievement, but differences were noted in other areas such as the characteristics portrayed or expected in other activities. The authors concluded the article through a discussion of the role of narratives in oral language development and cultural values.

Currie, J., & Thomas, D. (1999). Does Head Start help Hispanic children? *Journal of Public Economics*, 74(2), 235-262.

**Abstract:**

Poor educational attainment is a persistent problem among US Hispanic children, relative to non-Hispanics. Many of these children are immigrants and/or come from households that use a minority language in the home. This paper examines the effects of participation in a government sponsored preschool program called Head Start on these children. We find that large and significant benefits accrue to Head Start children when we compare them to siblings who did not participate in the program. On average, Head Start closes at least 1/4 of the gap in test scores between Hispanic children and non-Hispanic white children, and 2/3 of the gap in the probability of grade repetition. However, we find that the benefits of Head Start are not evenly distributed across sub-groups.

**Annotation:**

Head Start is a federally-funded comprehensive child development and school readiness program for low-income children and their families in the U.S. This study explored the potential influence of Head Start for Hispanic children. The researchers compared the performance of 750 children of Mexican and Puerto Rican origin on the following measures: the Picture Peabody Vocabulary Test (PPVT), the Peabody Individual Achievement Test in Mathematics (PIAT-MATH), and the Peabody Individual Achievement Test in Reading Recognition (PIAT-READING). Sibling pairs were utilized in the study, where one sibling attended Head Start and the other had not. This approach was used to control for family demographic variables. Results indicated a large, positive effect of Head Start on Hispanic children; it partially closed the gap in test performance and grade repetition for this population. Statistical estimates were largest for Mexican-origin children attending Head Start, who scored significantly higher on assessments compared to their siblings who did not attend. In turn, Puerto Rican children who attended Head Start outperformed their siblings who attended other early childhood programs. Differences were not evidenced between Puerto Rican Head Start attendees and their siblings who were cared for at home. This may be due to the potential “spill-over” effects between siblings that was identified in the results. The authors recommended future research investigating the influence of Head Start across subgroups of the Hispanic population in the U.S.



de la Vega, A., & López-Cepero, R. (2009). Seasonal variations in the incidence of congenital anomalies in Puerto Rico based on the timing of conception. *Puerto Rico Health Sciences Journal*, 28(2), 121-125.

**Abstract:**

Background: Birth defects represent one of the main causes of infant mortality and morbidity around the world.

Objective: The purpose of this study is to identify seasonal changes in the incidence of various congenital anomalies in our population.

Methods: We identified all cases of open neural tube defects, cardiac anomalies, cleft lip and palate and gastroschisis of children born in Puerto Rico and reported to the Health's Department Birth Registry Program between January 1995 and December 2005. The conception dates were determined by estimation based on the reported last menstrual period. All deliveries during this same period were recorded and their conception dates estimated in the same manner. The data for each anomaly was separated into 4 groups for each year studied corresponding to the four seasons. The sample was stratified based on the type of anomaly detected and the season when conception took place.

Results: There is a seasonal pattern in the rate of conceptions in Puerto Rico with the highest incidence during the winter and lowest during the summer months. We detected a statistically significant increase in the incidence and relative risk during the summer months (using winter as a reference) of conceiving a child with open neural tube defects (1.03/1000, RR:1.33), cardiac anomalies (5.22/1000, RR:1.39), or cleft lip and palate (1.68/1000, RR:1.89). Gastroschisis did not show a statistically significant difference in the rate of conceptions, but there was a tendency towards a higher incidence during springbc (0.39/1000, RR:1.67).

Conclusions: The reported seasonal variation in the incidence of open neural tube defects, cardiac anomalies, and cleft lip and palate may be secondary to the effect of yet to be identified teratogens acting on the population at large, or, more likely, to changes in activity and dietary patterns of the population.

**Annotation:**

Since birth defects are a major cause of infant mortality, researchers in Puerto Rico sought to better understand the incidence of birth defects by investigating whether there was a seasonal pattern to their occurrence. They used data on all children born in Puerto Rico from 1995-2005, and then identified a subsample of those born with defects or anomalies (specifically, open neural tube defects, cardiac anomalies, cleft lip and palate, and gastroschisis) using the Puerto Rico Department of Health's Birth Defects Registry. The mothers' last reported menstrual cycles prior to pregnancy were used to determine

time of conception. Overall, results indicated that there was a seasonal pattern of conception for all babies, regardless of birth defects, such that more babies were conceived in the winter. While seasonal patterns of conception are commonly noted in areas with large differences in temperature across the year, this was reportedly surprising for Puerto Rico, since there is low temperature variability in the tropical climate. The authors suggested that the pattern may reflect the increase in social activities and alcohol consumption in the winter months, which may result in increased rates of unplanned pregnancies. Among infants with birth defects (except for those with gastroschisis), the reverse pattern was observed: a disproportionate amount were conceived in the summer months. The authors did not make an etiological claim as to why this pattern occurred, but they posited that it may reflect differential amounts of physical activity, changes in dietary patterns, or varied exposure to teratogens based on the season. These potential causes may be further investigated to understand and potentially reduce the incidence of birth defects and infant mortality in Puerto Rico.

de la Vega, A., & Verdiales, M. (2002). How does maternal age affect pregnancy planning in Puerto Rico? *Puerto Rico Health Sciences Journal*, 21(2), 127-128.

**Abstract:**

Family planning is essential to most prenatal care programs. It is generally believed that maternal age influences the planning of pregnancy with younger patients having higher incidences of unplanned pregnancies. To test this hypothesis we evaluated 470 consecutive cases of pregnant patients regarding pregnancy planning in their current pregnancy. A total of 170 (36.1%) were planned. The incidence of planned pregnancies was evaluated among three age groups and results were as follows: less than 20 years old, 18/60 (30.0%), patients 20 to 29 years old, 105/270 (37%) and more than 29 years old, 47/140 (33.6%). These differences were not statistically significant. Surprisingly, no differences among age groups regarding pregnancy planning were identified in this study.

**Annotation:**

The authors sought to investigate the rate and maternal age distribution of unplanned pregnancies. They predicted that older women would be more likely to have planned pregnancies than young women. They evaluated 470 consecutive pregnancies among mothers in both public and private clinics in San Juan. They divided the women into three age groups: less than 20-years-old, 20- to 29-years-old, and over 29-years old. Across age groups, only 36.1% of pregnancies were planned. Surprisingly, whether pregnancy was planned or unplanned surprisingly did not differ based on maternal age. The finding that 73.1% of pregnancies were unplanned was comparable to low-income mothers in mainland U.S. These findings indicate that support for mothers facing unplanned pregnancies in Puerto Rico should target not only adolescent mothers, but also older women.

de von Figueroa-Moseley, C., Ramey, C. T., Keltner, B., & Lanzi, R. G. (2006). Variations in Latino parenting practices and their effects on child cognitive developmental outcomes. *Hispanic Journal of Behavioral Sciences*, 28(1), 102–114. doi: 10.1177/0739986305284036

**Abstract:**

This research examines variations in parenting and its effects on child cognitive outcomes across Latino subgroups from a national sampling that utilized a subset of 995 former Head Start Latino parents and children. Comparisons of the Parenting Dimension Inventory scaled scores revealed Latino subgroup differences on nurturance and consistency. Puerto Rican parental caregivers scored higher on nurturance and consistency than Mexican Americans and El Salvadorans. Pearson's product-moment correlation revealed a positive relationship between responsiveness to child inputs and higher academic achievement scores for each Latino subgroup. Examination of the Woodcock-Johnson Test of Achievement also revealed a main effect of Latino subgroup differences. Findings suggest that there exist intracultural variations in parenting and academic achievement within the Latino population and confirm previous findings that parenting is related to positive child cognitive outcomes.

**Annotation:**

While research projects commonly either combine all Hispanic participants into one group or focus exclusively on Mexican Americans, there is considerable variability among Hispanic subgroups. Given the heterogeneity of Hispanic subgroups, this research investigated variations in parenting and their relations to child cognitive skills. This sample was drawn from a larger study of Head Start transition services through third grade. 56% of participants were Mexican American, 31% were Puerto Rican, and 13% were El Salvadorans. Data were gathered in either Spanish or English in the fall and spring of children's kindergarten year. Parenting styles were measured using the Parenting Dimensions Inventory and child cognitive ability was measured using the Woodcock-Johnson Test of Achievement. Factor analysis of parenting domains for this sample revealed a six-factor structure: nurturance, parental control, consistency, responsiveness to child inputs, nonrestrictive attitudes, and anger management. Results revealed that Puerto Rican parents reported more nurturant behavior and consistency than the other two subgroups. No significant differences were observed for the other four parenting domains. For Puerto Rican families, parental responsiveness was positively correlated with the Applied Problems subscale of the Woodcock-Johnson in the fall. Puerto Rican children showed improvement on both subscales from fall to spring. However, they scored lower than El Salvadoran children on Letter Word Identification in the fall and spring, and scored lower than Mexican Americans and El Salvadorans on Applied Problems in the fall and spring. These data illustrate the potential variability among these groups, some of the authors suggested are attributable to varying levels of bilingualism (and the utilization of monolingual assessments). In addition, they reveal the relative parenting strengths and child

academic weaknesses (coupled with improvement) of Puerto Rican families participating in Head Start.

del Toro Delgado, L. & Alvarez, V. (1990). Validity of the Kaufman Assessment Battery for Children (K-ABC) in the diagnosis of cognitive deficits in preschool children. *Avances de Psicología Clínica Latinoamericana*, 8, 99-114.

**Abstract:**

Studied the validity of the K-ABC with mentally retarded or borderline preschool children. Human subjects: 58 male and female Puerto Rican preschool children (aged 49-71 mo) (mentally retarded or borderline intellectual functioning). All Ss completed the Spanish version by C. Albizu-Miranda and M. Hernández (1979) of the Stanford-Binet Intelligence Scale, the Spanish version of the K-ABC by A. S. Kaufman and N. L. Kaufman (1983), the Spanish version of the Vineland Adaptive Behavior Scales by S. S. Sparrow et al (1984), and the Preschool Visual-Motor Test. Correlations among the various measures were calculated, and implications for intellectual evaluation of Spanish-speaking preschool children are discussed.

**Annotation:**

This study examined the validity of the Kaufman Assessment Battery for Children (K-ABC) for children with difficulties in cognitive functioning. Comparisons were made with among intelligence tests, a parent-report measure of adaptive functioning, and a visual-motor task. 58 preschoolers with intellectual deficits participated in the study; they were attending Head Start in Puerto Rico. The correlation of the K-ABC and the Stanford-Binet was .57. The participants scored higher on the K-ABC (particularly its non-verbal scale) than on the Stanford-Binet. Parents overall reported a low level of adaptive functioning. The authors recommended the use of the K-ABC for children with linguistic difficulties (such as those with cognitive impairments) or language barriers (such as immigrant children) due to the K-ABC's lower utilization of verbal tasks in the estimation of intelligence.

Delgado, M. (1998). Puerto Rican elementary school-age children: Assistance with homework as an indicator of natural support strengths. *Social Work in Education* 20(1), 49-54.

**Abstract:**

The educational challenges facing Puerto Rican children and their families has been well documented in the professional literature (Hidalgo, Siu, Bright, Swap & Epstei, 1995; Kozol, 1991). Puerto Rican Children have an exceedingly high probability of failing one or more grades, of being placed in special education, and of dropping out of school before graduation (Children's Defense Fund, 1991; Irvine & York, 1993; Perez & Martinez, 1993). The lack of educational achievement represents a serious threat to the emotional, economic, and social well being of the Puerto Rican community (Solis, 1995).

School recognition of cultural strengths, in this case natural support systems, is one method of fostering an environment based on mutual understanding and respect (Delgado & Rivera, 1997). If formal educational success is to be achieved, it will necessitate collaboration among schools, families, and community: "Research in this field [families, schools, and communities] is still in its infancy. Although based on a long tradition of research on families and on schools studied separately, attention to issues of 'partnership' is relatively new" (Hidalgo et al., 1995, p. 498). This article addresses the role of natural support systems as a resource for helping Puerto Rican children with homework. The identification of whom and how many people help a child with homework is a low-labor-intensive means of focusing on strengths of cultural resources. This resource, however, has implication beyond homework.

A 2 ½-year study of 24 Puerto Rican families in an urban elementary school uncovered attitudes, aspirations, and coping strategies contrary to stereotypes of low-income Puerto Rican families commonly portrayed in the mass media. These families had high educational expectations for their children. The findings have practice implications for school social workers in elementary schools in their quest to develop meaningful partnerships among schools, families, and communities (Delgado, 1996b).

**Annotation:**

Researchers were interested in identifying the natural support systems of Puerto Rican families in the U.S. to better educate Puerto Rican children. Natural support systems are culturally informed sources of perceived support – from people, institutions, and philosophies – that mediate one's day-to-day coping. Natural support systems can benefit families as a whole and young at-risk students specifically. Participants were 24 families with kindergarten or first grade children in bilingual classrooms. The researchers assessed natural support systems by interviewing parents using open-ended questions, including queries about extended family, religion, folk healing, and merchant and social clubs. Results revealed the importance of school and family involvement in the lives of young

Puerto Rican children; *la familia* and the neighborhood school were considered central resources for families, whereas neighbors, folk healers, and clubs were not. Findings also demonstrated that the average number of individuals in families' social support systems was an unexpectedly low (1.3 persons per family), which reflects their access to help in times of need. Further, parents indicated that the most important way they could help their children's education was helping them with their homework (n=13); this response was more common among families with more social support. Finally, families had very high expectations for their children's academic achievement, with most parents hoping their children would graduate from high school and college. The authors hoped that this insight into the natural support systems of young Puerto Rican children and their families may aid schools and teachers in fostering their natural strengths and bolstering their performance.



Dobbs, J., Arnold, D. H., & Doctoroff, G. L. (2004). Attention in the preschool classroom: The relationships among child gender, child misbehavior, and types of teacher attention. *Early child development and care, 174*(3), 281-295. doi: 10.1080/0300443032000153598

**Abstract:**

Research in preschool classrooms has shown that boys receive more attention from their teachers than girls do, and also that misbehavior is positively associated with teacher attention. However, these previous findings relate primarily to total attention, ignoring the many different types of teacher attention that are likely to have different antecedents and consequences. Additionally, previous studies have not investigated the way teachers treat difficult children when they are not misbehaving. This study examined the relationships among child gender, child misbehavior, and specific types of non-disciplinary teacher attention. An ethnically and sociometrically diverse sample of 153 preschool children and their teachers were observed through videotapes of preschool classrooms. Girls received more positive interactions than boys, and misbehavior predicted commands unrelated to discipline. Both gender and misbehavior were involved in the prediction of rewards. When these relationships were examined within Puerto Rican, Black, and Caucasian groups, some differences in attention distribution appeared.

**Annotation:**

This study examined the relationship between teacher attention and child behavior in preschool classrooms. Seven preschool centers in Springfield, MA participated; 153 children and 50 teachers were observed. The ethnic distribution was fairly even among Puerto Rican, African-American, and European-American. The gender distribution was generally equal and the children's mean age was 53 months. Gender differences were evidenced in both child behavior and teacher attention within the Puerto Rican sample. Higher levels of misbehavior were noted for boys compared to girls, and boys received less rewards and positive interactions from teachers than girls did. No relationship was found between teacher commands and misbehavior for the Puerto Rican sample, while such correlations were found for the African- and European-American groups. The authors conclude by noting that gender appears to more related to teacher attention than child behavior is for mainland Puerto Ricans; they warn that the results are exploratory due to the limited sample size.

Fagan, J. (1998). Correlates of low-income African American and Puerto Rican fathers' involvement with their children. *Journal of black psychology*, 24(3), 351-367. doi: 10.1177/00957984980243006

**Abstract:**

Determinants of fathers' involvement with their children were examined in a study of 60 low-income African American and 25 low-income Puerto Rican men residing with their children in two-parent families. All fathers had at least one preschool-age child in Head Start. Ss participated in interviews concerning father's accessibility, direct interaction, play, outings, reading, and responsibility for children in Head Start. The findings showed that higher levels of paternal involvement with children were negatively related to the father's self-esteem and positively related to maternal employment, mothers' hours in paid work and school, family income, and paternal nurturance. The study concluded that a combination of sociostructural, psychological, and parenting skill factors influences the involvement of African American and Puerto Rican fathers with their children.

**Annotation:**

This article examined contributors to paternal involvement among Puerto Rican and African-American fathers with young children. Various hypotheses and theories were discussed including time availability, sociocultural, and human capital. The study was conducted in collaboration with eight Head Start centers, and the analyses for this article focused on biological fathers (n=71) and stepfathers (n=14). 25 of the 80 participants were Puerto Rican; the other fathers were African-American. Data collection included an in-person interview as well as three phone interviews. Results were similar between the Puerto Rican and African-American fathers. Neither paternal employment status nor type of relationship (biological vs. stepfather) related to fathers' engagement with their children. Rather, factors related to maternal employment, income, self-esteem, and nurturance were related to paternal engagement with young preschool-aged children.

Fagan, J. (2000). African American and Puerto Rican American parenting styles, paternal involvement, and Head Start children's social competence. *Merrill-Palmer Quarterly*, 46(4), 592-612.

**Abstract:**

I examined (a) the similarities and differences in parenting styles and paternal involvement within and between African American and Puerto Rican American parent groups and (b) the relationship between mothers' and fathers' parenting styles, child care involvement, and Head Start children's social competence. The findings documented similarities between African American mother and father self-reports of these behaviors. Puerto Rican American parents reported being significantly more nurturant and responsive/ consistent than African American parents. Puerto Rican American mothers and fathers who reported higher levels of responsiveness/ consistency had children whose Head Start teachers rated them as having higher levels of social competence. There was no significant relationship between parental responsiveness/ consistency and child behavior for African American Families.

**Annotation:**

This study compared the self-reported parenting and paternal involvement practices of African American and Puerto Rican American parents of Head Start children, and investigated the connection of these factors to their children's social competence. They were interested in focusing on African American and Puerto Rican American parents because both of these groups have been exposed to high levels of discrimination, poverty, and adversity. The authors were motivated to undertake this research because they perceived that previous findings portraying the parenting habits of minorities negatively were privileging the dominant culture and failing to acknowledge that different behaviors are adaptive in different cultural contexts. The sample consisted of 73 mother-father pairs, of which 21 were Puerto Rican American (either they or their parents were born in Puerto Rico). The researchers measured parenting style with the Parenting Dimensions Inventory (PDI), a tool that asked parents to self-report on eight dimensions of parenting: nurturance, responsiveness, nonrestrictive attitude, and type of control, amount of control, maturity demands, consistency, and organization. The authors developed a measure to assess parental involvement in child care activities that listed specific common child caretaking tasks and asked the parents to rate which parent typically assumed responsibility for each task. Teachers completed the Social Skills Rating System (SSRS), which measured frequency of behaviors categorized as either reflecting social skills or problem behaviors. Results revealed that ethnicity was significantly associated with parenting style: Puerto Rican American parents reported higher levels of nurturance and responsiveness with their children than African American parents; differences between the parenting styles of fathers and mothers of the same ethnicity were not found. Among Puerto Rican American families, higher parental responsiveness was associated with higher child social compe-

tence, although this pattern was not found among African American families. The authors recommend future studies should exploring why the relationship between those two variables was not consistent across ethnic groups. In addition, future studies can examine differences in self-report style as well as utilizing observational techniques and longitudinal research designs to assess parenting styles and their outcomes.

Feldman, J., Ortega, A., Koinis-Mitchell, D., Kuo, A., & Canino, G. (2010). Child and family psychiatric and psychological factors associated with child physical health problems. *Journal of Nervous and Mental Disease*, 198(4), 271-279.

**Abstract:**

To examine associations among Puerto Rican children's physical health problems and children's internalizing disorders, parental psychopathology and acculturative stress, and family factors. A population-based probability sample of 2491 Puerto Rican children, aged between 5 and 13 years, and caregivers from the South Bronx and the U.S. Commonwealth of Puerto Rico participated in this study. The parent version of the Diagnostic Interview Schedule for Children-IV was used to assess children's internalizing disorders. Children's anxiety disorders, parental psychopathology, and acculturative stress were associated with childhood asthma, abdominal pain, and headaches. Children's depressive disorders, maternal acceptance, and family functioning were associated with abdominal pain and headaches. Parents of children living in Puerto Rico were more likely to report physical health problems in their children than in the Bronx. Children's internalizing disorders, parental psychopathology, and acculturative stress may be important areas to target among Puerto Rican children with physical health problems.

**Annotation:**

Researchers were interested in examining the interrelationships among Puerto Rican children's physical health problems and internalizing disorders, their parents' psychopathology and acculturative stress, and general family factors, among Puerto Rican islanders and those living in the U.S. mainland. The sample was gathered with an epidemiological technique in which representative samples were selected from two locations, yielding a final sample of 2,491 children between the ages of 5 and 13 who were identified by their parents/caregivers as being of Puerto Rican background. The final sample of participants included 1138 child-parent dyads in the South Bronx and 1353 child-parent dyads in Puerto Rico. The researchers gathered data by interviewing the parents in English, Spanish, or a combination of both. Children's physical health was measured in a series of yes/no questions and their internalizing disorders were measured with the parent-report version of the Diagnostic Interview Schedule for Children (DISC-IV). Parents were also interviewed about their own background and psychological functioning. Results revealed that children's internalizing disorders (anxiety and depression), parental psychopathology, and parental acculturative stress were associated with Puerto Rican children's physical health problems (asthma, abdominal pain, and headaches). Health problems were more frequently reported for children living in Puerto Rico compared to those in the Bronx. The authors recommend future studies investigating the mechanisms underlying the connection between emotions and physical pain and discomfort.

Feng, X., Harwood, R. L., Leyendecker, B., & Miller, A. M. (2001). Changes across the first year of life in infants' daily activities and social contacts among middle-class Anglo and Puerto Rican families. *Infant Behavior and Development*, 24(3), 317-339.

**Abstract:**

This study examines the developmental changes in daily activities and social contacts of 60 middle-class Anglo and Puerto Rican infants at three timepoints during the first year of life. Individual Growth Models were applied to four activity variables: Self-feeding, Sleeping in Own Room, Dyadic Interaction, and Multiparty Interaction. Results indicated that infants' time spent on Self-feeding and Sleeping in Own Room increased substantially in both groups across the first year. However, the growth rate of Self-feeding differed according to infants' cultural background and gender, whereas the increasing rate of Sleeping in Own Room varied as a function of both culture and maternal working hours each week. Multiparty and Dyadic Interaction were stable over time. However, Puerto Rican infants on average spent more time in Multiparty Interactions than did Anglo infants. In terms of their social contacts, Puerto Rican infants spent more time with relatives than did Anglo infants.

**Annotation:**

Infant changes in everyday activities and social contacts across the first year of life were examined in a sample of Anglo and Puerto Rican children from middle class backgrounds. Both between-group and within-group differences were analyzed in order to identify cultural and individual factors that may contribute to infant experiences. The sample consisted of 32 Anglo infants living in Connecticut and 28 Puerto Rican infants living in Puerto Rico. The mothers were interviewed at three time points of the child's life (4, 8 and 12 months) about activities that they had performed with the child within the last 24 hours. Hierarchical Linear Models were used to analyze the data. Results revealed that Anglo children spent significantly more time feeding themselves, than did their Puerto Rican counterparts. Anglo children also spent longer time periods sleeping alone, though this was largely due to maternal employment. Finally, Puerto Rican children significantly spent more time interacting in social contexts, compared to the Anglo children. The authors described how different developmental milestone expectations may be at play across cultures. Future research recommendations included utilizing a wider timeframe for collecting data on infant experiences.

Ferrer-Medina, V. (2008). *Maternal perceptions of attachment: A study of the experience of Puerto Rican mothers* (Unpublished doctoral dissertation). Chicago School of Professional Psychology, Chicago, IL.

**Abstract:**

Attachment theory focuses on mother-child interaction and the notion of providing a secure base for the child. A secure attachment is the product of the mother's quality of response to a series of behaviors manifested by the infant. Today, research studies have raised doubts on the universality of the theory across cultures. Three main factors have been specifically targeted: the Strange Situation procedure, maternal sensitivity, and the meaning of attachment behaviors across cultures. The present study focuses on attachment in the Puerto Rican culture, particularly attachment from the mother's perspective and experience. A more in depth and richer analysis was warranted to better understand the attachment experiences of Puerto Rican mothers. On the other end, literature on parenting in the Puerto Rican culture lack reputable indigenous professional sources that provide a base for Puerto Rican clinicians and families. Accordingly, the goals of this study were two: first, to uncover the phenomenon of mother's perceptions of attachment by suitably describing and interpreting the event, and second, to contribute to the understanding parenting practices and mother-child interactions in Puerto Rico. Ten Puerto Rican mothers, who were born, raised, and currently living on the island of Puerto Rico where interviewed. All mothers had at least one child from 12 to 24 months. All interviews were coded and analyzed using a hermeneutic phenomenology approach. Member checks were conducted with five out of the ten participants. Seven major themes emerged: Mother-Child Interaction, Mother's Response to Infant's Needs, Communication, Physical Proximity, Maternal Beliefs about Parenting, Maternal Attitudes about Motherhood, and Emotional Link. The results of this study suggest that Puerto Rican mothers feel attached through feeling needed by their child, emotional satisfaction from taking care of their child, providing a routine for their child, and being physically close; all concepts found in the attachment theory literature. All mothers felt that their experiences of attachment with their mothers influenced their rearing practices. Finally, definitions of "good mother" and "good baby" were developed to increase the understanding of Puerto Rican mother's experience.

**Annotation:**

The dissertation began with a review of Puerto Rico, particularly its familial structures, values, and lifestyles. Influences on parenting practices among Puerto Rican mothers were highlighted, as appropriate. Attachment theory was subsequently discussed, along with the rationale for a qualitative study of attachment perspectives among Puerto Rican mothers living on the island. Ten mothers with children between the first and second years of life participated in the investigation. All were adults without a child with disabilities. The interviews lasted between 30 and 72 minutes. Seven themes emerged during the qualitative analysis, which the author member checked with some of the participants: 1)

Mother-Child Interaction (Breast Feeding, Routine, Play), 2) Mother's Response to Infant's Needs (Emergencies, Minor Need, Discipline), 3) Communication (From Infant, From Mother), 4) Physical Proximity (Closeness, Separation), 5) Maternal Beliefs about Parenting (Value, Perception of Role), 6) Maternal Attitudes about Motherhood (Good Mother/Good Baby, Personal Experiences, Learning Process, Satisfaction), and 7) Emotional Link. The dissertation includes substantial quotes capturing each of the themes.



Fomby, P., & Cherlin, A. J. (2004). Public assistance use among U.S.-born children of immigrants. *International Migration Review*, 38(2), 584–610. doi:10.1111/j.1747-7379.2004.tb00210.

**Abstract:**

U.S.-born children of immigrants may be less likely to receive some social services than are children of native-born parents if foreign-born parents who are themselves ineligible are less likely to apply on their children's behalf. We use retrospective data from a sample of about 2,400 low income households in three U.S. cities to determine whether children with foreign-born caregivers are less likely than children with native-born caregivers to receive benefits from any of five programs over a two-year period: TANF, SSI, Food Stamps, Medicaid, and WIC. The most significant disparities between children of citizen and noncitizen caregivers are in TANF and food stamp use.

**Annotation:**

As mixed-status families (with a U.S.-born child and immigrant parent[s]) become increasingly prevalent in the U.S., it is crucial to understand whether citizenship and immigration status affect children's access to social services. The researchers used retrospective data collection methods to investigate their hypothesis that immigrant families underutilize social services. Low-income families living in Boston, Chicago, and San Antonio were interviewed in 1999 in either English or Spanish. Parents were asked whether they or any of their children had received benefits in the past two years from TANF (Temporary Assistance for Needy Families), SSI (Supplemental Security Income), Food Stamps, Medicaid, and WIC (Women, Infants, and Children), and if so, for how long. To parse apart the impact of migration and citizenship status, Puerto Rican-born parents were included (N = 135), since they are citizens but also recently migrated to one of the cities. Parents born in the U.S. mainland, foreign-born U.S. citizen parents, and foreign-born noncitizen parents were also included in the sample, for a total sample of N = 2,402. Analyses controlled for ethnicity, child health, maternal education, age, health, and marital status (paternal variables were not considered since over 90% of parents interviewed were mothers). Among the Puerto Rican families in the sample (who lived primarily in Boston), 20.5% were married and 5.8% of parents reported a serious disability. Overall, foreign-born and noncitizen parents tended to use services less often and for shorter time periods than native U.S. citizens (mainland and Puerto Rican). Puerto Rican-born parents participated in Medicaid, WIC, and food stamps at similar rates as mainland-born parents. Participation rates were higher in TANF and SSI. The authors assumed that parental use of benefits meant that their children received the benefits. Hence, these results indicated that Puerto Rican children living in the U.S. mainland had access to benefits at a level that was equivalent to children with mainland-born parents, and better than children with foreign-born parents.

Fracasso, M. (1994). The relationship of maternal behavior and acculturation to the quality of attachment in Hispanic infants living in New York City. *Hispanic Journal of Behavioral Sciences*, 16(2), 143-154. doi: 10.1177/07399863940162004

**Abstract:**

The present exploratory study examined maternal parenting behavior and patterns of attachment using the Ainsworth Strange Situation with a Hispanic sample. Twenty-four Puerto Rican and 26 Dominican mother-infant dyads were videotaped in the strange situation and observed in their homes. As in other cross-cultural and subcultural studies, the pattern of attachment classifications differed from that reported for middle-class Euro-American populations: Overall there was an equal number of secure and insecure infants. Additionally, there were sex differences in the distributions of attachment patterns: Although two thirds of the boys were securely attached, two thirds of the girls were insecurely attached. The maternal behaviors that distinguished mothers of securely from insecurely attached infants in this study were also disparate from those found in previous studies using non-Hispanic samples. These findings provide a descriptive basis for future research with Hispanics and are important for their implications regarding the development of inner-city Hispanic children.

**Annotation:**

Parenting behaviors, acculturation, and attachment were examined among 23 Puerto Rican and 26 Dominican families living in New York City (total n=50). The mothers had low levels of income, and were generally in their mid-twenties while the infants had just completed their first year (mean=13 months). The infant-mother dyads were observed in a laboratory setting with the Ainsworth Strange Situation, as well as observed in their homes engaging in directed play. No differences were evidenced in maternal behaviors between the Puerto Rican and Dominican mothers. Acculturation was also not found to significantly relate to parenting behaviors or attachment, though this may be due to degree of variability in the sample. Notable findings include sex differences in attachment behaviors, the positive relationship of physical interventions with attachment, and differences in the proportion of securely vs insecurely classified infants. The authors remarked on cultural differences in parent-infant relationships and the need to examine longitudinal outcomes.

Frazer de Lladó, T. E., González de Pijem, L., Hawk, B., & The Puerto Rican IDDM Coalition (1998). Incidence of IDDM in children living in Puerto Rico. *Diabetes Care*, 21(5), 744–6.

**Abstract:**

**Objective:** To determine incidence, geographic distribution, and seasonal variation of IDDM in children 0–14 years of age living in Puerto Rico. Because these data have been collected through the infrastructure of the World Health Organization's DiaMond project, these results are directly comparable with incidence data from other populations worldwide involved in this study.

**Research Design And Methods:** Beginning in 1990, new cases of IDDM were registered retrospectively from 1985 and prospectively to 1994 by review of medical records from island hospitals. Included in the hospital registry are 1,527 cases of IDDM. Validation of the primary source was by three secondary lists of cases obtained through diabetic camps, surveys of schools, and a government registry. Log linear modeling (capture-recapture) was used to correct incidence.

**Results:** Mean incidence of IDDM from 1985–1994 was 18.0 cases/100,000 children per year (95% CI 17.6–18.3). There was a slight female rather than male predominance: 51% of the cases were girls, and 49% were boys. Although Puerto Rico has marked variation in rainfall, altitude, and genetic markers, no significant differences are found in the incidence rates of different areas or seasons of the island.

**Conclusions:** This registry of Puerto Rican children is the largest IDDM registry of minority children in the U.S. The results of this study indicate that the annual incidence of IDDM of children living in Puerto Rico is higher than the incidence of other multiracial ethnic groups living in the U.S.

**Annotation:**

Epidemiological studies in mainland U.S. had revealed higher incidences of Insulin Dependent Diabetes Mellitus (IDDM; Type 1 Diabetes) among Puerto Rican children compared to Caucasian children. The authors were interested in parsing out whether this pattern could be attributed to unique predispositions for IDDM among that group, or whether it related to children's immigrant status or other social/environmental factors. Hence, they investigated the prevalence of IDDM on the island to compare to its prevalence elsewhere. Data was gathered both retrospectively and prospectively using the island-wide registry of new cases of IDDM among children under 15-years-old from 1985–1994; in accordance with World Health Organization (WHO) protocol, the 1,527 cases were validated by secondary sources. The results found that the prevalence of IDDM in Puerto Rico was 18/100,000 children per year, with a slight female predominance. This

was the highest rate of IDDM among minority children in the U.S. The incidence of IDDM was similar for children living on the island and in the U.S. mainland, which suggests that the risk for Puerto Rican children does not increase with migration. The relative contributions of genes and environmental risks such as poverty have yet to be determined.

Garcia, G. & Levin, M. (2001). *Latino children in Head Start: Family characteristics, parent involvement and satisfaction with the Head Start Program*. Poster presented at the Society for Research in Child Development Biennial Meeting. Minneapolis, MN.

**Abstract:**

None available

**Annotation:**

The study utilized data from the 1997 Family and Child Experiences Survey (FACES) conducted by the ACF; it includes a sample of Head Start children living in Puerto Rico and is described in detail elsewhere in this annotation. The authors compared the responses between Puerto Rican families with Hispanic and non-Hispanic families living in the mainland. Principal findings included higher levels of education among the Puerto Rican sample, with lower levels of income. In addition, Puerto Rican families reported higher levels of involvement with the Head Start program than the other two groups. They also reported less barriers than the mainland Hispanic group. Higher levels of social support, in general and from Head Start, as well as satisfaction were reported by both the Puerto Rican and Hispanic samples. Larger gains in family-child activities were reported by both Hispanic samples in classrooms with higher levels of academic activities.

Giambruno, C., Cowell, C., Barber-Madden, R., & Mauro-Bracken, L. (1997). The extent of barriers and linkages to health care for Head Start children. *Journal of Community Health*, 22(2), 101–114. doi:10.1023/A:1025160705362

**Abstract:**

Data were gathered as part of a larger survey of 218 Head Start Programs in Region II (New York City, New York State (excluding New York City), New Jersey, Puerto Rico and U.S. Virgin Islands) in 1993–94. The general purpose of the survey was to obtain information on child health, screening practices, training needs, family health and community problems, barriers to diagnosis and treatment and the extent of linkages between Head Start programs and health and nutrition providers at the local level. In this study barriers to the care of Head Start children and their families were examined as perceived by the Health Coordinators or other health related staff of the Health Services Component of these programs. The extent of linkages with health and nutrition service providers were also examined. The most frequently reported barriers were lack of parent participation (72%), private transportation not available (67%), parents' perception of quality of care (64%), distance to provider (63%), cost of transportation (63%), lack of funding (56%), limited/inconvenient hours (56%), and health services not available in the community (55%). On average, programs reported linkages to 14.5 providers (including an average of 4 nutrition programs). More than 90% of them reported linkages with public health services, child protective services, WIC and private physicians/dentists. Finally, the extent of barriers and linkages were compared across different geographic areas. Significant barriers were identified in this study, yet the survey confirmed and validated the extensive nature of formal linkages with health and nutrition service providers at the local levels. These findings may indicate that the current levels of service availability may not be sufficient to meet the severity and diversity of health needs of this population.

**Annotation:**

Access to health care is a basic need for children and can be related to school readiness. However, there are financial, structural and individual barriers that prevent children from receiving adequate pediatric primary care. Head Start is a comprehensive early childhood program that targets, among many other outcomes, improved access to health screening and treatment. Data about health care in Head Start settings were gathered in 1993 and 1994 from New York, New Jersey, Puerto Rico and U.S. Virgin Islands. Families in focus groups reported on health and screening services, and Head Start Health Coordinators ( $N = 157$ ) completed surveys reporting on linkages and barriers to health care for families in their school. Major health issues in the sample included high rates of speech/language disorder (86%), asthma (84%), and substance use (69%). An average of 7.3 barriers were reported per Health Coordinator. The most commonly reported barriers were lack of parent participation (72%), lack of transportation (67%), low parental perception of quality of care (64%), provider distance (63%), and high cost of transportation (63%). Respondents in Puerto Rico reported significantly fewer barriers (4.9) than did those in the other

locations in general; specifically, they reported less barriers related to service coordination and service hours. Barriers related to service availability appeared similar across the sub-regions. Health Coordinators reported an average of 14.5 linkages, with common linkages being with public health services, WIC, and child protective services. The linkages in Puerto Rico were generally similar to those of other sub-regions. The authors conclude the article by discussing how the study's results can help Head Start understand which of their health care linkage services are working best, as well as which barriers may need to be addressed to improve Head Start children's linkages to health care.

Gillete, N. Y. (1989). *Evaluation of the use of a systematic training for effective parenting program modified for low-income Puerto Rican parents of preschoolers* (Unpublished doctoral dissertation). University of Massachusetts.

**Abstract:**

Research in parent training programs has shown that STEP (Dinkmeyer and McKay, 1976) can be presented in less than nine weeks, but little information exists with regard to its use with populations other than middle-class parents, and no studies have focused on presenting the program to low-income Puerto Rican parents. To test whether the STEP program (Spanish translation) would work with Puerto Ricans, twenty-four low-income Puerto Rican volunteer mothers of three and four year olds from a pre-school were randomly assigned to one control and one experimental group. Beside the "group" condition with subjects taking the training in consecutive weeks, there was, based on convenience to parents, an "individualized" condition in which subjects had individual appointments and rescheduled as needed. The modified program was taught in four sessions; the cuts involved focusing on the skills and omitting the discussions. A T-test revealed a significant improvement in experimental mothers' knowledge of the course material ( $T=-2.58$ ,  $p=.033$ ). A two-way ANOVA showed a significant change in mothers' attitudes regarding their child behavior on a adapted APACBS ( $F=4.7$ ,  $p=.048$ ) but not on the 32-item PACBS scale ( $F=.033$ ,  $p=.85$ ). A qualitative analysis revealed clinically significant changes of behaviors. Six of the ten experimental mothers when asked at post-test what they were doing regarding the target behavior they selected for their child focused on their own parental behavior and limitations. In contrast, control group parents focused strictly on punishment or its absence. Some parents prefer to join large groups while others wanted the program on an individual basis. Very high interest for the program and training was expressed.

**Annotation:**

This study focused on the potential applicability and effectiveness of a modified STEP (Systematic Training for Effective Parenting program) for low-income Puerto Rican parents. First and second-generation low-income Puerto Rican mothers living in the New England area participated. At pretest, 13 women were in the experimental group and 11 were in the control group; attrition was experienced. The STEP program was translated and modified into four sessions. The author hypothesized that parents in the experimental groups would show improvement in parenting skills, perspectives of their children's behaviors, targeted program behaviors, and interactions with their child. Parents who participated in at least three sessions of the modified STEP program displayed significant improvement in many of the hypothesized domains, compared to the control group. Moreover, parents reported that the program's techniques worked well in the home environment. Finally, the author suggested future research directions for parenting programs for Puerto Rican mothers, such as examining longitudinal effects and format (group vs. individual).



Goldstein, B.A., & Cintrón, P. (2001). An investigation of phonological skills in Puerto Rican Spanish-speaking 2-year-olds. *Clinical Linguistics and Phonetics*, 15(5), 343–361.

**Abstract:**

Researchers have been interested in separating common cross-linguistic phonological patterns (so-called ‘universals’) from language-specific ones. Previous studies typically have focused on a relatively small number of patterns (e.g., substitution patterns for target liquids, deletion patterns for clusters). The purpose of this study is to describe phonological skills of three Puerto Rican, Spanish-speaking 2-year-olds and to determine which patterns tend to be specific to Spanish and which ones are also exhibited commonly by speakers of a variety of languages. The study of Spanish represents an opportunity to continue examining a language that has a different ambient phonology and comes from a different language family than the languages examined in other studies of 2-year-olds: English, Cantonese and Igbo. Three monolingual, Spanish-speaking 2-year-olds living in Puerto Rico participated in the study. Independent and relational analyses of both consonants and vowels were conducted on the children’s connected speech samples. Comparisons were then made to phonological profiles of other Spanish-speaking 2-year-olds and to 2-year-olds speaking languages other than Spanish. The results indicated that the Puerto Rican, Spanish-speaking children exhibited phonological skills that were both comparable to and divergent from those exhibited by 2-year-old speakers of other languages.

**Annotation:**

Research on phonological development in children as young as 2-years-old is rare, as is research on phonological development among Spanish-speakers. Previous cross-linguistic studies found that children speaking different languages had many similar skills and difficulties, although differential error patterns have also been reported. In this study, the researchers investigated the phonological patterns of 2-year-old Spanish-speakers and compared them to results from previous studies analyzing 2-year-old speakers of other languages to better understand the development of phonological skills in Spanish and the universality of phonological patterns. The sample included three 2-year-old boys living in San Juan, Puerto Rico in middle-income families with typical speech and hearing development. Spontaneous speech samples were recorded in children’s homes in the context of free play with their mothers. Children’s utterances were coded for consonant and vowel production, syllable types, and word length. Consistencies across languages included syllable structure, number of final consonants, number of consonant clusters, and types of deletions. Inconsistencies across languages included number of initial consonants, types of cluster reductions, word length, and substitution patterns. The similarities and differences evidenced across languages suggested that there may be some universals and some language-specific aspects of phonological development. These results reflected preliminary, not conclusive, evidence for the conclusions drawn, because only three children were studied, all of whom were male.

Goldstein, B. A., & Iglesias, A. (1996). Phonological patterns in Puerto Rican Spanish-speaking children with phonological disorders. *Journal of Communication Disorders*, 29(5), 367–387. doi:10.1016/0021-9924(95)00022-4

**Abstract:**

This study characterizes the phonological patterns in phonologically disordered Spanish-speaking children who speak the Puerto Rican dialect. A single-word assessment was used to describe the mean percentage-of-occurrence and standard deviation of phonological processes and the number and type of nontargeted process errors in 54 3- and 4-year-olds. Analyses were made in reference to the Puerto Rican dialect of Spanish, yielding a number of specific patterns that characterized the speech of these children.

**Annotation:**

There has been scarce research on normative speech, disordered speech, and language patterns of Hispanic individuals. Much of what has been studied has been with Mexican and Mexican American samples. To address this gap in the literature, the researchers investigated the phonological errors of 65 3- and 4-year olds who spoke the Puerto Rican dialect of Spanish, of which 54 were found to be phonologically disordered. Participants attended a bilingual Head Start Program in an urban area of the U.S. mainland. The children had been referred to the project by either a parent or a teacher concerned about speech development. All participants were screened for hearing problems. To assess whether or not phonological disorder was present, the Assessment of Phonological Disabilities - Spanish (APD) was administered. The APD is a single word assessment that measures children's ability to identify and produce consonant-vowel-consonant words, clusters, and multisyllabic words from pictures. It has a clinical cut-off score to demarcate phonological disability. Results revealed that the phonologically disordered Puerto Rican children in the sample often made substitution and omission errors. Specifically, cluster reduction was the most frequent error, and initial consonant deletion, liquid simplification, and stopping were also moderately frequent. Overall, these findings were similar to the patterns of phonologically disordered English-speaking children. While the findings were also similar to results from studies of Mexican children, the authors cautioned that cross-dialectal comparisons are still worthwhile and necessary. These results enhance the research on phonological disorders by focusing specifically on preschool-aged Spanish-speakers of the Puerto Rican dialect with phonological difficulties; a more nuanced understanding of their common errors may be informative in guiding and individualizing their treatment.

González-Martínez, J. C. (2002). *Neonatal behavior & maternal representations over the first month postpartum: A short-term longitudinal study with Puerto Rican infants and their mothers* (Unpublished doctoral dissertation). University of Massachusetts-Amherst, Amherst, MA.

**Abstract:**

This short-term longitudinal study investigated changes in newborn infant behavior over the first month of life and changes in mothers' mental representations of their infants and of themselves as parents, during the first month postpartum. There is evidence to suggest that maternal representations and newborn infants' behavior play an important role in evolving infant-mother relationship, and that a newborn infants' developmental progress is depended upon the quality of that relationship. While there is some research on neonatal behavioral development in Puerto Rican infants, there are no data on the development of maternal representations in Puerto Rican mothers. The study's sample consisted of 20 newborn infants and their mothers. Infants were examined on the Clinical Neonatal Behavioral Assessment Scale (CLNBAS) (Nugent, 2001), during the first 48 hours of life and at one month postpartum. Mothers' representations were examined using the Maternal Representation Questionnaire (MRQ)(Stern & Stern-Brushwiler, 1999).

This is the first study to use the CLNBAS and MRQ for data collection during the first month. Results showed that newborn infant behavioral patterns of Puerto Rican infants changed in a positive direction during the first month postpartum. More specifically, significant positive developmental changes in the areas of autonomic, motor, and social interactions were found, while there were no changes in state organization, as measured by the CLNBAS. Results also revealed that mental representations of Puerto Rican mothers were positive and stable during the first month postpartum. Puerto Rican mothers' mental representations during the first month barely changed, were very positive and also consistent with the positive newborn developmental changes as assessed by the CLNBAS during the first month of their infant's life. Mothers' knowledge of their infants' capacities increased over the course of the first month and they felt they became more effective and comfortable in their role as new mothers. Mothers also reported feeling well supported by family and friends during their transition to motherhood. In summary, this study contributes to the understanding of newborn behavioral changes and maternal representations early in the development of the mother-infant relationship in the context of Puerto Rican families.

**Annotation:**

In this study, twenty Puerto Rican mothers living in Springfield, Massachusetts were followed from their final days of pregnancy until one month postpartum. An aim of the investigation was to better understand the changes that come with becoming a new parent, along with infant development. Puerto Rican mothers' evidenced very positive mental representations during the first 48 hours, leading to the first month postpartum. The in-

fants also showed healthy development and behavioral changes related to autonomic, motor and social interactive functioning. The study also showed that the CLNBAS serves as a sensitive measure of change among newborns within the first month of life. Finally, the authors noted that the behavioral patterns in Puerto Rican infants and their mothers were positive. More research was recommended by the author to better understand the Puerto Rican culture and population, and relationships with early child development and parenting.

González-Ramos, G., Zayas, L. H., & Cohen, E. V. (1998). Child-rearing values of low-income, urban Puerto Rican mothers of preschool children. *Professional Psychology: Research and Practice*, 29(4), 377-382.

**Abstract:**

To enhance clinicians' understanding of the child-rearing values Puerto Rican mothers consider important in parenting preschool-age children, the authors conducted focus groups, interviewed cultural consultants, and searched the literature. Eighty low-income, urban mainland Puerto Rican mothers with young children ranked in order of importance to them 13 child-rearing values that were presented. Mothers ranked honesty, respect, and responsibility most highly, followed by loyalty to family, affection, and sharing. They ranked values associated in the literature with Anglo culture (e.g., assertiveness, independence, and creativity) as being of lesser importance. Implications for therapy and educational interventions with parents and children are discussed.

**Annotation:**

Researchers were interested in learning which values or characteristics Puerto Rican mothers perceived as most important to instill in their preschool children. A convenience sample of 80 Puerto Rican mothers that resided in the U.S. mainland and had at least one child under age 6 was recruited. These mothers completed the Maternal Child-Rearing Values and Behaviors Inventory (MCRV-BI; a scale created by the authors and tested in focus groups) in which they rated 13 values in order of importance to them. The mothers ranked the values in the following order: honesty, respect, responsibility, loyalty, affection, sharing, independence, getting along with others, dignity, value of older people, humility, assertiveness, and creativity. Differences in ratings were found based on the degree of acculturation of the mother. Mothers who were more acculturated rated independence and creativity higher, showing more concordance with ratings of European American mothers in other studies. Less acculturated mothers ranked humility and respectfulness higher, aligning with more of a traditional Puerto Rican approach to childrearing. The authors suggest that psychologists can benefit from understanding parenting goals and the factors that affect them. Implications for practice include underscoring the importance of clinicians displaying openness to the influence of traditional cultural values on childrearing practices among minority families. However, the authors point out that the findings may have limited generalizability, based on the small size of the sample, the non-random approach to recruitment, and the homogeneity of the sample in many demographic variables.

Gorman, B. K. (2001). *Early childhood development among mainland and island Puerto Ricans: The roles of birth outcomes, socioeconomic status, and social support*. (Unpublished doctoral dissertation). Pennsylvania State University, State College, PA.

**Abstract:**

The main purpose of this dissertation is to identify those factors--both within the child as well as the caretaking environment--that affect the motor and social development scores of Puerto Rican children in early childhood (1-3 years of age). While there is an extensive literature available on this topic for non-Latino white (often middle class) children, few studies have examined this process for minority children, particularly Puerto Ricans. This study utilizes data from the Puerto Rican Maternal and Infant Health Study (PRMIHS), which contains a representative sample of Puerto Rican women and children from six U.S. states and the commonwealth of Puerto Rico. In particular, the oversample of low birth weight children in combination with detailed measures of health, demographic and socioeconomic characteristics, and social support allow for a more adequate analysis of both perinatal health and the caretaking environment than most past studies.

The strongest and most consistent finding is that poor health at birth has a large, significant, and negative relationship with developmental scores in early childhood. The results also show that the impact of health at birth is largely independent of other demographic, economic, and social characteristics of the child's family. Environmental influences are more complex. Unlike perinatal health, socioeconomic status has an inconsistent (and often absent) relationship with early child development among both mainland and island Puerto Ricans. Maternal stress is more consistent, showing a negative relationship with development (although this relationship is stronger among U.S. than Puerto Rico residents). While measures of social support were able to buffer the influence of stress somewhat, the protective effects of support received were often felt via main effects on motor and social development scores.

Overall, the results indicate that children who experience multiple biological and/or environmental risks have the highest likelihood of poor development in early childhood. At the same time, having multiple protective factors can also be instrumental in promoting health development. Lastly, substantial mainland-island differences in factors affects child development were found consistently throughout this dissertation.

**Annotation:**

This study examined risk and resilience factors among a cohort of Puerto Rican infants living on the island and in the mainland. The analyses used data from the Puerto Rican Maternal and Infant Health Study (PRMIHS), which interviewed a total of 2,763 women. Two-thirds of the sample included women with living infants and one-third had experi-

enced the death of an infant. The children were about 19 months at the time of the interviews. Statistical weighting was utilized to ensure accurate and replicable results. Data for non-Puerto Rican groups were drawn from the National Longitudinal Survey of Youth (NLSY). Development scores were found to be lower for island Puerto Ricans than for other groups, though some caution in interpretation is needed due to the differences in the PRMIHS and NLSY datasets. Puerto Rican infants on the island also scored lower than their mainland counterparts, particularly males. In addition, infants of teenage mothers on the island also fared better if living with both maternal grandparents. Further, infants of mothers with lower levels of education scored higher on developmental tasks if living on the mainland. In contrast, maternal stress played a stronger role in infant development among mainland Puerto Ricans, than for island families. This may relate to the higher level of social support evidenced on the island, among other factors. Among a host of social, demographic, and economic variables, the best predictors of Puerto Rican infant development were health at birth, age, gender, and plurality. Maternal stress and social support also play an interactive role, particularly when an infant is born with health difficulties.

Gorman, B. K. (2002). Developmental well-being among low and normal birth weight U.S. Puerto Rican Children. *Journal of Health and Social Behavior*, 43(4), 419.

**Abstract:**

Low birth weight is a more common occurrence among Puerto Rican children than among children from most other racial and ethnic groups in the United States, and they are more likely to experience the added risk of living in poverty. This study addresses what is protective for the development 602 normal birth weight and 554 low birth weight children from the Puerto Rican Maternal and Infant Health Study. The results presented in the current analysis identify several protective influences for development (particularly maternal social support, medical insurance, and paternal employment) among low birth weight children (who are at a high risk for developmental problems), and almost none for normal birth weight children. The results largely support the contention that protective factors emerge, or increase in strength, only in the presence of risk, indicating the use of targeted child health programs based on birth weight are an effective and efficient way to improve the developmental well-being of young Puerto Rican children in the United States.

**Annotation:**

Using data from the Puerto Rican Maternal and Infant Health study, the author examined risk and resilience among a sample of low (n=554) and normal (n=602) birth weight children. Mothers reported on their children's global development via the Motor and Social Development Index, which was first developed for the National Health Interview Survey. Low birth weight children were more likely to live with a single parent and to have a working mother within their first year of life. Overall, the author finds that protective factors play a role in development with the introduction of risk. Significant protective factors for low birth weight Puerto Rican children include socioeconomic status, paternal employment, emotional support, and medical insurance. Finally, a longitudinal study was proposed in order to examine the degree to which protective influences are present over time, along with their relationship with child development.



Guarnaccia, P. J., Martinez, I., Ramirez, R., & Canino, G. (2005). Are ataques de nervios in Puerto Rican children associated with psychiatric disorder? *Journal of the American Academy of Child and Adolescent Psychiatry*, 44(11), 1184–1192. doi: 10.1097/01.chi.0000177059.34031.5d

**Abstract:**

**Objective:** To provide the first empirical analysis of a cultural syndrome in children by examining the prevalence and psychiatric correlates of *ataques de nervios* in an epidemiological study of the mental health of children in Puerto Rico.

**Method:** Probability samples of caretakers of children 4-17 years old in the community ( $N = 1,892$ ; response rate: 90%) and in clinical services ( $N = 761$ ; response rate 72%) were administered structured interviews to assess the presence and correlates of *ataques de nervios*.

**Results:** Nine percent of children in the community sample and 26% of children in the clinical sample had a reported history of an *ataque de nervios*. In contrast to the overall community and clinical samples, which had more boys in them, the *ataque de nervios* groups in both samples had more girls in them. Family history of *ataques de nervios* was associated with *ataques de nervios* in children in both samples. Across a wide range of depression, anxiety, and disruptive disorders, children who reported an *ataque de nervios* were more likely to meet research criteria for psychiatric disorder in both samples.

**Conclusions:** *Ataques de nervios* are a frequently reported cultural syndrome among children in Puerto Rico. Adolescent girls are more likely to report this experience. *Ataques de nervios* have a significant relationship with psychiatric disorder and impairment in Puerto Rican children.

**Annotation:**

With the increased awareness of cultural syndromes reflected in *DSM-IV* at the time, the authors aimed to determine if a cultural syndrome found commonly among adults in many Hispanic groups, *ataques de nervios* (AdN), was observed in children. Common symptoms of AdN are uncontrollable screaming, crying, trembling, and/or aggression, usually follow a significant stressor such as a death in the family. This study used two samples: a community sample and a clinical sample. The community sample is the same that was used in Canino et al.'s (2004) epidemiological study described earlier in this annotated bibliography. It was designed to be representative of all Puerto Rican 4- to 17-year-olds ( $n = 1,886$ ). The clinical sample was identified with stratified random sampling and consisted of Puerto Rican 4 to 17-year-olds receiving mental health services from public or private providers ( $n = 751$ ). The Diagnostic Interview Schedule for Children - IV (DISC-IV) and the Parent Interviewer Children's Global Assessment Scale (PI-CGAS)

were used, in addition to specific questions about AdN and perceived poverty. Results revealed that 9% of the community sample and 26% of the clinical sample had a history of AdN. Across samples, females were more likely to have experienced an AdN. Also across samples, children who had AdN were more likely to have another psychiatric disorder, and more likely to have a family history of AdN. For the clinical sample only, children whose parents had a history of any type of mental illness were also more likely to get AdN. Children of parents who perceived that their families "lived poorly" were more likely to have had AdN. *Ataques de nervios* are a cultural syndrome commonly found among Puerto Rican adults, and this study indicated that they are a common method of expressing emotional distress among Puerto Rican children as well. The article discussed clinical implications for the accurate and culturally sensitive assessment and diagnosis of Puerto Rican children.

Gullón-Rivera, A. L. (2008). *Puerto Rican kindergarteners' representation of the self within family relationships: Are they related to their self-worth, child-mother relationship and behavioral adjustment?* (Unpublished doctoral dissertation). University of Wisconsin – Madison, Madison.

**Abstract:**

Eliciting stories about family relationships, especially relationships that involve attachment figures, has proved to be a useful method by researchers for obtaining meaningful information about how young children perceive the self in family relationships. This dissertation is based on children's narratives in response to the Attachment Story Completion Task (ASCT; Bretherton and Ridgeway, 1990), conceptualized as an expression of their sense of self-worth in the context of family relationships and coded with the aid of a system designed for this purpose by Gullón-Rivera and Bretherton (2005) for a previous study, the Overall Meaning Segment Based coding system (OMSB). This system focuses, first, on segmenting each story into meaningful interactive episodes. It then evaluates the coherent sequencing of these segments within each separate story. Finally, an overall pattern of self-representations is derived by considering the overall pattern of self-representations across the 5-story set. In a previous study with children from divorced families, ASCT self-representation patterns predicted teacher ratings of prosocial and problematic behavior with peers in the preschool (Gullón-Rivera & Bretherton, 2005).

The current study aims to provide additional validation for this coding system by testing three hypotheses grounded in assumptions from attachment theory (Bowlby, 1973, 1988) by (1) comparing the quality of Puerto Rican children's self-representations as reflected in their ASCT narratives to their responses of self-worth as expressed in answers to both indirect and direct questions about the self; (2) examining links between children's ASCT self-representation and their mothers' perception of the parent-child relationship; and (3) examining whether ASCT self-representations predict children's socio-emotional behavioral adjustment as rated by teachers and mothers. According to John Bowlby (1973, 1980), children develop internal working models of self in relation to attachment figures that assist them in the prediction, interpretation and guidance interactions in that specific relationship. Bowlby also proposed (and studies have shown) that these relationship-specific representations also influence how children enter into relationships with others outside the family.

One hundred and five children (51 girls and 54 boys;  $M_{age} = 5.52$ ,  $SD = .34$ ) from 11 kindergarten classrooms located in Lares, Puerto Rico participated in this study. The majority of children in the study were from two-parent, lower middle class homes. All of the parents had earned a high school diploma, and 60% had taken some college courses or had completed a college degree. Children were interviewed at their school to assess their sense of self-worth and vocabulary comprehension. Parents and teachers completed two questionnaires.

To validate the notion that the ASCT, coded with the OSMB system, can be used to assess young children's patterns of self-representation two existing instruments for assessing aspects of self-worth in preschoolers were employed: (1) Cassidy's (1988) Puppet Interview during which the child answers questions about the self indirectly by speaking through a puppet and (2) the Pictorial Scale of Perceived Competence and Social Acceptance (Harter and Pike, 1984), during which the child responds to direct questions about maternal and peer acceptance. In order to examine the hypothesized reciprocal influence between children's self-representation and the quality of the mother-child relationship as perceived by the mothers, mothers evaluated their children's behavior toward them using the Mothers' Report of Child Relationship Scale by Schaefer (1987). To examine the assumption that children's self-representation influence how they enter into interactions with others outside home, teachers and mothers rated children's socioemotional behavioral adjustment. Mothers completed the Child Behavior Checklist by Achenbach and Rescorla (2000). Teachers evaluated children's social competence with the Preschool Behavior Questionnaire by Olson (1985) and the Child-Teacher Report Form by Achenbach and Rescorla (2000).

Regarding hypothesis 1, correlational analyses provided highly significant support for the convergent validity of the ASCT (coded with the OSMB system) as an assessment of young school age children's perception of self-worth in the family. Children who enacted and narrated stories portraying the child protagonist (vicarious self) as more trusting (less conflicted, rejected and disturbed) also obtained more optimal self-worth scores on the Cassidy Puppet Interview. Correlations between ASCT Self-Representation scores and children's social acceptance by mother and peers on the Harter and Pike scale were moderate and became significant only after eliminating two items that were not consistent with the practices of Puerto Rican parents.

With respect to hypothesis 2, findings of highly significant correlations between maternal ratings of the child's behavior and the ASCT self-representation scores were consistent with Bowlby's (1988) assumption that children's internal working model of the self reflects the quality of their attachment relationship with the primary caregiver. Mothers who perceived their children as more positively involved and less detached in the relationship, had children who narrated ASCT stories in which the protagonist child-self was depicted as trusting and confident in the support and care received from parents and siblings.

Concerning hypothesis 3, regression analyses provided strong support for the predictive validity of the ASCT Self-Representation derived from the OSMB. That is, more trusting, less conflicted, rejected or disturbed self-representation predicted more desirable interactive behavior and fewer behavioral problems in relation to peers, as rated by teachers and mothers. This finding provides support to Bowlby's assumption that the representation of the self in relation to the attachment figure also influences how children enter into rela-

tionships with others outside the family.

In sum, the results of this study provided strong evidence that the ASCT, coded with the OSMB system, makes methodological and conceptual contributions to the literature on children's capacity to represent important aspects about the self—namely, their perceptions and feelings of being valued by family members, especially in stress situations—and showed that it can be used as a valid assessment of children's self-representations with Puerto Rican children. Additional support for the cross-cultural validity of attachment theoretical propositions and constructs—parental sensitivity, responsiveness and security—was provided by the demonstration of links between a child's sense of security/trustingness (or sense of self-worth) and maternal perceptions of the child-mother relationship. Finally, the significant association between teacher and mother ratings of children's socio-emotional behavioral adjustment and children's representation of the self corroborated Bowlby's assumption of the role of mental representations of self in family relationships in relation to how children enter into social interaction with others.

**Annotation:**

This dissertation research aimed to contribute to the validation of the Attachment Story Completion Task (ASCT) by studying its concurrent and construct validity with Puerto Rican kindergarteners. ASCT is a paradigm that elicits stories that reveal information about the participant's attachment to his/her caregiver, essentially seeking to capture one's sense of self-worth within one's family. Participants were 105 kindergarteners in 11 different classrooms in Puerto Rico, as well as their teachers and parents. To assess concurrent validity, children were administered the ASCT and two other conceptually related measures: a puppet interview in which they answered questions about themselves using a puppet, and a pictorial questionnaire probing maternal and peer acceptance. To examine if ASCT scores related to mother-child relationship quality, mothers reported on their children's behavior in dyadic exchanges with the Mothers' Report of Child Relationship Scale. Teachers also both rated the children's socioemotional development, to determine if ASCT scores related to interactions with others besides mothers. Results showed that 1) concurrent validity was supported by significant moderate correlations between the ASCT and the two other measures of self worth and acceptance, 2) more positive ASCT stories were associated with positive and involved mother-child relationships, and 3) more positive self-reflections in the ASCT related to fewer behavior problems and better interactions with peers. These results support the potential validity of the ASCT as a measure of attachment among Puerto Rican children, and support the tenants of attachment theory that claim that one's early attachment relationship may create an internal working model for future relationships.

Hammer, C. S., Lawrence, F., Rodríguez, B., Davison, M. D., & Miccio, A. W. (2011). Changes in language usage of Puerto Rican mothers and their children: Do gender and timing of exposure to English matter? *Applied Psycholinguistics*, 32(2), 275–297. doi:<http://dx.doi.org.proxycu.wrlc.org/10.1017/S014271641000041X>

**Abstract:**

This longitudinal study investigated changes in reported language usage between Puerto Rican mothers and their preschoolers over a 4-year period. It also examined whether differences in language usage occurred depending on the timing of children's exposure to English and children's gender. Seventy-six mothers reported the languages they and their children used when talking to each other during 2 years in Head Start, kindergarten, and first grade. Mothers of children who were exposed to Spanish and English prior to preschool entry reported using more English to their children than mothers of children who were not exposed to English until after preschool entry. The language usage of the children followed the same patterns as their mothers. The difference between the groups was maintained over the 4 years, although both groups increased their English usage. A gender effect was observed. Mothers of girls were five times more likely to use "More or All Spanish" than mothers of sons. In addition, girls who were exposed to Spanish only prior to preschool entry were six times more likely to speak to their mothers in "More or All Spanish" than other participating children. The bidimensional model of acculturation is used to present and interpret the findings.

**Annotation:**

The large population of Spanish-speakers, as well as dual English and Spanish language learners, in the school system underscores the need to better understand the process of acquiring two languages, including the different factors that impact this process in young children. The authors investigated changes in mother-child language use over a 4-year time period. The sample included 76 Spanish-speaking mothers of Puerto Rican descent living in the mainland with a child in Head Start. Home visits were made annually for the two years the child was in preschool, kindergarten, and first grade. Mothers were interviewed at each visit about their language use with their child. Longitudinal data revealed a steady increase in the amount of English that mothers spoke to their children, and a smaller increase in the amount of English children spoke to their mothers. Such increases in English language usage were seen among mother-child dyads who had spoken both English and Spanish prior to preschool entry, as well as among dyads who had primarily spoken Spanish. Gender differences were noted with mothers of males more likely to use predominantly English when speaking to their child than mothers of females. The observed gender difference in mothers' choice of language may reflect the socialization of the genders. Within Hispanic families adhering to traditional roles, females' roles as caretakers may influence language usage; as future mothers, girls may be regarded as the conveyors of the Spanish language to future generations. Further, speaking more English to boys may reflect the expectation that they will work outside the home. Finally, additional

analyses examined the potential influence of the timing of initial English use among children and mothers. The question “At what age, did you, other family members, or people at school begin talking to your child in English?” was not found to predict changes in either child or maternal language use. Thus, timing was not as influential in this study as other factors were. This may be due to methodological limitations and/or the high level of later English exposure in the Head Start program for all study participants.

Hammer, C. S., Nimmo, D., Cohen, R., Draheim, H. C., & Johnson, A. A. (2005). Book reading interactions between African American and Puerto Rican Head Start children and their mothers. *Journal of Early Childhood Literacy*, 5(3), 195–227. doi: 10.1177/1468798405058683

**Abstract:**

In keeping with a sociocultural view of children's literacy development, this study investigated the book reading behaviors of African American and Puerto Rican mothers and their Head Start children. Ten African American and 10 Puerto Rican mothers and their children participated. The communicative behaviors of the mothers and children produced during book reading were analyzed and the book reading styles of the dyads were also identified. Results revealed that mothers read the text from the books, responded to their children and asked questions most frequently. The children responded to their mothers' utterances, produced labels/comments, and asked questions most frequently. Puerto Rican mothers produced significantly more labels/comments than did African American mothers. Puerto Rican children had higher assertiveness ratios than their African American counterparts. Four book reading styles were identified in the two groups. Implications for developing interventions that incorporate families' literacy practices are discussed.

**Annotation:**

Parent-child shared book reading is commonly accepted to be an important aspect of children's literacy development. Many studies on the topic document differences in shared reading styles based on socioeconomic status (SES) and ethnicity. However, most studies compare Hispanic or African American families to Caucasian families. This study examined similarities and differences between African-American mother-child dyads ( $N = 10$ ) and mother-child dyads of Puerto Rican descent ( $N = 10$ ) living in mainland U.S. All of the families were participating in Head Start at the time of the study (mean child age = 53 months). Mothers were interviewed about their personal and shared literacy practices, and shared reading interactions between mothers and infants were video-recorded and coded. The coding scheme entailed classifying each mother and child communication as responsive (e.g. comment on what the other person just said) or assertive (e.g., asking a question). Across the two cultural groups, mothers and children had comparable numbers of utterances. Maternal behaviors were largely similar, except Puerto Rican mothers produced more labels and comments than African American mothers. Child behaviors also did not generally differ, except in their assertiveness rating. An assertiveness ratio was computed that reflected the proportion of the total assertive utterances in the dyadic interaction that the child generated. Puerto Rican children made 1 in 3 of the assertive utterances in their dyads, whereas African American children made 1 in 6. Thus, the Puerto Rican children in the sample asked a higher proportion of questions, while African-American children had higher proportions of comments. In addition, four maternal shared reading styles were identified: text-reading style (at least 60% of their utterances were the text), labeling style (a high proportion of labeling or commenting),



child-centered style (children were the primary storytellers), and combinational style (a mix of reading the text, labeling/commenting, and responding to child utterances). Overall, it is informative to note that African American and Puerto Rican dyads displayed largely similar shared reading patterns. Interestingly, Puerto Rican children were more active participants, and their mothers were likely to provide labels and allow children to lead the storytelling. These differences can be interpreted in light of cultural differences in the socialization aspect of shared reading.

Hammer, C. S., Rodríguez, B. L., Lawrence, F. R., & Miccio, A. W. (2007). Puerto Rican mothers' beliefs and home literacy practices. *Language, Speech, and Hearing Services in Schools*, 38(3), 216–224.

**Abstract:**

**Purpose:** The aims of this investigation were to examine the parenting beliefs and literacy practices of mothers of Puerto Rican descent and to determine if relationships existed between the mothers' beliefs and practices.

**Method:** Eighty-one mothers of bilingual children who attended Head Start programs participated in the project. As part of a larger project, the children were divided into 2 groups depending on the timing of when they were exposed to English. Children who were exposed to Spanish and English from birth were classified as having home English communication (HEC); children who were not expected to communicate in English until age 3 when they entered Head Start were classified as having school English communication (SEC). Trained home visitors used questionnaires to collect information from the mothers on their background, beliefs about parenting and education, and home literacy practices.

**Results:** The results revealed that Puerto Rican mothers held both traditional and progressive beliefs. Additionally, differences between the mothers of children in the HEC and SEC groups were observed on some of the measures of beliefs and practices. Relationships between beliefs and practices were not observed.

**Implications:** The findings demonstrated that Puerto Rican mothers integrated aspects of both the Puerto Rican culture and the mainstream culture of the U.S. mainland into their views concerning child rearing and education. Implications for practice are discussed.

**Annotation:**

The authors set the stage for the study by discussing the need for research on cultural differences in parents' childrearing beliefs and the home learning environment, to supplement what is known from studies using European American samples. In recognition that the Hispanic population is quite heterogeneous, this study focused on Puerto Rican families living in the U.S., a group that is distinguished by factors such as their U.S. citizenship, high levels of poverty, and bilingualism. Participants were 81 mothers of Puerto Rican descent with children attending Head Start programs in the mainland U.S. The children ( $M$  age = 4 years, 8 months) were all Spanish-English bilingual, but some ( $N = 51$ ) had experienced home English communication (HEC) before beginning preschool, whereas others ( $N = 30$ ) had only experienced school English communication (SEC). Mothers in the SEC group were more likely to have been born on the island. Data was collected in home visits. The degree to which mothers' beliefs were traditional or progressive was measured with the Parental Modernity Scale. Mothers also rank ordered a series of statements to determine the relative importance they placed on their child's conform-

ing, self-directing, and social behaviors. The Home Literacy Activities Questionnaire was used to assess the frequency with which the mother and child, alone or together, engaged in literary activities. Both groups of mothers endorsed both progressive and traditional beliefs at a high rate. They also endorsed high value for all three domains of child behavior; however, SEC mothers ranked conformity significantly lower and self-direction significantly higher than HEC mothers. Mothers in the HEC group read to their children and taught early literacy skills significantly more often, although the value placed on reading was comparable for the two groups. Interestingly, maternal beliefs were unrelated to home literacy activities. These results seem to indicate that, for immigrant or minority parents, parenting beliefs may reflect the influence of multiple cultures. While beliefs were not linked to behaviors, the authors noted that a more sensitive understanding of cultural influences on parenting beliefs may be helpful for enhancing teacher-family communication and collaboration.

Harwood, R., & Miller, J. (1991). Perceptions of attachment behavior: A comparison of Anglo and Puerto Rican mothers. *Merrill-Palmer Quarterly*, 37(4), 583-599.

**Abstract:**

Sociocultural values and perceptions of attachment behavior were examined among middle- and lower class Anglo-American and Puerto Rican mothers (n = 51). Subjects offered closed and open-ended assessments of three hypothetical 18-month-old toddlers portrayed as displaying Group A, B, or C patterns of attachment behavior. Anglo mothers placed more emphasis on self-confidence, independence, and the ability to function autonomously. In contrast, Puerto Rican mothers focused more on obedience, the capacity for relatedness, and the maintenance of proper demeanor. In addition, Anglo mothers rated the Group C infant as significantly less desirable than did the Puerto Rican mothers. The findings suggest that conceptualizations of individual differences in attachment behavior reflect, in part, cultural ideals, and indicate the need for culturally-sensitive models of the meaning and predictive significance of attachment behavior.

**Annotation:**

This study examined how Puerto Rican and Anglo-American mothers interpreted attachment behaviors. 17 Puerto Rican mothers from a low socioeconomic status (SES), 17 Anglo-American mothers from low SES, and 17 Anglo-American mothers from middle SES participated in the investigation. All of the Puerto Rican mothers had been born on the island and reported that Spanish was their first language; they had lived in the mainland U.S. for a mean of 4 years. Verbal descriptions of the Strange Situation task were presented to measure the mother's attitudes towards three attachment behaviors. The data were then analyzed using a Mixed design ANOVA. Puerto Rican mothers were found to place a higher emphasis on behavior and social relatedness than the low and high SES Anglo-American mothers. In contrast, Anglo-American mothers emphasized independent behavior. In terms of classifications, all groups rated Group B ("secure" behaviors) highly, while Puerto Rican mothers rated Group C ("resistant" behaviors) more favorably. No differences were noted in the ratings for Group A ("avoidant" behaviors), though their qualitative rationales were distinct. Socialization differences were also reported among the cultural groups. Generalizing from the results, the authors proposed that sociocultural considerations must be taken into account when evaluating individual differences in attachment. Finally, more culture-sensitive models were recommended.

Harwood, R. L., Schölmerich, A., & Schulze, P. A. (2000). Homogeneity and heterogeneity in cultural belief systems. *New Directions for Child and Adolescent Development*, 87, 41-57.

**Abstract:**

Intergroup and intragroup variations in Anglo and Puerto Rican mothers' long-term socialization goals and in mother-infant interactions provide an empirical context for this exploration of how we can simultaneously represent both homogeneity and heterogeneity in cultural communities.

**Annotation:**

Of interest in this article was the presence of cultural patterning in situational variability in both White middle class mothers in Connecticut, and middle-class Puerto Rican mothers in San Juan. 40 mothers participated in this investigation (18 Puerto Rican, and 22 White). They reported on their long-term socialization goals, and were video recorded interacting with their infants. Results suggested that White mothers emphasized socialization goals like "self-maximization" and "self-control", while Puerto Rican mothers focused on goals like "proper demeanor" and "decency." Researchers found that both verbal and non-verbal behaviors during mother-infant dyad interactions matched the cultural constructs of the mothers. Anglo mothers displayed more individualism, while Puerto Rican mothers evidenced more sociocentrism behaviors. The authors concluded the article by describing the relationship of cultural belief systems on maternal socialization goals, while acknowledging the presence of heterogeneity in cultural groups.

Harwood, R. L., Schoelmerich, A., Ventura-Cook, E., Schulze, P. A., & Wilson, S. P. (1996). Culture and class influences on Anglo and Puerto Rican mothers' beliefs regarding long-term socialization goals and child behavior. *Child Development*, 67(5), 2446–2461. doi:10.2307/1131633

**Abstract:**

These 2 studies examine culture and socioeconomic status as simultaneous possible sources for group differences in mothers' beliefs regarding desirable and undesirable long-term socialization goals and child behavior. In Study 1, 100 mothers of young toddlers aged 12–24 months from 5 sociocultural groups participated: middle- and lower-class Anglo, middle- and lower-class island Puerto Rican, and lower-class migrant Puerto Rican. Results indicate that culture and socioeconomic status contribute independently to group differences, but that cultural effects appear to be stronger. Study 2 examined cultural differences in perceptions of behaviors using middle-class Anglo and Puerto Rican mothers only. The findings support those of Study 1, suggesting that Anglo and Puerto Rican mothers place differential value on the constructs of Self-Maximization and Proper Demeanor, even when socioeconomic status is controlled for. The findings of these studies have important implications for the culturally sensitive study of the relation between parental beliefs and behaviors.

**Annotation:**

Cross-cultural differences in maternal beliefs about desirable attributes and behaviors for children have been observed in other studies, and two studies were designed to parse out the influences of culture and socioeconomic status (SES) on potential group differences. In Study 1, mothers with infants between 12 and 24 months of age were interviewed about positive and negative child qualities, and their responses were coded. There were five groups of mothers, representing both cultural and socioeconomic differences: low- and middle-SES Caucasian American mothers (from New England), low- and middle-SES Puerto Rican mothers (from San Juan and Ponce), and low-SES migrant Puerto Rican mothers. The full sample was 100 mothers (20 in each group). Culture and SES were both found to relate to response patterns, with stronger relationships with culture. Puerto Rican as well as Caucasian American mothers valued self-maximization and proper demeanor in their children, but to different extents. Low- and middle-SES Caucasian Americans valued self-maximization more highly than Puerto Rican mothers. The low-SES Caucasian American mothers also reported valuing proper demeanor. All three groups of Puerto Rican mothers valued proper demeanor more highly than Caucasian mothers, with more value for self-maximization also reported by the middle-SES Puerto Rican mothers.

Study 2 assessed similar constructs, but differed from Study 1 in two key manners: 1) mothers were asked about specific child behaviors rather than broad characteristics, and 2) SES was held constant across groups by interviewing middle-classes mothers. 20 Puerto Rican islanders and 20 Caucasian Americans from New England were interviewed.

The groups were demographically similar except that Caucasian American mothers were slightly older than Puerto Rican mothers. Caucasian American mothers rated active and exploratory behaviors more favorably than Puerto Rican mothers, which corresponded with the self-maximization values described in Study 1. Puerto Rican mothers rated quiet, respectful, and attentive behaviors more favorably than Caucasian American mothers, which was consistent with the proper demeanor values reported in the first study. Based on the findings, the authors suggest that culture influences childrearing beliefs and goals above and beyond the effect of income. Furthermore, the response patterns are reportedly consistent with the individualism-collectivism heuristic, with Puerto Rican mothers' beliefs reflecting value for social/familial cohesion and Caucasian American mothers' beliefs reflecting value for independence and personal fulfillment.

Hakuta, K. (1987). Degree of bilingualism and cognitive ability in mainland Puerto Rican children. *Child Development*, 58(5), 1372-1388.

**Abstract:**

The relation between degree of bilingualism and cognitive ability was assessed longitudinally in low-income background Puerto Rican elementary school children in the United States. All subjects were enrolled in a transitional bilingual education program. 83 subjects, beginning in grades K-1, were followed for 3 years; 111 subjects, beginning in grades 4-5, were followed for 2 years. Cross-sectional and longitudinal models using regression procedures were tested for the hypothesis that degree of bilingualism is positively related to cognitive ability. Positive and statistically reliable results were obtained between nonverbal intelligence measures and degree of bilingualism in the younger cohorts, but the effects attenuated over time and age level. Metalinguistic awareness in the native language did not show a relation with degree of bilingualism. The results are interpreted in light of the sociolinguistic characteristics of the bilingual condition of the community.

**Annotation:**

The purpose of this study was to assess whether children's cognitive abilities relate to their degree of bilingualism (e.g. how balanced their grasp of two languages was). Previous research had supported the notion that bilingual individuals may have some enhanced cognitive functions compared to monolinguals. At the time, this had only been studied in children attending schools with English instruction, and not in schools using multiple languages. This study's participants were children in a Spanish-English transitional program, and the majority of the native Spanish speakers were Puerto Rican. The study included two cohorts of children, one that began when the children were in kindergarten and one in first grade. The cohorts were both followed for three years each, with two observations per year. Another two cohorts, one beginning in fourth grade and one in fifth, were followed for two years, also with two observations per year. The final sample, with some attrition, was 194 children total across all four cohorts. English and Spanish versions of the Peabody Picture Vocabulary Test (PPVT) were used to assess degree of bilingualism, and several measures of metalinguistic awareness were administered. Several measures of nonverbal intelligence, including Raven's Coloured Progressive Matrices Test, were used to quantify cognitive functioning. The study found that there was a positive relationship between cognitive functioning and degree of bilingualism among elementary school students. However, the relationship between the variables was strongest in kindergarten and first grade and weakened in the higher grades. The longitudinal analyses suggested that the two variables interact over time, rather than one causing the other. Interestingly, the researchers found no consistent effect of metalinguistic awareness on bilingualism. This unexpected null result, as well as for the attenuation of the relationship between cognitive ability and bilingualism across childhood, were recommended for further study.



Hernández-Candelas, M. (2007). Policies for early childhood music education in Puerto Rico. *Arts Education Policy Review*, 109(2), 27–32.

**Abstract:**

In this article, the author, aware of the importance of music education from the earliest age, especially in the emotional, expressive, cultural, social, intellectual, and creative needs of all children, analyzes the status of music education for the young child in Puerto Rico. She examines whether and how local education policies impact the quality of education for children and their families. She also analyzes how Puerto Ricans grow around music, the current changes in the quality of their popular music, and the need for formal music education and quality musical training for music and general teachers. In conclusion, the author makes recommendations to improve the lives of Puerto Rican children through music.

**Annotation:**

This article focused on the state of music education for young children in Puerto Rico. The author praised Puerto Rico's rich music tradition and cited a personal anecdote to underscore the importance of exposure to music in childhood. In Puerto Rico, education policies mandated that every public school (kindergarten through twelfth grade) offer opportunities for creative development through the arts, but no specific requirements for music education were included. Each school was required to employ at least one fine arts teacher, who may or may not be a music teacher. No policies required music education in early childhood education settings, and private schools also did not have these policies. Early childhood teachers were required to take a music and movement class as a part of their training, but they may or may not ever sing in their classrooms. Only 40% of schools in San Juan serving children pre-kindergarten through second grade had a music teacher. This lack of a specific regulation for music education may translate into a gap in children's musical development, since only some had access to music classes in school. With the exception of wealthy families who can afford private classes, the author asserts that children were not likely to receive substantial music education, especially in early childhood.

Despite the lack of government music education policies, efforts were underway to increase access to music education for preschoolers in Puerto Rico. A Head Start pilot program was training classroom teachers to teach music, and an assessment was created to gauge children's benefit from the program. New teaching guides were made available that reflected Puerto Rico's musical tradition. The author recommended enhancing early childhood music education by regulating the provision of music classes, providing more music education training programs, and enhancing teacher and parent engagement.

Hertzig, M. E., & Birch, H. G. (1971). Longitudinal course of measured intelligence in preschool children of different social and ethnic backgrounds. *American Journal of Orthopsychiatry*, 41(3), 416–426. doi:10.1111/j.1939-0025.1971.tb01128.x

**Abstract:**

The longitudinal course of measured intelligence in white middle-class and Puerto Rican working class children was examined at three and at six years of age. Findings suggested that stability in IQ over this time period was characteristic of both groups, with greater stability manifested by the Puerto Rican than by the middle-class children. No evidence for deterioration of IQ with age in the disadvantaged group was found. The data are considered in relation to problems of the stability of IQ and its utility in the assessment of the effects of compensatory education programs.

**Annotation:**

Past studies have reported declines in IQ scores among children growing up in adverse and disadvantaged contexts. However, it is unclear whether this reflected a true cognitive phenomenon, a fault of the assessment tool, or an unintended consequence of cross-sectional data collection. This study compared the IQ stability of 110 Caucasian middle class and 57 Puerto Rican working class children from preschool (3-years-old) to school entry (6-years-old). Participants were drawn from two parallel longitudinal studies of early child development. Psychologists administered the Stanford-Binet, Form L to measure IQ. Over the three years, average IQ scores did not drop for either group; in fact, both groups had higher average IQ scores at 6-years-old than at 3-years-old. Hence, this study contradicted previous studies that reported a decline in IQ scores for low-income children compared to stable or increasing scores for middle class children. Nevertheless, middle class Caucasian children's scores were still significantly higher than those of their Puerto Rican working class counterparts, with a more pronounced disparity at the older age. Furthermore, Puerto Rican working class children demonstrated more stability of IQ. Middle class Caucasian children with average performances were more likely to improve their scores to above average levels, perhaps as a function of early educational experiences that they were more likely to be enrolled in. The chapter concludes with a discussion of the role of early education, along with other factors, that may relate to young children's development.

Hertzog, M. E., Birch, H. G., Thomas, A., & Méndez, O. A. (1968). Class and ethnic differences in the responsiveness of preschool children to cognitive demands. *Monographs of the Society for Research in Child Development*, 33(1), 1-69.

**Abstract:**

It has long been recognized that the school performances and achievements of children from the lower-class segments of society are in general inferior to those of middle-class children. The groups in which failure and inferior achievement are most common differ from middle-class white children both in ethnicity and in social class. Although these two variables are separable and may, with value, be treated independently as factors influencing school achievement, in practice ethnicity and social class are most usually conjoined in their effects since the overwhelming proportion of certain nonwhite ethnic groups are of lower-working-class economic and social status. In practice, therefore, when one considers the children with high risk of educational failure, concern is inevitably directed toward social groups in which the combined influences of ethnicity and social class are operative.

Over the last decade in part as a result of the forces for social change and in part as a consequence of a growing responsiveness by social scientists to social problems, a body of research has emerged, to bring a fuller understanding to factors contributing to differences in performance and achievement. These efforts have increasingly suggested that the origin of unsuccessful learning styles in children from nonwhite, working-class backgrounds must be sought in early childhood and in the preschool years. The present study seeks to extend and understanding of these differences and of their origins by comparing the responsiveness of the 3-year-old children of Puerto Rican, working-class origin to cognitive demands with the responsiveness of identically aged children of middle-class professionals to the same demands of functioning.

**Annotation:**

This study examined preschoolers' responsivity to cognitive demands among differing social and ethnic groups. The subjects included 116 middle-class children (presumably of European-American heritage) and 60 Puerto Rican children from working class families. The children were administered the Stanford-Binet, Form L, an intelligence test in English. Observational data was also utilized. Results showed that middle-class children responded with more work-related responses, compared to the Puerto Rican sample. Middle-class children also responded more frequently with verbalization, rather than by action or gesture. The authors concluded that middle-class children and Puerto Rican working-class preschoolers differ in the behavioral styles with which they respond to demands for cognitive functioning. The study compared different socioeconomic, ethnocultural, and linguistic subsamples; thus, the relative influences of each of these could not be teased apart.

Higgins, B. (2000). Puerto Rican cultural beliefs: Influence on infant feeding practices in western New York. *Journal of Transcultural Nursing*, 11(1), 19–30. doi: 10.1177/104365960001100105

**Abstract:**

The purpose of this study was to examine the cultural beliefs and practices of Puerto Rican families that influence feeding practices and affect the nutritional status of infants and young children. The goal of the study was to outline strategies that would enable nurses to provide culturally congruent care for this population. Culture care theory guided the research, and an ethnonursing methodology was used. From interviews with 10 key and 5 general informants, 11 universal and 2 diverse themes were abstracted. The dimensions of kinship, cultural values, lifeways, and philosophical beliefs were found to influence Puerto Rican infant feeding practices. The cultural belief that big is healthy was found to be integrally related to cultural feeding practices. Strategies are suggested to facilitate provision of culturally congruent care for Puerto Rican infants and children in an ambulatory setting.

**Annotation:**

An understanding of the cultural beliefs that affect health behaviors may be crucial for healthcare professionals to provide appropriate care to people from different backgrounds. This qualitative study used an ethnonursing methodology to study the cultural beliefs informing how Puerto Rican parents feed their infants and young children, recognizing the importance of diet in determining children's nutrition statuses and overall health. The population studied was Puerto Ricans living in a disadvantaged neighborhood in New York City. Informants were mothers living in the community who self-identified as Puerto Rican and had an infant under 4-months-old, as well as Puerto Ricans in the clerical staff at the local hospital. The sample size was 15 and open-ended interviews were utilized. Several themes emerged in response to inquiry into Puerto Rican informants' beliefs and practices about raising a healthy child. The most dominant theme was love of family and family togetherness, indicating that feeding children was often considered an expression of love. Many mothers made comments that reflected a cultural ideology that big was beautiful and healthy. They also reported often feeding their babies with formula and using limited breastfeeding. The Puerto Rican mothers in the sample also made statements consistent with *liberalismo*, a more passive approach to feeding and other caregiving activities whereby caregivers do not tend to force foods upon their children, wean them off of foods they enjoy, or limit their consumption. Knowledge of these cultural factors that inform the nutritional status of Puerto Rican children in the U.S. may be used by healthcare professionals to tailor their care for these children and their approach to conversing with their parents.

Hollestelle, K., & Koch, P. D. (2003). *2003 Family Child Care Licensing Study*. Washington, DC: The Children's Foundation.

**Abstract:**

This report presents the findings of the 2003 national survey of state child care regulatory agencies to update and expand family child care regulatory information published in the 2002 study. Data on small family child care homes and group or large family child care homes are organized into the following 23 categories: (1) number of regulated homes; (2) definitions and regulatory requirements; (3) unannounced inspection procedures; (4) tracking of denials and revocations; (5) complaint procedures (6) provider qualifications; (7) provider training and orientation; (8) discipline policy; (9) emergency medical consent policy; (10) environmental policy; (11) immunization policy for children; (12) national life safety fire code policy; (13) nutrition policy; (14) smoking policy; (15) before and after school programs; (16) infant care programs; (17) programs for children with disabilities; (18) sick child care programs; (19) tiered reimbursement for subsidized children; (20) zoning regulations; (21) available resources; (22) local contact; and (23) pending and new legislation. The report's introduction describes the methodology; defines terms; and lists regulatory requirements for family child care homes for each of the 50 states, the District of Columbia, Puerto Rico, and the Virgin Islands. This section also answers questions related to number of providers, methods of state regulation, exemptions, child caregiver requirements, caregiver/child ratios, and inspections. The bulk of the report then details data for each state, the District of Columbia, Puerto Rico, and the Virgin Islands. A list of regulatory agencies is appended.

**Annotation:**

The authors reported on a nationwide survey of child care regulations. Data were gathered by requesting information from the central regulatory agency of each of the 50 states, the District of Columbia, Puerto Rico, and the Virgin Islands. In Puerto Rico, when three or more unrelated children are being cared for, a license is required. The authors reported that there were 41 regulated family child care homes in Puerto Rico in 2003. There were requirements for the staff, the environment, and the health standards of these child care homes. At the time, a staff to children ratio of 1:4 was required for infants, and 1:12 for children from 16 months to 5 years old. When two or more children under age two are present, more than one caregiver was required. Background checks were not always required for the child care providers; however, it was required that the provider and all their family members have no history of drug or alcohol abuse or child abuse. While there were no specific initial or on-going educational requirements for the staff, any training offered by the Family Department was mandatory for all child-care staff. There was a space requirement of 35 square feet per child. However, there was no requirement to test for the presence of asbestos, lead, or radon. All providers and children must have had current immunizations. Smoking was forbidden and corporal punishment was prohibited.

Nutrition policies had not been implemented. Overall, the report describes the relative level of protective regulations for young children in family child care in Puerto Rico.

Ishida, K., Klevens, J., Rivera-García, B., & Mirabal, B. (2013). Child maltreatment in Puerto Rico: Findings from the 2010 national child abuse and neglect data system. *Puerto Rico Health Sciences Journal*, 32(3), 124-131.

**Abstract:**

**Objective:** Child maltreatment can have long-term adverse effects. Quantifying the scope and characteristics of child maltreatment is necessary for effective prevention in Puerto Rico.

**Methods:** The National Child Abuse and Neglect Data System Child File contains all the reports of child maltreatment from the United States (US) and Puerto Rico. A child maltreatment victim is defined as a child whose maltreatment was substantiated or indicated by the local child protective agency. We compared reporting and victimization rates and reporting sources in Puerto Rico, with those in the US and examined characteristics of child maltreatment in Puerto Rico.

**Results:** During 2006-2010, a total of 31,849-40,712 cases of child maltreatment were reported annually in Puerto Rico. Victimization rates are consistently higher in Puerto Rico than in the US (10.7/1,000-14.8/1,000 in Puerto Rico vs. 10.1/1,000- 12.1/1,000 in the US), despite consistently lower reporting rates. In 2010, victimization rates were highest among children aged 1-6 years. In Puerto Rico, neglect is the most common form of maltreatment, followed by emotional abuse; however, the majority of victims suffered multiple types of abuse. Reporting was more commonly anonymous in Puerto Rico (29.8%) than in the US (9.4%) and less commonly provided by professionals in Puerto Rico (37.2%) than in the US (58.7%).

**Conclusion:** We identified a high prevalence of child maltreatment in Puerto Rico. A lower reporting rate, higher victimization rate, and substantial percentage of anonymous reporting indicate potential underreporting of child maltreatment in Puerto Rico. Increasing the awareness and training professionals for improved child maltreatment identification could help alleviate the problem of underreporting.

**Annotation:**

Child maltreatment is a serious societal problem with considerable negative consequences for children's futures. This research investigated the previously unknown prevalence and characteristics of child maltreatment in Puerto Rico, and compared the results to data from the U.S. mainland. The researchers used data from the National Child Abuse and Neglect Data System Child File, which contained all substantiated reports of abuse from the U.S. and Puerto Rico. Children ranging in age from newborn to 17-years-old were included in the analyses. Victimization rates were higher in Puerto Rico than in the U.S. In 2010, the victimization rate for Puerto Rico was 13.0 maltreatment cases per 1,000, and the rate for the U.S. was 10.1 maltreatment cases per 1,000. In Puerto Rico, victimization was highest among children 1- to 6-years old, and neglect was the most

common form of abuse, followed by emotional abuse; most victims suffered multiple types of abuse. Neglect was defined as, "to fail to complete the duties to adequately provide food, clothing, shelter, education, and healthcare to the minor..." Thus, attention to basic needs is an area of concern in child maltreatment in Puerto Rico. Finally, compared to the U.S., there were lower rates of reporting child abuse in Puerto Rico, which may reflect systematic underreporting, a tendency to only report severe cases, or perhaps differences in cultural values about reporting. The higher incidence of child maltreatment in Puerto Rico, especially among its youngest citizens, presents a concern that may need to be addressed through policies to prevent child maltreatment, support for struggling parents, and vigilance in detecting maltreatment and treating the victims.



Jiménez Castro, M. IL. J. & Connell, P. (2001). Early morphological development and case marking in Spanish monolingual Puerto Rican children. In A. H. J. Do & L. Domínguez (Eds.), *Proceedings of the 25th Annual Boston University Conference on Language Development, Volumes 1 and 2*. (pp. 377-388). Somerville, MA: Cascadilla Press.

**Abstract:**

The purpose of the current study is to determine whether there is a stage in which children acquire a grammar composed entirely of lexical categories, that is, with no functional categories. In particular, the purpose is to determine whether there is any evidence for an early stage during which children compose sentences that do not contain an Inflectional Phrase (IP), as evidenced by a lack of tense and agreement marking and pronoun case assignment. This study also investigates whether, once functional category elements begin to be acquired, there is an order to the acquisition of the individual features of IP (tense, agreement and case). Ten Puerto Rican Spanish-speaking children participated in this study, 4 boys and 6 girls, between the ages of 25 and 32 months. In a series of brief sessions, the subjects were administered two experimental tasks designed to elicit responses containing IP features. The overall pattern across the four features is as follows: person is the first feature acquired followed by either tense alone or both number and case together.

**Annotation:**

This book chapter described a study examining the grammar of Puerto Rican toddlers. It began with a comparison of Radford's small clause hypothesis with Hyam's hypothesis of early morphological and case marking development. Ten Puerto Rican children from Spanish-only families participated in the study; they were attending child care at the time. Two experimental tasks were administered during play activities. Language samples were additionally obtained. The results of the study provided relatively more support for Radford's hypothesis such that the early sentences produced by young Spanish-speaking children may not include an Inflectional Phrase. Patterns in the development of agreement, tense, number, and case were also revealed.

Johnson-Beykont, B. & Beykont, Z. F. (2010). Against the assimilationist tide: Nurturing Puerto Rican children's bilingual, bicultural, and academic development in preschool. In U. Okulska & P. Cap (Eds.), *Discourse approaches to politics, society and culture* (pp. 359-384). Amsterdam, Netherlands: John Benjamins Publishing Company.

**Abstract:**

In this chapter, we report on a Spanish-English enrichment bilingual preschool program that is being designed specifically for Puerto Rican children in the U.S. In general, enrichment bilingual preschool programs are characterized by substantial and prolonged use of Spanish and English (Beykont 1997a; Christian 1994; Lindholm 1990; Lindholm-Leary 2001, 2005). Native-English and native-Spanish speaking children are taught basic vocabulary and preliteracy skills and early concepts of math and science bilingually. The teachers are bilingual, and so are the instructional materials. The curriculum builds on what children know to teach the knowledge base valued in U.S. schools. These programs aim to develop children's bilingualism, inculcate pride in their cultural identities, and prepare children for the academic challenges of U.S. elementary schools. We first describe the sociopolitical context in which La Casa's Spanish-English enrichment bilingual preschool program operates. The theoretical framework that informed our work at this child-care center is then examined in relation to two essential program components, namely classroom language use and curriculum. The final part of the paper draws lessons from the experiences at La Casa and highlights the importance of developing a theory-based bilingual program.

**Annotation:**

This book chapter describes adaptations made to a preschool program geared developed for Puerto Rican children. These changes stemmed from feedback from parents requesting improvements in dual-language instruction, bicultural identity, and academic achievement. La Casa was developed in the 1970s and is situated in a housing project comprised of a predominately Puerto Rican community in the northeastern United States. Three preschool aged classrooms are available. The parents of the children were reported to primarily have been born in Puerto Rico and to have completed approximately 9 years of schooling. The book chapter describes the sociopolitical influences on Puerto Rican children and the program, as well as the theories and empirical findings utilized to create curricular changes at La Casa. Adaptations were made in language instruction, classroom environment, curriculum, and parent engagement, among others.

Korn, S. J. & Gannon, S. (1983). Temperament, cultural variation, and behavior disorder in preschool children. *Child Psychiatry and Human Development*, 13(4), 203-212.

**Abstract:**

Thomas, Chess and Birch have reported that children with a particular temperament pattern, "the Difficult Child syndrome," are more likely to develop behavior disorders. In this study, the relationship between temperament and behavioral adjustment is examined in two groups of five-year-old boys; from middle-class, well educated families and Puerto Rican families living in low income housing. The middle-class children were found to have significantly more and different symptomatology than the Puerto Rican children. A significant correlation existed between symptomatology and temperament in the middle-class children, but not in the Puerto Rican group. The results are interpreted within the framework of vulnerability to stress and the "goodness of fit" model. Some environmental encounters may be more compatible with the so-called Difficult Child temperament syndrome. Incompatible encounters, not temperament, per se, account for the development of behavioral difficulties.

**Annotation:**

This study examined the interrelationship between temperament and behavioral adjustment using data from the New York Longitudinal Study. Twenty-two 5-year-old boys from low-income Puerto Rican families were matched by temperament to 22 boys from middle-class (and likely Caucasian) families. Middle-class boys were reported to have more behavioral symptoms by a factor of two-and-a-half, and a wider range of symptomatic areas. While temperament related to behavioral problems among middle-class boys, the correlation was not significant among Puerto Rican boys. The authors conclude the article by describing the importance of considering culture, as well as the match between the child's temperament and their environment, in understanding behavioral difficulties among young children.

Landale, N. S., Gorman, B. K. & Oropesa, R. S. (2006). Selective Migration and Infant Mortality Among Puerto Ricans. *Maternal and Child Health Journal*, 10(4), 351-360.

**Abstract:**

This study examines the implications of migration to the United States for infant mortality among Puerto Rican mothers born in Puerto Rico. The roles of selective migration and duration of US residence are assessed. Method: Using survey data collected from mothers of infants sampled from computerized birth and infant death records of six US vital statistics reporting areas and Puerto Rico, we estimate logistic regression models of infant mortality among the sampled infants. These models provide a baseline for comparison with fixed-effects models based on all births within each mother's history. Results: Logistic regression models for sampled infants show that the risk of infant mortality is lower for migrant women than for nonmigrant women in Puerto Rico until the migrants have lived in the United States for a substantial period of time. Fixed-effects models indicate that once unmeasured stable characteristics of the mother are controlled, early migrants do not differ from nonmigrants with respect to the risk of infant death. Both sets of models demonstrate that as mothers' exposure to the US mainland increases, the risk of infant mortality rises. Conclusions: Selective migration plays a role in the relatively low risk of infant mortality among recent Puerto Rican migrants to the United States. Migrants appear to be selected on qualities that contribute to favorable health outcomes for their offspring, but those qualities are later lost with exposure to life in the United States.

**Annotation:**

The present study extends prior research conducted by the authors on the potential influence of migration on infant mortality. The annotation for Landale, Oropesa, & Gorman (2000) below describes the methodology used and results when comparing Puerto Rican women living on the island and on the mainland. The prior study analyzed the data of Puerto Rican women born in the United States, as well as women who had migrated from the island to the mainland. The present article included each mother's birth history and focused its analyses on Puerto Rican women who were born on the island, who either migrated or who remained in Puerto Rico. While recent migrants generally appear to have lower infant mortality rates related to Puerto Ricans living on the island, this association is attenuated once a range of maternal factors are accounted for. Thus, selective migration may be at play. Over time, infant mortality rates increase with mainland exposure, both for Puerto Ricans who remain living in the mainland as well as for those who return.

Landale, N. S. & Oropesa, R. S. (2001). Father involvement in the lives of mainland Puerto Rican children: Contributions of nonresident, cohabiting and married fathers. *Social Forces*, 79(3), 945-968.

**Abstract:**

This study examines the nature and determinants of father involvement among mainland Puerto Ricans using interview data collected from mothers of a representative sample of Puerto Rican infants. Focusing on both financial contributions and participation in child care (e.g., diapering, feeding and bathing the child), the behavior of nonresident fathers is compared to that of cohabiting fathers and married fathers. A key question addressed in the analysis is whether father involvement is influenced primarily by the father's economic status or whether other factors identified in the literature are also important for Puerto Ricans. Overall, our results underscore the critical role of employment in fathers' contributions to Puerto Rican children.

**Annotation:**

This article examines paternal relationships in the lives of Puerto Rican infants. The data are drawn from the Puerto Rican Maternal and Infant Health Study (see the annotation after next for a description of the methodology). The results indicate that paternal employment is the strongest predictor of both financial contributions as well as fathers's involvement. The family structures at the time of infant birth were generally evenly distributed between married, co-habiting, and nonresidence. About 3/4 of nonresident fathers were in contact with their babies, and nearly half provided some degree of financial support at the time of the interview (when the children were about 2 years of age). The article concludes with a discussion of the potential influence of the recent economic recession on Puerto Rican families.

Landale, N. S. & Oropesa, R. S. (2005). What does skin color have to do with infant health? An analysis of low birth weight among mainland and island Puerto Ricans. *Social Science & Medicine*, 61, 379–391.

**Abstract:**

This study investigates the relationship between maternal skin tone and low birth weight among Puerto Ricans, a group with a complex ancestry and skin tones that range from very light to very dark. Using data from a representative sample of Puerto Rican mothers, we assess whether skin tone has different implications for low birth weight in three geographic areas (Puerto Rico; New York City; other eastern states). The analysis shows that skin tone is unrelated to low birth weight in Puerto Rico and New York City. However, in the other eastern states in our sample, mothers with dark skin have a high risk of bearing a low birth-weight infant, relative to mothers with light skin. We interpret our findings in light of differences in the social meaning of phenotypic differences across locales.

**Annotation:**

This article explores the contributing factors related to health disparities by examining the relationship between maternal phenotype and infant birth weight. The following annotation describes the methodology used for the Puerto Rican Maternal and Infant Health Study, from which the data for this article stemmed. Even after accounting for a host of contributing factors (such as socioeconomic status, education, and more), maternal skin tone was found to relate to infant birth weight across the whole sample. The mechanisms through which these influences may be playing a role include health behaviors and stress. Importantly, the relationship between maternal skin tone and infant birth weight was found to be contingent on context. In areas such as New York City and in Puerto Rico, infant health did not relate to maternal phenotype. In the other sample locales (including Connecticut, Florida, Massachusetts, New Jersey, and Pennsylvania), the significant relationship held.

Landale, N. S., Oropesa, R. S. & Gorman, B. K. (2000). Migration and infant death: Assimilation or selective migration among Puerto Ricans? *American Sociological Review*, 65(6), 888-909.

**Abstract:**

Using pooled origin/destination data from the Puerto Rican Maternal and Infant Health Study, the authors examine the implications for infant mortality of migration from Puerto Rico to the United States. An analysis restricted to the U.S. mainland shows that children of migrants have lower risks of infant mortality than do children of mainland-born Puerto Rican women. A critical question is whether this pattern indicates that maternal exposure to U.S. culture undermines infant health or whether it is largely a result of the selective migration of healthier or more advantaged mothers to the United States. The findings show that mother's duration of U.S. residence is positively related to infant mortality among the children of migrants, suggesting that a process of negative assimilation is occurring. However, inclusion of Puerto Rico in the analysis demonstrates the importance of selective migration in explaining the U.S. mainland pattern: Infant mortality is substantially lower among recent migrants to the mainland than it is among nonmigrant women in Puerto Rico. The roles of socioeconomic status, cultural orientation, health habits, and health care utilization in accounting for differences in infants' survival chances by maternal migration status are assessed.

**Annotation:**

This study investigated the potential influence of migration to the United States on the mortality rates of infants. Data from the Puerto Rican Maternal and Infant Health Study (PRMIHS) were used to study first- and second-generation Puerto Rican women living on the mainland, as well as Puerto Rican mothers living on the island. 2,763 women with infants were interviewed across six states on the East Coast and in Puerto Rico after being initially identified through a systematic review of birth and death records in 1994-1995; a weighted, representative sample was then created. After controlling for demographic variables, infant mortality was estimated to be similar or poorer on the island compared to those living on the mainland. Interestingly, Puerto Rican women who recently migrated to the United States experienced lower infant mortality rates compared to those remaining on the island; the authors suggest that selective migration may be at play. Unfortunately, greater infant mortality is evidenced with longer residence in the United States. Potential protective factors were also identified; among those with low levels of education, the use of Spanish reduced infant mortality while education was a key factor for mothers speaking predominately English. (See prior annotation for a follow-up article by the authors focused on mothers who were born in Puerto Rico).

Landale, N. S., Oropesa, R. S., Llanes, D. & Gorman, B. K. (1999). Does Americanization have adverse effects on health?: Stress, health habits, and infant health outcomes among Puerto Ricans. *Social Forces*, 78(2), 613-641.

**Abstract:**

Generational differences in the social circumstances, health habits, and infant health outcomes of Puerto Rican women are examined using recently collected data from the Puerto Rican Maternal and Infant Health Study. The results show that recent migrants to the U. S. mainland experience fewer stressful life events and are less likely to engage in negative health behaviors during pregnancy than U.S.-born Puerto Rican women. Recent migrants also exhibit better infant health outcomes than childhood migrants and U.S. born women. Risk factors (e.g., low human capital, meager financial resources, and residence in disadvantaged neighborhoods) and protective factors (e.g., strong family support and a Latino cultural orientation) identified in theories of segmented assimilation are related to the outcomes examined but cannot explain the generational differences that are documented.

**Annotation:**

The present study is part of a research program examining infant health among Puerto Ricans living on the island and on the mainland. The prior annotation describes the methodology used for the Puerto Rican Maternal and Infant Health Study. This article focuses on Puerto Rican women with infants living in the United States; they either were born on the mainland or had migrated from the island. Analyses revealed poorer health behaviors and greater stress levels among Puerto Rican women born in the United States than among those who had migrated. The health and stress variables included factors such as smoking and domestic violence. In addition, the infants of recent migrants to the United States (such as those who migrated during adolescence or adulthood) experience better health outcomes, as indicated by birth weight and mortality. The authors examined a range of potential predictive values such as social support and cultural orientation; the results did not yield significant relationships. The authors suggest that selective migration of other factors may be at play.



Lara, M., Akinbami, L., Flores, G., & Morgenstern, H. (2006). Heterogeneity of childhood asthma among Hispanic children: Puerto Rican children bear a disproportionate burden. *Pediatrics*, 117(1), 43–53. doi:10.1542/peds.2004-1714

**Abstract:**

**Objectives.** To estimate differences in asthma prevalence among Hispanic subgroups and non-Hispanic children living in the United States and to explore the association between these differences and risk factors.

**Methods.** Weighted logistic regression analyses of merged 1997 to 2001 National Health Interview Survey data were used to estimate the prevalence of asthma diagnosis and asthma attacks in a sample of 46511 children (age: 2–17 years) living in the 50 states and the District of Columbia.

**Results.** Puerto Rican children had the highest prevalence of lifetime asthma (26%) and recent asthma attacks (12%), compared with non-Hispanic black children (16% and 7%, respectively), non-Hispanic white children (13% and 6%, respectively), and Mexican children (10% and 4%, respectively). Adjustment for asthma risk factors did not change these comparisons appreciably. Compared with non-Hispanic white children, the adjusted odds ratios (ORs) for a lifetime asthma diagnosis were 2.33 (95% confidence interval [CI]: 1.90–2.84) for Puerto Rican children, 1.16 (95% CI: 1.04–1.29) for non-Hispanic black children, and 0.90 (95% CI: 0.79–1.03) for Mexican children. Birthplace influenced the association between ethnicity and lifetime asthma diagnosis differently for Puerto Rican and Mexican children. Compared with United States-born non-Hispanic white children with United States-born parents, the adjusted ORs were 1.95 (95% CI: 1.48–2.57) for Puerto Rican children in families with the child and parent(s) born in the 50 states/District of Columbia and 2.50 (95% CI: 1.51–4.13) for island-born Puerto Rican children with island-born parents. The corresponding adjusted ORs for Mexican children were 1.05 (95% CI: 0.90–1.22) for families born in the 50 states/District of Columbia and 0.43 (95% CI: 0.29–0.64) for those born in Mexico. The results were similar for recent asthma attacks.

**Conclusions.** The appreciably higher asthma morbidity rates experienced by Puerto Rican children cannot be explained by sociodemographic and other risk factors measured in the National Health Interview Survey. The heterogeneity of asthma among Hispanic subgroups should be considered in developing effective public health prevention and intervention strategies.

**Annotation:**

Impoverished and ethnocultural communities have been reported to be at increased risk for asthma in the U.S. This study examined how Hispanic populations are affected by this disease, and whether there are differences in prevalence across Hispanic subgroups. The

researchers predicted that Puerto Rican children would be disproportionately burdened by asthma since prior research indicated that they had elevated risk for other chronic illnesses. They used data from the National Health Interview Survey (NHIS) from 1997 to 2001 to investigate this question. The survey had a representative sample of the population in the 50 states and D.C.; data collection did not include the island of Puerto Rico. The final sample included 46,511 children ages 2- to 17-years-old whose parent had answered questions about lifetime prevalence and 12-month prevalence of asthma for the target child. The groups represented were: non-Hispanic white, non-Hispanic black, Mexican American, Cuban American, Puerto Rican, and Dominican American children. Results indicated that the prevalence of asthma for Puerto Rican children living in the United States was markedly higher than that of any other group: their lifetime prevalence was 26% compared to an average of 13% across the other groups, and their 12-month prevalence was 12% compared to an average of 6% across the other groups. This rate was significantly higher than the rates for non-Hispanic white, non-Hispanic black, and Mexican American children, even after controlling for asthma risk factors (e.g., poverty, household smoking, single parenthood, and obesity). Further, the differences among prevalence rates were not solely attributable to socioeconomic (SES) differences, because other low-SES groups were less likely to experience asthma than Puerto Rican children. Among Hispanics, variability was evidenced, with Puerto Ricans having the highest rate and Mexican Americans having the lowest rate. Further, groups other than Puerto Rican children experienced a reduced likelihood of asthma if they were born abroad to foreign-born parents. The opposite pattern was true for Puerto Rican children, such that the prevalence was higher if they were born in Puerto Rico. The authors indicate that the differential incidence may relate to early life environmental exposures, genetics, or an interaction effect. More research into why this disparity occurs is suggested by the authors, with increased medical attention to asthma in Puerto Rican populations.

Leadbeater, B. & Bishop, S. (1994). Predictors of behavior problems in preschool children of inner-city Afro-American and Puerto Rican adolescent mothers. *Child Development (Special Issue: Children and Poverty)*, 65(2), 638-648.

**Abstract:**

Maternal reports on the Child Behavior Checklist/2-3 (CBCL/2-3) were used to evaluate child, maternal, and environmental predictors of behavior problems in 83 preschool children of disadvantaged adolescent mothers. CBCL/2-3 scores correlated modestly with independent ratings of child difficult behaviors observed in videotaped mother-child play interactions. 13% of children had scores in the clinical range. Significant correlations were consistently found between CBCL/2-3 ratings and maternal depressive symptoms, social supports, and life stress--assessed 3 times during the first year postpartum. In hierarchical regression analyses, maternal depressive symptoms, residence with the adolescent's mother, and perceived emotional support from friends contributed most to the explained variance. A significant ethnicity x child gender interaction term also suggested that African American mothers of male children reported more behavioral problems. Findings evidence the heterogeneity of outcomes for children of disadvantaged adolescent mothers but also demonstrate how correlates of poverty negatively affect their socioemotional development.

**Annotation:**

Research has indicated that children of adolescent mothers are more likely to exhibit behavior problems, which may be at least partially attributable to the negative financial and social conditions of teenage parenthood. This study prospectively investigated the relationships between child, family, and contextual variables with the goal of better understanding the protective and risk factors in the development of behavior problems among the children of adolescent mothers. Participants were teenage mothers ( $M$  age = 17.1 years) recruited from a health center in New York City. 39% of mothers were Puerto Rican and 56% were African American (total  $n = 83$ ). Participants were visited five times, beginning approximately one month postpartum and ending when children were between 28 and 36 months old. Attrition was high due to difficulty locating mothers and mobility, as is common in research with among low income families. Mothers completed the Child Behavior Checklist (CBCL 2/3) to report on their children's behavior problems at the last data collection time point. To complement the CBCL and assess its validity, a subset of mother-child dyads were also observed in a play activity and child behavior was coded. Mothers reported on depressive symptoms using the Beck Depression Inventory (BDI) and on life stress using the Life Events Scale. Social support was measured using the Perceived Social Support from Family (PSSFA) and Perceived Social Support from Friends (PSSFR) measures. Other measures were collected as part of a larger study. Thirteen percent of the children scored in the clinical range for behavior problems on the CBCL. Child behavior problems were associated with maternal depression, but not with maternal age, maternal education, or welfare status. Across ethnicities, there was not a main effect

of gender, but there was a gender by ethnicity interaction, such that male Puerto Rican American children were reported to have fewer behavior problems than African-American males. Among Puerto Rican children, mothers reported fewer behavior problems for their sons than their daughters, which the authors attributed to cultural-related gender expectations. Residence with grandmothers was associated with lower rates of behavior problems for male children of both ethnicities. Increased social support was associated with fewer behavior problems among Puerto Rican children. Relationships between child-level variables (temperament, language and cognitive development) and behavior problems were not observed. Results can be interpreted in light of the multitude of influences that affect children's behavioral outcomes, including culturally-informed parenting attitudes. The authors note that the above findings are preliminary due to the small sample sizes of each of the statistical cells (ethnicity by gender). A follow-up study to this one found similar relationships across the cultural groups between maternal depression, parent-child conflict, and behavioral outcomes (see Leadbeater, Bishop & Raver, 1996).

Lester, B. M., García-Coll, C. T., & Sepkoski, C. (1982). Teenage pregnancy and neonatal behavior: Effects in Puerto Rico and Florida. *Journal of Youth and Adolescence*, 11(5), 385-402. doi:10.1007/ BF01540376

**Abstract:**

The purpose of this study was to examine the relationship between neonatal behavior and prenatal and perinatal risk factors in infants of teenage and older mothers in Puerto Rico and Mainland United States. The sample included approximately 300 newborn infants; half were examined in Puerto Rico, the other half in Florida, using the Brazelton Neonatal Behavioral Assessment Scale. Comparisons by maternal age and the number of obstetrical complications showed that for the Puerto Rican group, infants with fewer obstetrical complications were better able to regulate their crying and active states. Infants of teenage mothers with fewer complications had a higher level of arousal than infants of older mothers with fewer complications. Infant behavior in the Mainland sample did not vary by maternal age or complications. Multiple regression analysis indicated that the combination of biomedical variables significantly predicted neonatal behavior in both cultures. Mother's age was not separately correlated with neonatal behavior, but was repeatedly combined with other variables in the significant regressions. The findings suggest that infants of teenage mothers may differ from infants of older mothers, particularly in the organization of state behavior, and that the effects of maternal age on neonatal behavior are increased in the presence of biological outcome factors.

**Annotation:**

This study examined the relationship between health risks with infant behavior in the first days of life. The sample was comprised of low-income women living in Puerto Rico (n=155) and Florida (n=148); the Florida sample was primarily African-American. About 25% of infants from both groups were born to teenage mothers. Results revealed that, among Puerto Ricans, infant behavior related to both maternal age and the extent of obstetrical complications. Such differences were not evidenced in the Florida sample, leading the authors to assert the importance of cultural knowledge in understanding infant development such as the greater likelihood of marriage and extended family involvement among Puerto Rican teenage mothers.

Lewis, K. (2012). *Family Early Literacy Practices Questionnaire: A validation study for a Spanish-speaking population*. (Unpublished doctoral dissertation). University of Delaware, Newark, DE.

**Abstract:**

The purpose of the current study was to evaluate the psychometric validity of a Spanish translated version of a family involvement questionnaire (the FELP) using a mixed-methods design. Thus, statistical analyses (i.e., factor analysis, reliability analysis, and item analysis) and qualitative analyses (i.e., focus group data) were assessed. Participants included 81 parent/guardians of preschool and kindergarten aged children. One hundred percent of the participants were Hispanic and 97% of parents spoke primarily Spanish or both Spanish and English at home. Participants reported their countries of origin were Puerto Rico, Mexico, Countries in the Caribbean Sea, and South American Countries. The results showed that the Spanish translated version of the FELP was reliable and valid for parent/guardians in the current study as demonstrated by the internal consistency coefficients and the item-total correlations. However, a four-factor model, in contrast to the original five-factor model, was found to be reliable, a good-fit for participants, and had strong construct validity. Quantitative and qualitative findings support the relevancy of FELP items for participants in this study. Rasch analysis revealed that parents endorsed direct literacy activities (e.g., teach the child letter names) more strongly than indirect literacy activities (e.g., making sure the child sees the parent read). Additionally, analyses revealed that FELP items functioned statistically different across demographic subgroups (i.e., country of origin, income, and education level). Finally, focus group discussions revealed possible ways to more fully capture the richness and diversity of literacy practices in Spanish-speaking homes and highlighted the diverse experiences, practices, and beliefs of Hispanic and Spanish-speaking populations. The research and practical implications for early childhood education programming for ELLs are discussed.

**Annotation:**

As children's first teachers, parents play a large role in children's development of early literacy skills. For the growing number of English Language Learners (ELLs) in the U.S., it is critical to understand how early family literacy practices can best prepare them for school. Performing this kind of cross-linguistic and cross-cultural research requires that assessments be translated while still maintaining the same meaning. This study sought to determine if a Spanish translation of the Family Early Literacy Practices (FELP) questionnaire was psychometrically valid using qualitative and quantitative methods. A sample of 81 Hispanic, Spanish-speaking parents of preschool children and kindergarteners living in the U.S. mainland was recruited. Forty-four percent were Puerto Rican. Parents reported on demographic information and completed the FELP questionnaire. Six of the parents also participated in focus groups. Overall, participants' responses on the FELP indicated more emphasis on direct, educational, experiential reading experiences rather than indirect modeling behaviors. Internal consistency was good, and item-total correla-

tions were variable by subscale, with the weakest correlation in the full scale. Exploratory and confirmatory factor analysis revealed that, among Hispanic participants, the measure appeared to best fit a four-factor structure (skill building, interactive reading, child skill, and expectations), rather than the five-factor structure found in studies of the English version (the modeling and monitoring factor was eliminated). Given the small sample size, these findings can be considered preliminary. Puerto Rican participants showed differential response patterns on the skill building and child skills factors. Focus group participants, 4 of whom were Puerto Rican, expressed approval for the scale, but suggested other aspects of early literacy that were relevant to them and not included in the FELP. These include considerations about which language is used most when speaking and reading to the child, and how to best support and supplement children's school learning. Despite the potential for additional questions to capture the richness of the home learning environment, it appeared that the FELP can be used to assess early exposure to literacy in the homes of Hispanic, Spanish-speaking children. Assessments such as this one may help educators better understand the home learning experiences of culturally and linguistically diverse children and, accordingly, tailor their instructional approaches.

López del Valle, L. M. (2010). Dental and periodontal health and treatment needs in a mother/child rural Puerto Rican population. *Puerto Rico Health Sciences Journal*, 29(1), 36-39.

**Abstract:**

Background: Oral research directed toward the maternal and child dyads is important because mothers are a source of dental caries pathogens and are the health behavior managers and trainers of children. The objectives of this study were: 1) to evaluate the oral health status of the mothers in a sample of 100 children aged 12 to 60 months from a rural community in Puerto Rico, and 2) to compare the children with their mothers' oral health status.

Methods: A sample of 71 women and 100 of their children, (Mean Age= 28.8 years  $\pm$  9.0, and 36.41 mos  $\pm$  18.2, respectively) were evaluated for DMFT/S and periodontal health or deft/s. A NIDCR calibrated dentist performed all dental evaluations of children and mothers utilizing NIDCR criteria. Descriptive statistics were produced.

Results: Mothers' bleeding point prevalence in at least one site was 63%; prevalence of at least one site with pocket depth of 4 to 6 mm was 37 %. Calculus prevalence was, no calculus 25%, supragingival calculus 56.7%, subgingival calculus 2.2%, supra and sub gingival calculus 16.3%. Mean Dental Indices for mothers were DMFS (16.51  $\pm$  0.02), DMFT (12.20  $\pm$  6.76), Caries (2.93  $\pm$  2.86), Filling (7.07  $\pm$  8.76), Missing (2.93  $\pm$  4.53). Children's Mean Dental Indices were defs (4.32  $\pm$  9.7), deft (2.30  $\pm$  4.0), decalcifications lesions (1.36  $\pm$  1.9), caries (1.96  $\pm$  3.2) and surfaces caries (3.81  $\pm$  8.68), fillings (0.22  $\pm$  0.83) and extracted teeth (0.043  $\pm$  0.45).

Conclusions: Significant levels of treated and untreated caries and gingival disease were observed in this sample. The importance for primary and secondary prevention, as well as treatment for periodontal and dental disease, in rural Puerto Rican communities is evident from this investigation.

**Annotation:**

The authors investigated the concordance of oral health between mothers and their young children in a semi-rural region of Puerto Rico. They hypothesized that mothers and children would have similar rates of dental problems, since mothers are their children's earliest models for health behaviors. The convenience sample consisted of 100 12- to 60-month-old children and their mothers (n = 71). Dentists evaluated the oral health of each participant using a caries exam and a periodontal evaluation. In accordance with other studies reporting poor oral health among Hispanic children, 36% of the children in this sample had caries. Mother showed high levels of dental and periodontal disease, with an average of three missing or decayed teeth. As predicted, children of mothers with poor oral health were more likely to also have poor oral health. Interestingly, there was an as-



sociation between maternal oral health and history of having a low birth weight child, though confounds in this relationship were predicted. This study emphasized the need to enhance oral health among rural populations in Puerto Rico, and indicated that a potentially efficacious approach to improving oral health early in life would be to educate and encourage mothers to improve their own dental habits.

López del Valle, L. M., Dave-Singh, G., Feliciano, N., & Machuca, M. D. C. (2006). Associations between a history of breast feeding, malocclusion and parafunctional habits in Puerto Rican children. *Puerto Rico Health Sciences Journal*, 25(1), 31-34.

**Abstract:**

Studies relating breast-feeding, malocclusion and parafunctional habits in young children are scarce. Purpose. The purpose of this study is to evaluate the associations of a history of breast-feeding, incidence of malocclusion and parafunctional habits. Methods. The dental records of a sample of 540 children aged 6 to 72 months screened for oral conditions and behavioral risk factors were evaluated for variables such as a history of breast-feeding, malocclusion and parafunctional habits. Descriptive statistics using the EPI-INFO Program and Chi-square test at the 0.05 level of probability were performed. Results. The results showed that the mean age of the children was 28 months  $\pm$  14. The mothers' mean age was 26.4 years  $\pm$  6. The prevalence of breast-feeding was 34% with a mean breast-feeding time period of 3 m  $\pm$  3.7. About 95% of the children had a history of bottle feeding and 90% showed some evidence of malocclusion at the time of dental examination. The main malocclusion problems were space deficiency (closed contacts among incisors) (31%), open bites (6%) and crossbites (5%). A habit of thumb sucking was reported in 32% of the cases and pacifier use in 21%. There were significant differences for the following variables: mother's age and breast feeding time period; number of children in family and breast-feeding time period; breast-feeding history and breast-feeding time with bottle use, malocclusion and thumb sucking habit; and gender and thumb-sucking habit. Conclusion. It is concluded that breast-feeding practices and time period are behavioral factors that contribute in the prevention of malocclusion in addition to decreasing the practice of parafunctional habits in preschool children.

**Annotation:**

The authors investigated the relationship between breastfeeding, malocclusion, and parafunctional habits (such as thumb sucking), guided by the notion that breastfeeding was beneficial for jaw development while non-nutritive sucking (NNS) may be detrimental. The sample consisted of 540 children 6- to 60-months-old and their mothers, ages 14-40. The prevalence of breastfeeding was 35%, with a mean duration of 3 months. Having more children per family was negatively associated with likelihood of breastfeeding. Breastfeeding was positively related to normal occlusion and negatively related to malocclusion and NNS habits. Nearly 90% of the children in this sample showed evidence of malocclusion (a misalignment of teeth or incorrect relation between the teeth of the two dental arches) at their dental examinations, and the presence of malocclusion was related to NNS habits. These results indicate the benefits of breastfeeding and present its outcomes among Puerto Rican children.

Malgady, R. G., Rogler, L. H., & Costantino, G. (1990). Culturally sensitive psychotherapy for Puerto Rican children and adolescents: A program of treatment outcome research. *Journal of Consulting and Clinical Psychology*, 58(6), 704-712.

**Abstract:**

Recognition of cultural distance between Hispanic clients and non-Hispanic therapists has prompted efforts to introduce culture into therapy, but there is little evidence that such efforts influence treatment outcomes. This article evaluates treatment outcomes from a program of research on modeling therapy with Puerto Ricans, targeting anxiety symptoms, acting-out behavior, and self-concept problems. Evaluation of outcomes confirmed the impact of culturally sensitive modeling therapy on anxiety symptoms and other selected target behaviors, but negative treatment effects were also evident. Results suggest that new approaches to psychotherapy for special populations, such as Hispanic children and adolescents, should be buttressed by programmatic research oriented toward the comparative evaluation of treatment outcomes and should be attuned to therapeutic processes mediating between culture and outcome.

**Annotation:**

High rates of mental health problems and high school dropouts indicate that Puerto Rican children and adolescents living in the U.S. may benefit from mental health services. However, some have wondered whether Hispanic clients with non-Hispanic therapists may feel a sense of distance and incongruence with their therapist, which may impede therapeutic gains. The purpose of this study was to assess the influence of incorporating culturally sensitive content into psychotherapy sessions on the outcome of the treatment for this population. In order to test this question, 210 low SES Puerto Rican kindergarten to third graders participated in mixed-sex group therapy sessions. These participants had all classified in the secondary prevention stage for risk of mental disorder in a screening procedure. The group therapy sessions were designed to resonate with Puerto Rican children; they incorporated *cuentos* based on Puerto Rican folklore, modernized to reflect the children's urban context, and presented bilingually. The sessions were 90 minutes each week for 20 weeks, with attendance at over 80%. Participants were assessed before and after the treatment with a battery of assessments measuring the children's anxiety, conduct problems, low self-esteem, and poor social judgment. Compared to controls, there was a significant reduction in anxiety symptoms among those in the culturally sensitive treatment, but only for first graders, and not at follow-up one year later. These mixed results indicate that incorporating culture into therapy can be an effective strategy, and yet more research is needed to understand what works, and for whom.

Mather, M. (2003). *Children in Puerto Rico: Results from the 2000 Census*. Baltimore, MD: The Annie E. Casey Foundation and the Population Reference Bureau.

**Abstract:**

This report provides an overview of children in Puerto Rico, based on data from the 2000 U.S. Census. It documents the situation of children in Puerto Rico, how it compares with conditions of children living in the 50 states and the District of Columbia, and how the characteristics of children in Puerto Rico have changed over time. The census, conducted every 10 years, includes basic demographic information about age, gender, race, and Hispanic origin, as well as more detailed socioeconomic information about poverty, education, family structure, household characteristics, income, place of residence, and other characteristics. Data from the decennial census also provide information for local communities in Puerto Rico that are not available from any other source.

**Annotation:**

In 1990 and 2000, children under the age of 18 made up 33% and 29% (respectively) of the Puerto Rican population, which equated to about 1.1 million people in Puerto Rico under the age of 18. According to the authors, the decreasing percentage of children may be attributable to both declining fertility rates and the migration of families to the U.S. mainland. There were also high levels of female sterilization in the 1950s-1960s, such that approximately 46% of married women were sterilized. Families headed by a single female were more common in urban areas than in rural areas, and accounted for 27% of families overall. 71% of single parent families headed by a female were under the poverty line in 1999, while only 44% of two-parent families were considered to be under the poverty line. 58% of children were living in poverty, and childhood poverty was more prevalent in rural areas. A smaller percentage of mothers with children under 6-years-old in Puerto Rico were employed (40%) compared to the U.S. (59%). In all, the report highlights salient and resilience risk factors for children living in Puerto Rico.

Martinez, I. M., & Shatz, M. (1996). Linguistic influences on categorization in preschool children: A crosslinguistic study. *Journal of child language*, 23(3), 529-545.

**Abstract:**

Research on categorization suggests that information conveyed by language may be a guide for children performing classification tasks. In our study we asked whether differences between languages in linguistic form influence this performance. Thirty-five three- and four-year-old monolingual speakers of Spanish and English, languages differing in the way they encode gender, were tested in their native countries on a classification task of familiar objects. This task assessed strategies used in (1) a free sort, (2) a sort with instructions to use natural gender, and (3) one (for the Spanish speakers) with specific instructions to use grammatical gender. Half of both the Spanish and the English groups used animacy as a sorting strategy in the first sort, whereas the majority of both groups sorted by natural gender in the second sort. Most Spanish speakers also used grammatical gender as a categorizing strategy in at least one of the sorts. Results suggest that both instructional context and language-specific experience can influence the ways children classify familiar referents.

**Annotation:**

This article examines the relationship of categorization with linguistic gender marking among English- and Spanish-speaking children. It begins with a description of Spanish and English gender class systems, followed by a review of children's acquisition of gender. The study was conducted with 18 Spanish-speaking and 17 English-speaking preschoolers that were generally 4-years-old. Both were from high-middle socioeconomic backgrounds; the Spanish-speaking sample was drawn from Puerto Rico. The children were presented with 30 drawings during a naming task and a classification task, which was comprised of various sorting procedures. When free sorting, about half of the preschoolers from both groups utilized an animate vs. inanimate distinction, though there were also instances of free sorting by linguistic form. Directed sorting tasks evidenced the influence of grammatical gender and instruction on the participants' behaviors. The article concludes with a discussion of the role of language in cognitive processes.

Martinez, I. M. (2001). *The effects of language on children's understanding of agency and causation*. (Unpublished doctoral dissertation). University of Michigan, Ann Arbor, MI.

**Abstract:**

During young children's developmental process, language-specific characteristics of structure, systems of meaning, and rules of language use may affect the direction of development of both their native language and their cognition. The present study looks at how differences in language structure translate into differences in performance on cognitive tasks and differences in the ways we attend and reason about events and objects in our environment on occasions of language production and interpretation.

The main thesis of this dissertation is that differences in the ways the English and Spanish languages do not mark or mark, respectively, verbs of change of state (CS), change of position (CP), change of location (CL), and movement (MV), translate into differences in the aspects of events that speakers of these languages attend to, influencing children's cognitive preferences in tasks designed to test for their understanding of agency and causation, in linguistic and non-linguistic contexts. Linguistic analyses of these verbs suggest that English speakers should prefer to attend to the agents of actions causing events whereas Spanish speakers should prefer to attend to the end results of those events.

Four-year-old English and Spanish speakers were given a storytelling task and a forced choice selection task followed by a narrative task to test for their cognitive preferences in both linguistic and non-linguistic contexts. Their performance showed that, overall, differences in language structure influence the ways speakers interpret and talk about events described by the verbs of CS, CP, CL, and MV. In addition, the use of these verbs has an effect on children's performance in cognitive tasks, with English speakers preferring to attend to the agents of events and Spanish speakers preferring to attend to the end result of events. Nonetheless, the effect of language structure is moderated by variables such as the type of verb, type of entity involved in the event, type of event, type of stimulus, and level of cognitive and grammatical development of the subject.

**Annotation:**

This study examined the influence of linguistic systems on the performance of young children across a variety of tasks. 115 preschoolers participated in the study, with 61 living in Puerto Rico and 54 living in the United States. On average, the children were 4-and-a-half years of age and were from middle to high-middle class backgrounds. Gender was generally equally distributed. The children were invited to participate in a storytelling task, a forced-choice selection task, and a narrative task. Results revealed that 4-year-olds' narration in each language was similar in form to that of adult speakers, and narrative differences between the Spanish- and English-speakers reflect the linguistic nu-

ances of each language. Differences across language groups were also evidenced in the degree to which preschoolers described events in the narration task, with Puerto Rican children describing outcomes to a greater degree. Attentional differences to agency were also found on the forced-choice task. Such linguistic differences were influenced, to some degree, by factors such as verbs, events, and individual differences, among others.

Matias, B. (1990). *Getting things done: A naturalistic study of the kinds and functions of directive language in a Puerto Rican early childhood classroom* (Unpublished doctoral dissertation). New York University, New York, New York.

**Abstract:**

The aim of this study was to explore and describe the kinds and functions of directive language in the process of getting things done in one early childhood Puerto Rican Montessori classroom. Literature about linguistic theory, specifically that which pertained to directives, provided the initial theoretical framework. Sixteen children, aged 2.7 to 5.5 years, and one teacher participated in the study. Six children were newcomers to school, six had one year and four had two years of previous school experience. The classroom was studied for one school year in three intensive videotaping phases, at the beginning, middle and end of the academic year, as well as participant observation. Three classroom events were chosen for specific study: entrance/transition to work, individual work time and circle time. There were nine formal and twenty-four informal teacher interviews. A broadly focused description of classroom directives was followed by data from micro-analysis of six videotapes. Directives in three classroom events were studied in the communication flow of teacher to student(s), student(s) to teacher and student(s) to student(s). Overall, the results of broadly focused analysis were congruent with those of the more specific microanalysis. In entrance/transition to work, at first, most teacher directives were sent to individual children and allowed them choices. As the year progressed, this event became more academically oriented and students had less choice and opportunity to send each other directives. During individual work time, the overall teacher directive pattern was individual; seeking information increased and reminding of rules decreased as students internalized their pupil roles. Students bid for the teachers' attention, sought information and asked for help. Students' directives to other students asked for help and expressed social and academic needs. Throughout, circle time was the most teacher-directed activity. Students were expected to enact the student role here faster than in the other two events. There were marked differences in how this teacher sent directives to boys and girls and to children with different schooling experience. Twenty-one social rules were extracted. Political and educational ramifications of the results were considered.

**Annotation:**

This study focused on the utilization of directive speech in an early childhood Puerto Rican Montessori classroom. The methodology entailed observations over the course of a year; these focused on a mix of experiences each day: entrance/transition to work, individual work time and circle time. In addition, staff interviews were conducted. Results revealed chronological changes in the use of directives, as well as their purpose, through-



out the school year. Teachers and students varied their directives depending on context, intent, target, and time.

Matos, M., Torres, R., Santiago, R., Jurado, M., & Rodríguez, I. (2006). Adaptation of Parent–Child Interaction Therapy for Puerto Rican families: A preliminary study. *Family Process, 45*(2), 205–222. doi:10.1111/j.1545-5300.2006.00091.x

**Abstract:**

This study examines how parent-child interaction therapy (PCIT) was adapted for Puerto Rican parents of children aged 4-6 with hyperactivity and other significant behavior problems. Four steps were followed: (1) translation and preliminary adaptation of the treatment manual, (2) application of the treatment to 9 families as part of an exploratory study using repeated measures, (3) treatment revision and refinement, and (4) in-depth interviews with parents (n=15) and clinical psychologists (n=5) from Puerto Rico who provided feedback on treatment process and components. Throughout this process, cultural elements and modifications were recommended to be incorporated into the treatment protocol. Both quantitative and qualitative results suggest that PCIT seems to be an acceptable intervention for this population, with some minor changes. Parents reported a high level of satisfaction, a significant reduction in children's externalizing behavior problems, and reduction of parenting stress and improvement in their parenting practices. Psychologists also evaluated positively the treatment protocol and recommended its use. Results from this study may inform clinicians and researchers who work with Latino families about relevant issues to be considered to promote their participation in behavioral family interventions and to enhance their acceptability and effectiveness.

**Annotation:**

This research was part of an effort to adapt parent-child interaction therapy (PCIT) for young children in Puerto Rico. PCIT is a therapy that aims to reduce young children's problem behaviors by teaching parents two complementary skills to: 1) the ability to foster warm synchronous relationships with their children, and 2) the ability to provide consistent, predictable punishments for unwanted behaviors. The authors translated the PCIT manual into Spanish, continually checking that the content was equivalent to the English version. Then, they implemented the Spanish version of PCIT in Puerto Rico with 12 children (from 9 families) referred for behavior problems. The children were between 4- and 6-years-old and predominately male (77%). Before treatment, 78% of the children met criteria for being diagnosed with AD/HD (Attention-Deficit/Hyperactivity Disorder) and 89% met criteria for ODD (Oppositional Defiant Disorder). The researchers utilized parents' and psychologists' feedback and their own knowledge to make adaptations to the manual based on cultural considerations of the sociocultural context in Puerto Rico. Adaptations to the PCIT manual reflected the values of *personalismo* and *familismo*. They included extending sessions to allow for more communication between parent and psychologist, more discussion of how to provide consistent discipline across caregivers in the extended family, and the softening of time-out procedures to hinge on loss of privilege. Also, more psychoeducation about hyperactivity was incorporated.

The researchers conducted a preliminary evaluation of the effectiveness of the adapted PCIT in Puerto Rico. Parents' reports revealed significant reductions in their children's behavior problems and parenting stress, as well as improvements in parenting practices, that were maintained for 3 months post-treatment. Parents also reported high satisfaction with the treatment and demonstrated low attrition. However, not all aspects of PCIT were consonant with parenting beliefs of every family in this sample. For example, ignoring bad behaviors was seen as a lack of helpful activity by some parents, letting a child direct play was seen as a loss of control, and using a time out room where the child was alone was considered to be abandonment. Overall, the adaption of PCIT seemed to be a promising treatment for young children in Puerto Rico with behavior problems, but evidence from a larger, randomized sample is necessary before efficacy claims can be made.

McCarton, C. M., Brooks-Gunn, J., & Tonascia, J. (1994). The cognitive, behavioral, and health status of mainland Puerto Rican children in the Infant Health and Development Program. In G. Lamberty & C. García Coll (Eds.), *Puerto Rican women and children: Issues in health, growth, and development* (pp. 161-189). New York, NY: Plenum Press.

**Abstract:**

“(from the book) report on the effects of a health and home-based and center-based early intervention service directed at low-birth-weight infants of various race/ethnic and socioeconomic backgrounds / findings indicate an increase in the cognitive functioning of Hispanic and African-American study Ss [through 3 yrs old] / indicate that Puerto Rican infants as a group have higher rates of serious morbidity, accounted for mainly by higher respiratory tract infections and by asthma attacks requiring hospitalization and lengthy periods of convalescence at home”

**Annotation:**

This book chapter describes risk and resilience factors for Puerto Rican low-birth-weight babies and the outcomes of the Infant Health and Development Program, a large-scale early intervention trial conducted at multiple sites across the country. The intervention was provided to the infants between birth and 36 months of age; it consisted of home visits and participation in early educational centers. A total of 965 infants participated in the study, 11% of whom were Hispanic. The sample was stratified by site and birth weight, with randomization by various variables. After describing the overall study, the authors first described the study results for Hispanics generally, followed by the results of the Puerto Rican children at the Bronx site. The development of Hispanic low-birth-weight babies was positively influenced by the intervention, particularly in the areas of verbal and visual-spatial abilities. Such effects were also evidenced for Puerto Ricans. Hispanic mothers reported more behavioral difficulties (which may relate to cultural variations in social expectations) as well as more categorical perspectives on development than Caucasian mothers. Finally, the results indicated higher levels of respiratory difficulties among the Puerto Rican children. The authors discuss limitations of the study, which have attenuated the results; these include the exclusive use of English for the intervention and assessments.

Mendoza F.S., Ventura S.J., Valdez R.B, Castillo, R.O., Saldivar, L.E., Baisden, K., & Martorell, R. (1991). Selected measures of health status for Mexican-American, mainland Puerto Rican, and Cuban-American children. *Journal of the American Medical Association (JAMA)*, 265(2), 227–232. doi:10.1001/jama.1991.03460020081033

**Abstract:**

The 1987 National Vital Statistics System and the Hispanic Health and Nutrition Examination Survey (1982 through 1984) were used to assess the health status of Mexican-American, mainland Puerto Rican, and Cuban-American children by examining the prevalences of pregnancy outcomes and chronic medical conditions. The low—birth-weight rate among Hispanics (7.0%) compared favorably with that of non-Hispanic whites (7.1%) despite the greater poverty and lower levels of education among Hispanics. When examined by Hispanic subgroup, however, significant differences were present, with mainland Puerto Ricans having the highest prevalences of low—birth-weight infants. Premature births were more common among all three Hispanic subgroups than among non-Hispanic whites. Mexican-American and Cuban-American children had a similar prevalence of (3.9% and 2.5%, respectively) chronic medical conditions compared with non-Hispanic white children; Puerto Rican children had a higher prevalence of chronic medical conditions (6.2%). When assessed by these health status indicators, Hispanic children seem to have a health status similar to non-Hispanic white children. However, mainland Puerto Rican children seem at greater risk for poor health, reflecting the US Hispanic population's heterogeneity. Health programs targeted at US Hispanics should appropriately consider these group differences.

**Annotation:**

The health status of Puerto Rican mainlander, Mexican American, and Cuban American children was investigated in this 1991 study. The authors used two sources of data, the Hispanic Health and Nutrition Examination Survey (HHANES) and the National Vital Statistics System, to examine two health indicators: pregnancy outcomes and prevalence of chronic illnesses among children ranging from 6-months-old to 18-years-old. Results indicted that, across subgroups, the Hispanic population in general had rates of low-birth-weight babies comparable to the non-Hispanic Caucasian population. However, when analyzed by Hispanic subgroup, Puerto Rican mainlanders had the highest prevalence of low-birth-weight infants of all groups. All three Hispanic groups had increased incidences of premature births compared to non-Hispanic Caucasian women. Puerto Rican children showed a higher prevalence of chronic illnesses (6.2%) than Mexican-American, Cuban-American, and non-Hispanic Caucasian children. In all, Puerto Rican children seem to be at elevated risk for poor health compared to non-Hispanic Caucasian children and other Hispanic children.

Molins, C., Martinez Martinez, C. J., & Villanueva Rodriguez, S. (2009). 428: Child car seat safety knowledge among caregivers in Puerto Rico: Is more education needed? *Annals of Emergency Medicine*, 54(3, Supplement), S135. doi:10.1016/j.annemergmed.2009.06.468

**Abstract:**

N/A

**Annotation:**

Many child deaths in automobile accidents may be prevented if children are restrained in accordance with car seat safety laws. The authors sought to understand how informed parents are in Puerto Rico about car seat safety. They used a convenience sample of 203 parents in an emergency room in Puerto Rico and measured their self-reported knowledge of car seat safety guidelines and laws. Descriptive results indicated that 85% of parents were incorrect about state law limit for a child to be in a safety seat. 90% knew that children under 12-years-old should be in a rear seat, but only 37% knew that children 22 pounds and over could be in a booster seat. 83% knew infants under 1 years of age should be rear facing and that children over 1 may face front. However, participants did not know that children should be in the middle seat. A higher proportion of correct answers regarding car seat safety was associated with higher levels of education and income. The authors concluded that there is limited parental knowledge about car safety laws in Puerto Rico. This finding indicated that parents must be educated more comprehensively about this issue to minimize preventable child mortalities in car accidents.

National Council of La Raza. (2012). *2012 kids count: Puerto Rico data book*. Washington, DC: National Council of La Raza.

**Abstract:**

The "2012 KIDS COUNT – Puerto Rico Data Book" is an effort to collect and analyze child-focused data every year with the purpose of improving the well-being of Puerto Rico's youth. It provides statistical information on the conditions of children in Puerto Rico and in each of its 78 municipalities. The data presented in this book were obtained from the Puerto Rico Department of Health, Mothers, Children, and Adolescents Division, and the U.S. Census Bureau, American Community Survey, and Population Division.

**Annotation:**

Data were collected in 2009 regarding key indicators of well-being for children living in Puerto Rico for the island as a whole and for each of its 78 *municipios*. The 15 indicators are: estimated population under 18, percent of low-birth-weight babies, percent of preterm births, percent of cesarean births, infant mortality rate, child death rate, teen death rate, teen birth rate, percent of teens who are high school dropouts, percent of teens not attending school and not working, percent of children in poverty, percent of children who received public assistance, median family income, percent of children in single-parent families, and percent of children in female-headed households. Children under the age of 18 represented 25% of Puerto Rico's population. San Juan had 88,316 children under 18, the largest population of children on the island. In 2009, 12.4% of all live births were low-birth-weight babies (under 2,500 grams), and 17.6% of births were preterm. The infant mortality rate was 8 in 1,000 live births, and the child death rate was 17.2 in 100,000 (with child operationalized as 1- to 14-years-old). 56.6% of children living in Puerto Rico were living below the poverty line, with a median income (\$19,658) that was less than one-third of the median income in the U.S. mainland. A considerably larger percentage of children in Puerto Rico lived in single-parent households than do children in the U.S. mainland (54.3 compared to 33.6). These data highlight some of the strengths and needs in Puerto Rican well-being.

O'Carroll, K. L. (2012). Beyond barriers: The relationship between Head Start parents' social capital, their involvement, and children's academic school readiness. Doctoral dissertation, Harvard Graduate School of Education.

**Abstract:**

Head Start programs have renewed their commitment to parent involvement (Improving Head Start for School Readiness, 2007) given an increased focus on kindergarten readiness in the United States (U.S. Goals 2000) and the association between parent involvement and children's outcomes in Head Start (Fantuzzo, McWayne, Perry & Childs, 2004). Research suggests limits to some parents' capacity to be involved (Lamb-Parker, Piotrkowski, Baker, Kessler-Sklar, Clark et al., 2001), however, particularly among Hispanic or Latino parents (Garcia & Levin, 2001). Elsewhere, research suggests that parents' social capital, or resources exchanged within social networks (Bourdieu, 1986), may promote parent involvement (Sheldon, 2002). The relationships among social capital, parent involvement, and academic readiness have not been examined in Head Start.

This dissertation examines the possibility that parent social capital indirectly predicts children's academic readiness by way of parent involvement. In a sample of Puerto Rican Hispanic and non-Hispanic parents (N=126) and children (N=87), I examined the associations among (1) two indicators of parent social capital - the strength of family networks and the strength of Head Start networks; (2) three types of involvement - Home-Based Involvement, School-Based Involvement, and Home-School Conferencing; and (3) children's academic readiness. I used multivariate regression to examine the relationships among these constructs and to build and test a path model.

Results show that the strength of family-based networks was associated with Home-Based Involvement, and the strength of Head Start networks was associated with Home-Based Involvement, School-Based Involvement, and Home-School Conferencing. Home-Based Involvement was moderately associated with academic readiness, and Home-School Conferencing was negatively associated with academic readiness. The association between Head Start network strength and Home-School Conferencing was stronger for non-Hispanic parents than for Puerto Rican Hispanics while the strength of the relationship between parent education and Home-Based Involvement was stronger for Puerto Rican Hispanic parents.

Findings support prior research showing an association between the strength of parents' social networks and parent involvement. They also challenge the notion that social network size predicts involvement and that more involvement is associated with greater academic readiness. Compared with parent involvement, parent education and ethnicity emerged as stronger predictors of academic readiness.

**Annotation:**

This dissertation builds upon previous research indicating the importance of parental involvement in predicting school readiness among Head Start preschoolers. This research added the construct of social capital to analyses, hypothesizing that it would relate to parental involvement. A sample of Puerto Rican and non-Hispanic Head Start families (126 parents, 87 children) was recruited. Parents' involvement in home, school, and home-school conferencing was assessed, as was children's academic school readiness. Social capital was operationalized as the strength of family networks and of Head Start networks. Path modeling revealed that Head Start social capital was associated with all three parental involvement facets, and family social capital was associated with parental home involvement. Parental home involvement, in turn, was related to school readiness. Parental home involvement was more strongly tied to parental education among Puerto Rican parents, whereas their link between Head Start social capital and home-school conferencing was weaker. These findings illuminated the importance of social capital and parental involvement, but the author cautioned that parental education and ethnicity were still stronger predictors of academic readiness.



Oropesa, R. S., Landale, N. S., & Dávila, A. L. (2001). Poverty, prenatal care, and infant health in Puerto Rico. *Social Biology*, 48(1/2), 44–66.

**Abstract:**

Using data from a survey administered to a representative sample of mothers who gave birth in Puerto Rico in 1994–95, we investigate whether prenatal care and infant health outcomes are associated with family poverty and neighborhood poverty. The results show that infant health outcomes are unrelated to both family poverty and neighborhood poverty, despite the association of family poverty with the adequacy of prenatal care and the content of prenatal care. However, the poverty paradigm does receive some support using measures of participation in government programs that serve the low-income population. Women who rely on the government to fund their medical care are more likely than women who rely on private health insurance to have an infant death. They are also less likely to receive the highest levels of prenatal care. Nonetheless, targeted government programs can have an ameliorative impact. The analysis shows that participants in the Women, Infants, and Children (WIC) program are more likely than non-participants to receive superior levels of prenatal care and are less likely to have negative infant health outcomes.

**Annotation:**

Pregnancy outcomes are often used as a key indicator of an area's economic and social development, based on the poverty paradigm heuristic. This study sought to ascertain if the presumed relationship between poverty, prenatal care, and infant health are reflected in data from families in Puerto Rico. Data were drawn from the Puerto Rican Maternal and Infant Health Survey, which used birth and death certificates from 1994-1995 on the island to create a stratified representative sample of Puerto Rican births. Family poverty was operationalized with an income-to-needs ratio, and neighborhood poverty was quantified with census data. Contrary to expectations based on the poverty paradigm, the results revealed that low birth-weight and infant mortality were not associated with family or neighborhood poverty. However, prenatal care utilization and advice from health care providers - though not the services themselves - were related to family poverty, with those living in poverty more likely to underutilize prenatal health care options and to receive inadequate advice. Analyses also examined the relationship of government medical care as well as participation in targeted programs such as WIC. While it does not seem as though poverty in Puerto Rico plays as direct a role in infant health outcomes as theory posited, this may relate to the greater degree and variability of poverty and economic health experienced in Puerto Rico. More research may be needed on the determinants of health outcomes for women and children in Puerto Rico, and protective factors could be investigated for their potential contributions to alleviating the burden and risks associated with family and neighborhood poverty.

Ortiz-Colón, R. (1985). *Acculturation, ethnicity and education: A comparison of Anglo teachers' and Puerto Rican mothers' values regarding behaviors and skills for urban Head Start children* (Unpublished doctoral dissertation). Harvard Graduate School of Education, Boston.

**Abstract:**

This socio-educational study compared the values held by Puerto Rican mothers and Anglo teachers concerning the behavior and skills of male and female Puerto Rican children attending Head Start programs in a Latino community. Their values were described as they spontaneously expressed them. In addition, specific values concerning self-discretion or conformity were measured. Intra-group comparisons were made of mothers and teachers related to a series of background variables. For mothers, these variables included their acculturation level and migration patterns, their occupational and educational histories, and their level of participation in the Head Start center of their child. For teachers, these variables included their ethnic background, the type of university in which they were trained, whether they spoke Spanish and had lived abroad, and their level of cultural sensitivity to Puerto Rican culture. The interface occurring between these mothers and teachers in values was examined specifically concerning their children at school. This study expanded on existing research in five ways: (1) by analyzing intensively Latino mothers and children. Previous research had concentrated on describing the effects of ethnic differences between parents and teachers, without concentrating on any one group (2) by focusing specifically on the Head Start setting, in the hopes of improving the quality of children's learning by actively dealing with their teachers' and mothers' value differences; (3) by analyzing the effects of the acculturation level of mothers upon their values as spontaneously expressed and concerning a specific value: self-direction or conformity; (4) by studying further the contribution of differences between mothers and teachers as a result of the sex of the child as they pertain to values specifically; and (5) by using a multi-method approach, where open-ended interviews and analysis of values meanings serve as complements to the methodology used in earlier research, namely the analysis of individual differences through forced-choice techniques. Data was collected in four Head Start centers within a predominantly Latino, working-class community in New York City. One hundred and twenty mothers and 35 teachers of their children participated. Multiple methods were used, including ethnosemantic and open-ended interviews to elicit their valued skills and behaviors for children at Head Start, questionnaires and scales to measure background variables, and a picture inventory technique designed by Winetsky (1978a) to assess their preferences for self-direction or conformity in the preschool activities of children. Quantitative and qualitative information was analyzed. The results suggest that, although mothers and teachers agree on a domain of behaviors for children, discontinuities between them emerge in the importance they assign to a different pattern of behaviors. Both in their rankings of behaviors and in their explanations of their meaning, teachers saw as more important that children be independent, verbally expressive and assertive. On the other hand, mothers placed more importance than

teachers on obedience and mindfulness of rules. They significantly agreed that children be 'able to defend themselves in life'. In addition, teachers significantly preferred self-direction and mothers preferred conformity in the preschool activities of children. Lastly, no significant sex differences in their response patterns were observed in any of the comparisons. As other studies suggested, teachers and mothers in the present sample agree more than disagree on skills that they value for children to acquire while at Head Start. However, teachers were more specific to skills associated with reading readiness, while mothers expected children to learn to read upon finishing Head Start. Comparisons among mothers' values indicated that their acculturation and income levels correlated significantly with their rankings of skills, behaviors and preferences. Findings suggest that culture change and socio-economic factors interact to create differences in values among mothers. More acculturated mothers who also have higher incomes and years of schooling resemble teachers' valued behavior and skill rankings and significantly prefer self-directed preschool activities. Less acculturated mothers with less income and years of schooling value that children be able to read, be obedient, conform to adult supervision, be friendly and able to join groups well. The findings of comparisons among teachers indicate that they are generally homogeneous in their pattern of response. Teachers tend to bond together in valuing behaviors and skills appropriate to a classroom setting, such as children competing tasks, asking questions, and remembering that they learned. Only teachers' speaking Spanish, living abroad, and their cultural sensitivity significantly affected some of their value rankings and preferences. Spanish-speaking teachers who also have lived abroad resemble less acculturated mothers in their rankings of skills. Non-Spanish speaking teachers placed more importance on behaviors appropriate to academic situations. Culturally sensitive teachers also placed more importance on classroom norms, and in this way they do not resemble mothers generally. Results suggest that multiple factors affect the continuity or discontinuity in the values of home and school in this community. Cultural, socio-historical, structural, and attitudinal factors intersect dynamically, significantly affecting teachers' and mothers' values. Multiple interpretations were applied to the findings. Recommendations to researchers and practitioners in preschool settings were offered in order that dialogue between teachers and parents is encouraged. In this way, teachers and parents can learn about each others' styles and values, rather than having these different values produce only unexamined conflict. Concrete ways were suggested in order to deal with value differences at school so as to reduce deleterious effects upon children's learning and advancement.

**Annotation:**

This dissertation investigated the values that Puerto Rican mothers and Head Start teachers hold for preschool children. Specifically, the author examined the extent to which mothers and teachers expressed value for self-direction and conformity among Head Start children. Participants were 120 Puerto Rican mothers and 35 teachers from four Head Start centers in New York City. To understand any differences between the groups, qualitative and quantitative data were gathered using a variety of techniques, including open-ended interviews and questionnaires. Data collected from the mothers included: accultur-

ation level, migration pattern, educational histories, occupational histories, family composition, and involvement in Head Start programs. For the teachers, the variables measured were: ethnicity, educational history, knowledge of Spanish language, residence in another country, and sensitivity to Puerto Rican culture. Results showed that teachers and mothers valued many of the same skills, though the way they rated the importance of some values differed. Puerto Rican mothers rated conformity and obedience as more important for their preschoolers' school behavior, while teachers rated self-direction, independence, and expressiveness as more important. Sex of the child did not affect value ratings in either group. Among mothers, degree of acculturation and income were related to value ratings, such that more acculturated, higher income mothers responded in a way that more resembled the teachers' responses. Among teachers, speaking Spanish and having lived abroad was associated with responses more similar to the less acculturated mothers than other teachers. These findings highlight the dynamic interaction of cultural, economic, and structural factors in informing attitudes towards education, children, and behavioral norms. The author suggests techniques for enhancing dialogue between teachers and Puerto Rican mothers to guide their collaborative efforts to raise and educate preschoolers according to their values.

Otero-González, M., & García-Fragoso, L. (2008). Prevalence of overweight and obesity in a group of children between the ages of 2 to 12 years old in Puerto Rico. *Puerto Rico Health Sciences Journal*, 27(2), 159-161.

**Abstract:**

Background: Obesity in children has been related with co-morbid conditions being an important risk factor in adult morbidity and mortality. The objective of this study was to identify the prevalence of overweight/obesity in a group of children in Puerto Rico.

Methods: Participants included 158 children receiving pediatric care at the San Juan City Hospital and a primary care clinic. Body mass index (BMI) was calculated in children and parents. Results: Fifty-six percent of children were overweight/obese as well as 61% of mothers and 75% of fathers. Using weight-height percentiles graphs, 49% of children were overweight. Conclusions: This study shows the high prevalence of overweight and obesity in children and their parents. Using the BMI for evaluating weight identified more children at risk than the traditionally used graphs. Identifying risk factors will help health care professionals and parents intervene to improve the health of these families.

**Annotation:**

Childhood obesity has become a concern in the U.S., with affected children facing concurrent and future health concerns. This research investigated the incidence of childhood obesity in Puerto Rico, and compared children's results to their parents' results. The sample consisted of 158 2- to 12-year-olds (mean age = 6) receiving primary care or hospital care in public San Juan clinics that provide healthcare services to low-income families. For all child participants and their parents, body mass indices (BMI) were calculated. Based on these BMIs, 56% of children were classified as overweight or obese (20% overweight, 36% obese). There was no significant difference in prevalence between preschoolers and school-aged children. Among parents, 61% of mothers and 75% of father were classified as overweight/obese; the average mother had a BMI classified as overweight, and the average father had a BMI classified as obese. A high rate of concordance between parental and child overweight/obese status was observed. Furthermore, mothers did not identify their children as overweight. The authors caution that this study had a limited sample size and only recruited participants from an urban context, so the results may not generalize to the entire island. Regardless, the authors suggest that increased awareness and parental education could be indicated. Furthermore, since preschoolers' BMIs were just as problematic as school-aged children's BMIs, early intervention efforts regarding nutrition and exercise habits may be warranted.

Páez, M., Tabors, P., & López, L. (2007). Dual language and literacy development of Spanish-speaking preschool children. *Journal of Applied Developmental Psychology*, 28(2), 85-102.

**Abstract:**

This article describes oral language and early literacy skills in Spanish and English for a sample of 319 bilingual children in Massachusetts and Maryland (ECS) and a comparison group of 144 monolingual Spanish-speaking children in Puerto Rico (PRC). Children were assessed as they entered and exited pre-kindergarten programs. Data collection included four subtests of the Woodcock Language Proficiency Battery and a researcher-developed phonological awareness task. Results show that, on average, children in the ECS sample performed below average in both English and Spanish when compared to monolingual norms and, despite some early literacy and oral language gains during their pre-kindergarten year, continue to lag behind monolingual children of the same age. Children in the ECS sample performed better in the early literacy tasks than in the oral language tasks in both English and Spanish. On average, the PRC sample scored significantly better than the ECS sample in Spanish oral language skills, but lower in phonological awareness skills. Educational implications and directions for future research are discussed.

**Annotation:**

The purpose of this study was to understand the development of early language and literacy skills among Spanish-English bilingual preschoolers in the U.S., and to compare them with monolingual preschoolers in a Spanish-speaking country (Puerto Rico). The sample consisted of 319 pre-kindergarteners (mean age = 4.43) from Massachusetts and Maryland who were recruited from both Head Start and public preschools, and 144 pre-kindergarteners in Puerto Rico (mean age = 4.48), all in Head Start. All of the families of participants in the U.S. spoke Spanish at home, so their children were all dual language learners (DLLs). Of these DLLs, the majority were U.S. born (84.4%), with parents from 22 countries in Latin America and Puerto Rico; those not born in the U.S. were born in Puerto Rico (5.5%) and other Latin American countries. Children were assessed using four subtests of the Woodcock Language Proficiency Battery - Revised: Letter-Word Identification, Dictation, Picture Vocabulary, and Memory for Sentences. This battery was chosen since it was normed in Spanish and English; however, it should be noted that the Spanish normative sample consisted of monolingual Spanish-speaking children, who may differ in scores from the mainland bilingual children in the study. The researchers developed a phonological awareness task in English and Spanish that assessed rhyme production, rhyme recognition, initial phoneme recognition, syllable segmenting, and sentence segmenting. Bilingual children in the U.S. were tested in both English and in Spanish in the fall of their pre-kindergarten year, and again in the spring; the Puerto Rican comparison sample was tested at the same time points, but only in Spanish. Results revealed that DLLs scored lower than normative samples in both languages in oral lan-

guage and early literacy. The gains made over time were not as high as expected, particularly in oral language, with the mainland sample developing least quickly in their home language. On most language and literacy tasks, the Puerto Rican sample scored closer to norms than the mainland sample; however, they scored lower on a phonological task in Spanish. Given the link between early underperformance in language and literacy and future reading difficulty among low-income populations, the authors discuss the need for targeted interventions for the growing population of DLLs in the U.S.

Pillai, S. S. (1998). *Association between externalizing behavior in preschool children and factors related to insecure attachment: An exploratory study* (Unpublished doctoral dissertation). Bryn Mawr College, Bryn Mawr, PA.

**Abstract:**

This exploratory study sought to investigate the association between externalizing behavior in preschool children and factors related to insecure attachment. Twenty-five Puerto Rican boys who were enrolled at the Preschool Partial Hospitalization Program at the Child Psychiatry Center were involved in this study. Four scales and a semistructured interview schedule were administered to the primary caretakers of the subjects. Externalizing behavior at home and in school were the dependent variables. Factors related to insecure attachment, namely, lack of positive parental involvement, harsh and inconsistent discipline, threats of abandonment made by the primary caretaker, separation from the primary caretaker and biological parents, witnessing domestic violence and child maltreatment, were the independent variables. The Child Behavior Checklist (CBCL/2-3) and Conners' Rating Scales (CTRS-39) were used to measure externalizing behavior at home and in school, respectively. The Conflict Tactics Scales (CTS) Couple Form RC was used to measure domestic violence witnessed by the subjects. The Conflict Tactics Scales (CTS) Child Form R was used to measure child maltreatment. A semi-structured interview schedule was used to measure positive parental involvement, harsh and inconsistent discipline, threats of abandonment made by the caretakers and separation from the primary caretakers and biological parents. Results revealed that there was a positive association between externalizing behavior of subjects at home and threats of abandonment made by the primary caretakers and witnessing violence towards the primary caretakers. In addition, there was a positive association between emotional-overindulgent behavior in school and witnessing violence towards the primary caretakers. There was no positive association between externalizing behavior and separation from biological mother and father. There was no positive association between externalizing behavior and child maltreatment although there was direction. There was also no positive association between externalizing behavior and lack of positive parental involvement. The high rate of externalizing problems at home coincided with the increased use of harsh and inconsistent disciplinary methods. In addition, association between externalizing and internalizing behavior at home was approaching significance. The findings suggest that some factors related to insecure attachment are associated with externalizing problems in preschool children.

**Annotation:**

With connections to school disruption and future violent behaviors, externalizing behaviors in childhood are a serious concern. Past research has linked externalizing behaviors in children to insecure attachment to primary caregivers by explaining aggression as a reaction to the caregivers' lack of responsiveness. This dissertation examined the relation-



ship between factors related to insecure attachment and externalizing behaviors among 25 Puerto Rican boys in a preschool partial hospitalization program in a child psychiatry center in the U.S. Parents and teachers reported on the boys' externalizing behaviors using the Child Behavior Checklist (CBCL/2-3) and the Conners' Rating Scales (CTRS-39), respectively. Six factors of family life were examined as correlates of insecure attachment: lack of positive involvement, harsh or inconsistent discipline, threats of abandonment, witnessing domestic violence, separation, and child maltreatment. Data on these variables were gathered from parents' responses to The Conflict Tactics Scales (CTS) Couple Form RC and Child Form R, and a semi-structured interview schedule. Results indicated that externalizing behaviors were positively related to threats of abandonment and witnessing domestic violence, but not related to separation from caregiver, lack of parental positive involvement, or child maltreatment. At home, children with high rates of externalizing behaviors were more likely to have parents who used harsh or inconsistent discipline. There was a positive relationship between internalizing and externalizing disorders that approached significance. These findings indicated that, among a small and high-risk sample, the factors involved in insecure attachment were also related to externalizing behaviors. While this connection between children's problem behaviors and their relationships with primary caregivers is compelling, studies with more control variables and a larger sample may be needed to replicate these findings.

Peña, E. D. (2000). Measurement of modifiability in children from culturally and linguistically diverse backgrounds. *Communication Disorders Quarterly*, 21(2), 87-97.

**Abstract:**

Modifiability is a central concept in the area of dynamic assessment. Yet, there has been little attempt to capture the essence of modifiability, either qualitatively or quantitatively. The two studies reported here used a scaling approach to measure components of modifiability. The results indicate that modifiability (here defined as a combination of planning, attention to task/discrimination, motivation, transfer, responsivity, and examiner effort) differentiates between children having low language ability and typically developing children from culturally and linguistically diverse backgrounds. Furthermore, the individual components of modifiability, with the exception of motivation, significantly differentiated the two groups. These findings suggest that modifiability is a useful construct in providing a less biased assessment and that the descriptive results obtained from this observation can also be used to link assessment with intervention.

**Annotation:**

"Modifiability" refers to a child's ability to change in response to supportive learning environments and experiences. The concept is rooted in Vygotsky's "zone of proximal development," which differentiates between the tasks that children are able to do alone and those that they are able to do when guided by an adult or more advanced student. To assess modifiability, dynamic assessments are typically conducted in a test-teach-retest model. The area of language disorders is especially in need of assessments with limited potential for bias. Some present assessments do not adequately distinguish between children who truly have language difficulties and those who are English Language Learners, many of whom are then mistakenly placed in special education classes. Using a mixed sample of ELL and non-ELL preschoolers, the researchers sought to determine if a dynamic assessment of children's modifiability in a language intervention could distinguish low language ability (LLA) children from typically developing (TD) children, without bias by their dominant language.

In Study 1, 39 Puerto Rican and 11 African American Head Start preschoolers ( $M = 4$  years, 2 months) participated. Among the 50 children, 28 were Spanish-English bilingual or Spanish monolingual and 9 had low language ability (LLA). The Stanford-Binet Test of Intelligence - Comprehension subscale (CSSB) was used at baseline, and the Expressive One-Word Picture Vocabulary Test (EOWPVT) was used at both baseline and post. Pre-post patterns on the EOWPVT post-test scores on the CSSB distinguished the TD and LLA children. The intervention consisted of a language focused Mediated Learning Experience (MLE). Immediately after the MLE, teachers completed The Modifiability Scale to assess children's modifiability in the intervention. Results revealed that TD children scored higher on the Modifiability Scale than the LLA children, mostly accounted for by

the responsivity subscale, and the scale distinguished among TD and LLA children with 95% accuracy.

Study 2 expanded on Study 1 by adding a control group and using the Learning Strategies Checklist (LSC) as an additional measure of modifiability. Results replicated those of Study 1, except the Modifiability Scale classified 72.7% of the LLA children accurately. Furthermore, TD children had higher scores on the LSC than the LLA children. Overall, these studies support the notion that language difficulties may be interrelated with modifiability, and provide evidence supporting the use of two scales, the Modifiability Scale and the Learning Strategies Checklist, to distinguish among those with a true language disorder. This practice may reduce the number of ELL students mistakenly classified as having a language disorder.

Peña, E. D., & Quinn, R. (1997). Task familiarity: Effects on the test performance of Puerto Rican and African American children. *Language, Speech and Hearing Services in Schools*, 28(4), 323-332.

**Abstract:**

Two studies compared the performance of Puerto Rican and African American Head Start children on presumably familiar (description) and unfamiliar (one-word labeling) test tasks. Results indicated that children performed significantly better on the familiar test task, and that the familiar task was more sensitive in differentiating children who were typically developing from those with low language ability. Implications for the use of standardized tests, local norms, and dynamic assessment with culturally/linguistically diverse children are discussed.

**Annotation:**

Cross-cultural research on parent-child language use has revealed that parent's methods of questioning children vary across cultures, meaning that children have unequal exposure to various methods of inquiry. For example, the authors cite prior research indicating that Hispanic parents were less likely to ask children to answer questions when the parents already knew the answer. Since this is a common format for testing in school, assessments may be partially measuring acculturation rather than solely measuring ability. The fact that assessments utilize methods of questioning to which children have differential exposure may relate to the disparity in scores. This study compared children's scores on two language tasks: a description task that was presumed to reflect a common method of questioning in the homes of Puerto Rican and African American children, and a one word labeling task, which was presumed to be unfamiliar. The familiar task was the Stanford-Binet Test of Intelligence - Comprehension subscale (CSSB), and the unfamiliar task was the Expressive One-Word Picture Vocabulary Test (EOWPVT). The participants were 39 Puerto Rican and 11 African American children (*M* age = 4years, 2 months) in bilingual Head Start programs in the U.S. Results revealed that the children performed significantly higher on the CSSB as the EOWPVT, implying that children were more adept at taking tests when the questioning matched their home language socialization. The CSSB was also effective at distinguishing low language ability (LLA) children from typically developing (TD) children. No significant differences between African American and Puerto Rican children's scores were found. Study 2 replicated these findings in a sample of 17 African American and 60 Hispanic children. These findings have practical implications for the assessment of culturally and linguistically diverse children; based on the difference in performance on the two measures, it may be beneficial to assess children using measures that utilize familiar modes of questioning.

Pérez, S. M. (2000). *U.S. Latino children: A status report*. Washington, DC: National Council of la Raza.

**Abstract:**

This report presents status and trend data in several areas relevant to Latino children in the United States. The Latino population under age 18 years is growing faster than that of any other racial and ethnic group, and the challenges confronting these children have implications for cities and states where they live. While Latino children are likely to live in two-parent working families, the proportion of Latino children under 18 living in single-parent households has remained high over the past decade. These families are especially likely to be poor. The proportion of female-headed families is greatest for Puerto Ricans. Not enough Latino children participate in pre-primary education, and many drop out of high school. Among Latinos, Mexican Americans are the least likely to have high school diplomas. Hispanic Americans have persistently high teenage birth rates. A large share of Latino children live in poverty, with Puerto Rican children the poorest of all. A significant segment of Latino children is without health insurance, with children of immigrants especially likely to lack health insurance. The paper concludes with a brief review of why this matters to the nation and describes initiatives that can make a difference (the Earned Income Tax Credit and the Children's Health Insurance Program). Two appendixes present statistics on children in Puerto Rico, and Latino children and federal assistance programs.

**Annotation:**

This report uses Census data to describe key characteristics of Latino (including Puerto Rican) families living in mainland U.S, as well as Puerto Ricans living on the island. The data between mainland and island Puerto Ricans may not be directly comparable, though, since they stem from different surveys and different years. Nevertheless, they provide insight in some similarities and differences in the experiences of Puerto Rican children living in the mainland U.S. and on island.

Among Puerto Ricans living in the mainland, the proportion of female, single parent families was greater (37.2%) than for any other major U.S. Latino subgroup. In Puerto Rico itself, the percentage was 26%. Puerto Rican children living in the United States experienced the highest poverty level of all Latino children; more than two in five (43.5%) of Puerto Rican children live below the poverty level. This poverty rate has remained disproportionately high for 30 years. Puerto Rican children living on the island experience even higher rates of poverty (67%). In contrast, mainland Puerto Ricans were more likely to have a high school diploma (64%) and lower teenage pregnancy rates (75 per 1000) compared to respondents of Mexican origin. On the island, the dropout rate of 16- to 19-year olds was 22%; the teenage pregnancy rate was not reported.

Planos, R., Zayas, L. H., & Busch-Rossnagel, N. A. (1995). Acculturation and teaching behaviors of Dominican and Puerto Rican mothers. *Hispanic Journal of Behavioral Sciences*, 17(2), 225-236.

**Abstract:**

The relationship between acculturation and maternal teaching behaviors was studied by observing 101 low-income Puerto Rican and Dominican mothers in a teaching task with their preschool children and rating six teaching behaviors frequently used by parents. Puerto Rican mothers tended to be more acculturated than Dominican mothers. Although the two groups tended to prefer teaching behaviors that involved giving directives, visual cues, and modeling, Puerto Rican mothers made significantly more use of inquiry and praise, and Dominican mothers used more modeling behaviors. Significant correlations for the total sample were found between acculturation and three teaching behaviors (inquiry, praise, and modeling). These correlations were the function of group difference in acculturation and not socioeconomic status. Acculturation was only significantly related to negative verbal feedback and visual cues in teaching, and positively related to modeling among Puerto Rican mothers.

**Annotation:**

This study examined the similarities and differences between Puerto Rican and Dominican mothers' teaching strategies with their preschool-aged children, as well as the relative influence of acculturation on such practices. The sample included 51 Puerto Rican families and 50 Dominican families living in New York City and participating in Head Start. The children were approximately 4-years-old, and their mothers were in their late twenties. Some demographic differences were noted, with Puerto Rican mothers being younger and more likely to have been born in the mainland than Dominican mothers. Mothers engaged in a teaching task at the Head Start centers, and completed the instruments in their preferred language. Overall, mothers often engaged in modeling, visual cues, and directives. Puerto Rican mothers utilized inquiry and praise to a larger extent than Dominican mothers, though the analyses revealed that such differences may relate more to acculturative, rather than cultural, differences. In comparison, the greater preference of Dominican mothers to model behaviors was not accounted for by acculturation. The authors conclude with a discussion of socioeconomic and cultural influences on maternal behaviors with young children.

Planos, R., Zayas, L. H., & Busch-Rossnagel, N. A. (1997). Mental health factors and teaching behaviors among low-income Hispanic mothers. *Families in Society*, 78(1), 4-12.

**Abstract:**

The relationships among anxiety, depression, parenting stress, social support, and teaching behaviors were studied in a group of 101 low-income Dominican and Puerto Rican mothers with children in Head Start. The two groups of mothers showed high levels of depression, anxiety, and parenting stress but did not differ significantly from each other. Puerto Rican mothers reported more social support than did Dominican mothers. Surprisingly, neither anxiety nor depression was significantly associated with social support. Both groups used more directive, modeling, and visual cues than other behaviors in their teaching. Dominican mothers used more modeling than Puerto Rican mothers, who used more praise and inquiry. Anxious and depressed mothers also used more negative feedback, directives, and modeling. Those with high parenting stress used less inquiry and praise and more modeling. These findings inform clinical and educational interventions with parents and children.

**Annotation:**

As children's first teachers, parents prepare children to participate in school and society. However, adverse life situations and stressors, such as mental illness, may interfere with parents' ability to teach their children. This study explored the relation of anxiety and depression to teaching behaviors, as well as the impact of social support. Participants were Puerto Rican (N = 51) and Dominican (N = 50) mothers of children in Head Start in New York City. Puerto Rican mothers were significantly younger (M age = 27 years) and more likely to be born in the U.S. mainland than Dominican mothers (M age = 31 years). Teaching behaviors were coded using Maternal Teaching Observation Techniques (MTOT) during a mother-child interaction in which dyads completed a cognitive-perceptual task (i.e. creating Tinkertoy models). Stress was measured with the Parenting Stress Index, anxiety was measured with the State-Trait Anxiety Inventory, depression was measured with the Center for Epidemiologic Studies Depression Scale, and social support was measured with the Inventory of Socially Supportive Behaviors. Results indicated that average anxiety, depression, and stress scores were high relative to results from other studies, and did not differ widely between the two groups. However, Puerto Rican mothers endorsed greater social support. Depression and anxiety were positively related to parenting stress, but not to social support. Puerto Rican mothers used more praise and inquiry-based teaching behaviors and less modeling than did Dominican mothers. With regard to the connection between anxiety/depression and teaching behaviors, more anxious mothers used more directives, depressed mothers used more negative verbal feedback, and both used more modeling. The authors conclude the article with a discussion about the role of maternal mood disorders; they suggest that enhanced treatment

programs for low-income mothers may not only improve their lives, but also their ability to teach their children.



Quirk, M., Ciottone, R., Minami, H., Wapner, S., Yamamoto, T., Ishii, S., Lucca-Irizarry, N.... Pacheco, A. (1986). Values mothers hold for handicapped and nonhandicapped preschool children in Japan, Puerto Rico, and the United States mainland. *International Journal of Psychology*, 21(1-4), 463–485. doi: 10.1080/00207598608247602

**Abstract:**

This study examines the values held by mothers in Japan, Puerto Rico and the U.S. Mainland for their handicapped and nonhandicapped preschoolers in the contexts of home and school. In order to study values, mothers from the three cultures were asked to rank twelve value items relating to four value areas: physical, intrapersonal, interpersonal, and sociocultural.

The value rankings were different in the three cultures and depended upon the home and school contexts. The presence of a diagnosed orthopedic and/or neurological impairment in the child had no overall effect on value ratings but did interact with culture and context to influence mothers' values.

**Annotation:**

Building from previous cross-cultural research, this study examined the different values that mothers from three cultural traditions hold for their children. Specifically, the authors sought to compare the relative importance that mothers express for specific personal qualities and behaviors of their children, and whether these patterns relate to whether or not the child has a handicap. The authors predicted that the findings of this study would align with previous research, which has found (in broad terms) that Japanese mothers valued emotional attachment and freedom from restraint for their children, U.S. mainland mothers valued autonomy and self-esteem for their children, and Puerto Rican mothers valued dignity and *personalismo* for their children. The sample included 243 mothers of 3- or 4-year-olds: 58 from Puerto Rico, 99 from Japan, and 86 from the U.S. mainland. The participants rank-ordered twelve values for their preschoolers from four categories: physical, interpersonal, intrapersonal, and sociocultural. They did this twice - once for a school context and once for the home context. Results revealed that Puerto Rican mothers placed the most importance on health, self-confidence, and affection, in comparison to cultural awareness, religion, creativity, and productivity. In contrast, Japanese mothers valued self-discipline more, and U.S. mothers valued individualism more. Compared to Japanese and U.S. mothers, Puerto Rican mothers placed the most importance on religion. The article also highlighted the role of *respeto*, suggesting that Puerto Rican mothers wanted their children to embody both *respeto* for themselves (dignity, self-confidence, cleanliness), and for others (responsibility to others, religion). There were no differences in overall patterns of value rankings based on handicap status, but there were different interactions between context and culture. This research contributes to understanding of

different cultural approaches to childrearing, although heterogeneity within cultures is also prevalent.

Rivera Díaz, M. (2011). Niñez ciudadana: Un abordaje socioconstruccionista a la política de salud mental infanto-juvenil en Puerto Rico. *Revista Puertorriquena de Psicología*, 22, 122-146.

**Abstract:**

This article has as its main objective to present the current situation of mental health problems among children in Puerto Rico from a socioconstructionist perspective and active citizenship concept. Strengths and limitations of the Puerto Rican Mental Health Policy for children and adolescents are identified, with the aim of establishing recommendations for the social work and mental health related professions, and mental health policy development.

**Annotation:**

Researchers were interested in motivating future social work and mental health research by presenting the situation of mental health problems among children and adolescents in Puerto Rico from a socioconstructionist point of view. They focused on the contextual factors that may have strong influences on Puerto Rican children: poverty, child abuse, homicide, suicide, and substance use. The authors recommend removing blame and stigma from children as psychopathology, at least partially, may be related to the harmful aspects of environment in which these children develop. They recommend focusing future studies on contextual influences in the development of vulnerable groups, and how to overcome structural impediments in ensuring all children equitable access to health, education, and socioemotional development.

Rodríguez, J. M. (1984). *The effect of modifying curriculum and instruction on the acquisition of expressive vocabulary by Puerto Rican preschool deaf children* (Unpublished doctoral dissertation). The Pennsylvania State University, University Park, PA.

**Abstract:**

This study explored the following objectives: to determine the effectiveness of a preferred mode of communication of Puerto Rican preschool deaf children in the acquisition of expressive vocabulary and to determine the effectiveness of similar modes of communication in the home and in the school in the deaf child's acquisition of expressive vocabulary. A single-case research design with a multiple baseline was used to collect the data. A systematic prompt hierarchy was utilized to prompt the subjects' responses. A set of 15 nouns unknown to the subjects was used as the training items. The sample of this study consisted of three preschool deaf children attending La Escuelita at the Hospital Pediátrico Universitario in San Juan, Puerto Rico. Each subject utilized a different mode of communication: Spanish-Sign Mix, Oral Spanish, and Sign Alone. These were the three behaviors tested in this study. A Language Survey, a Parent-Child Survey, the Initial Imitation Test, the Peabody Picture Vocabulary Test, and a language sample were used to assess the language preference of the subjects. It was concluded that the language reported by teachers and parents as the preferred mode of communication for each subject was as effective as the less preferred modes in the acquisition of expressive vocabulary. Parents who used similar modes of communication as their children reinforced their children's communication mode by way of using the same mode to communicate with them at home. It was perceived that a Puerto Rican Sign Language was emerging in the population studied. It was recommended that the study be replicated with a larger sample and a more complex structure.

**Annotation:**

This dissertation focused on the preferred mode of communication of preschool deaf children, effective methods and the development of expressive vocabulary. The research design consisted of multiple baseline measurements that were replicated across the three behaviors. The three children in the study ranged from 2- to 5- years-old. A Parent-Child survey was administered, along with a Language Survey, to identify the language preferences and experiences of the children. The Initial Imitation Test and the Peabody Picture Vocabulary Test were used to examine their abilities. The preferred mode of communication reported by teachers and parents proved to be as effective as the less preferred modes in the development of expressive vocabulary. In addition, similarities were evidenced across the subjects in terms of their acquisition rates in response to interventions. Furthermore, two of the three subjects used similar communication models. Finally, the author found that parents who used modes of communication that were consistent with their child's communication mode supported development in that modality. The study also

shed light on potential multilingual and cultural influences on sign language use in Puerto Rico.

Román Oquendo, J.B., & Pérez, S.M. (2004). TANF implementation in Puerto Rico: A summary of data on leavers. Washington, DC: National Council of La Raza.

**Abstract:**

Analyses of the impact of the Temporary Assistance for Needy Families (TANF) program have tended to focus on the 50 states, but there has not been similarly extensive research conducted on the impact of TANF implementation in Puerto Rico. In particular, the federal law's main provisions which systematically sought to reduce welfare rolls and integrate recipients into the labor force as quickly as possible – neither focused on reducing poverty nor took into account the educational profile, preparation, and skills of TANF participants. In the case of Puerto Rico, this oversight has resulted in both an insufficient proportion of women making the transition to work and precarious employment outcomes for those who find jobs.

**Annotation:**

With the implementation of TANF in Puerto Rico, there has been a significant reduction in the number of welfare cases in Puerto Rico. However, this report suggests that the data may be misleading; a case may close due to either employment or failure to follow through with tasks for redetermination. In fact, only 28% of the case closures reflected individuals entering the labor force. While the economy of Puerto Rico had been poor at the time of this report (with considerable job loss and 11% unemployment in 2000), the main reason for poor employment rates for TANF recipients may have been their low educational attainment, according to the report. The majority of TANF recipients had less than 12 years of formal schooling. The authors suggest that a greater focus on employment barriers for impoverished women are needed in order to improve the movement of former TANF recipients into the paid labor force in Puerto Rico. These barriers relate to educational attainment, skill sets, transportation, child care, psychological well-being, and drug abuse. The authors describe recommendations for federal policies and collaboration between local government policy agencies.

Román-Oyola, R., & Reynolds, S. (2013). Prevalence of Sensory Modulation Disorder among Puerto Rican preschoolers: An analysis focused on socioeconomic status variables. *Occupational Therapy International*, 20(3), 144-154.

**Abstract:**

The purposes of this study were to determine the prevalence of sensory modulation disorder (SMD) in a sample of Puerto Rican preschoolers and to examine differences in the prevalence of SMD based on socioeconomic status (SES) variables. Caregivers of children from Head Start programs and private preschools were recruited from three regions in Puerto Rico (PR) to participate in the study. Each caregiver completed a Short Sensory Profile (SSP) and a demographic data sheet. Total scores on the SSP were used to establish diagnosis of SMD. The total sample included 141 participants (response rate of 64%). Prevalence of SMD among the total PR sample (19.9%) was higher than previously reported estimates on the US mainland (5–16%). Statistical results indicated no difference in the overall prevalence of SMD based on SES. However, significant differences in scores based on caregivers' educational degree were found on the SSP sub-domain of Movement sensitivity and Under-responsive/seek sensation; differences in scores based on caregiver household income were also found for the SSP sub-domain of Under-responsive/seek. Although SMD appears to be prevalent in preschoolers in PR, variables associated with SES do not appear to contribute to an overall SMD diagnosis. However, additional research linking specific sub-domains of SMD to SES variables may be warranted.

**Annotation:**

Sensory Modulation Disorder (SMD) involves dysregulation of responses to sensory input from the environment that impairs development of functional behaviors. This study investigated the prevalence of SMD in Puerto Rican preschoolers, and assessed whether prevalence was higher among low socioeconomic status (SES) children. A sample of 141 caregivers of Puerto Rican children was recruited from Head Start and private preschools in three regions of Puerto Rico. The researchers used the Short Sensory Profile (SSP) to assess SMD symptoms. Results showed that Puerto Rican children exhibited a higher prevalence (19.9%) of SMD compared to the prevalence rates of their mainland U.S. counterparts generated from previous studies (5-16%). There were no significant differences found in prevalence rates among different SES levels within Puerto Rico. However, when the subscales of the SSP were analyzed, a relationship was found between income and "Under-Responsive/Seek Sensation" subscale answers, such that higher income was associated with more children being rated under-responsive. Higher parental education was also linked to under-responsivity, as well as to "Movement Sensitivity." These SES-linked differences in certain SMD symptoms may reflect other influences, such as parental expectations for child behavior, amounts of environmental stimulation in the home, and parental attention. This was reportedly the first SMD prevalence study con-

ducted with Hispanic children outside of the United States, and the authors suggest that this information may help occupational therapists be better informed about this population.



Roopnarine, J. & Ahmeduzzaman, M. (1993). Puerto Rican fathers' involvement with their preschool-age children. *Hispanic Journal of Behavioral Sciences*, 15(1), 96-107. doi:10.1177/07399863930151005

**Abstract:**

The relationships between fathers' functional styles within the family, social support, and fathers' involvement with their preschool-age children (aged 3-5 yrs) in the home were assessed in 40 mainland Puerto Rican intact lower- to middle-income families. Data reveal that fathers spent 37% of the time that mothers did in primary caregiving. Family income and fathers' educational level were not significantly associated with paternal involvement, fathers' functional styles, or the degree of support received, but family income was positively associated with length of time married. Fathers' assessments of their commitment to the family and their competence were significantly associated with their involvement with their preschool-age children. Results are discussed with respect to the importance of personal psychological functioning for participation in early caregiving.

**Annotation:**

The present study examined both the types of paternal involvement displayed by mainland Puerto Rican fathers, as well as influences on engagement. A community sample of 40 Puerto Rican fathers was recruited. The fathers were generally in their thirties and had completed about two years of training or college. On average, they had two children, one of whom was a preschooler. Most of their spouses worked part- or full-time. Both fathers and mothers completed questionnaires describing paternal involvement. They similarly reported that fathers engaged in about 3 hours a day as primary caregivers, which was estimated to be about 37% of the time that mothers spent. While gender differences were noted in caretaking, fathers spent similar proportions of time with daughters and sons. Paternal commitment to their families and their family problem-solving skills were related to their caretaking behaviors. Paternal involvement among mainland Puerto Ricans did not relate to the presence or degree of extended family networks, or demographic variables.

Rowley, D. L., & Hogan, V. (2012). Disparities in infant mortality and effective, equitable care: Are infants suffering from benign neglect? *Annual Review of Public Health*, 33(1), 75-87.

**Abstract:**

Quality care for infant mortality disparity elimination requires services that improve health status at both the individual and the population level. We examine disparity reduction due to effective care and ask the following question: Has clinical care ameliorated factors that make some populations more likely to have higher rates of infant mortality compared with other populations? Disparities in post-neonatal mortality due to birth defects have emerged for non-Hispanic black and Hispanic infants. Surfactant and antenatal steroid therapy have been accompanied by growing disparities in respiratory distress syndrome mortality for black infants. Progesterone therapy has not reduced early preterm birth, the major contributor to mortality disparities among non-Hispanic black and Puerto Rican infants. The Back to Sleep campaign has minimally reduced SIDS disparities among American Indian/Alaska Native infants, but it has not reduced disparities among non-Hispanic black infants. In general, clinical care is not equitable and contributes to increasing disparities.

**Annotation:**

The authors provided a literature review examine the role of clinical care in reducing infant mortality among racial/ethnic minorities. Variations within the Hispanic community are described. For example, Puerto Rican infants had the third highest mortality rate, which was 50-77% higher than for other Hispanic groups. (The authors posited that this may relate to differences in the effects of migration among Hispanics.) Among Puerto Rican infants, low birth weight was the most common cause of early child death. Pre-term mortality is higher for Puerto Rican infants than for non-Hispanic white infants by 75%. Finally, the authors conclude with recommendations for future clinical care, including the development of clinical and community prevention programs targeting pre-term infant mortality.

Saavedra, F. M., Pastrana, E. A., Jiménez, L. M., Fernández, M., Billoch, J., Sosa, I., & Vigo, J. (2011). Pediatric brain tumors in Puerto Rico. *Puerto Rico Health Sciences Journal*, 30(4), 195-197.

**Abstract:**

**Objective:** To determine the frequency of pediatric brain tumors treated at the University Pediatric Hospital of Puerto Rico over a 6-year period and examine the demographic data and tumor histology of patients in different age groups.

**Methods:** A retrospective study was undertaken at the University Pediatric Hospital. We included patients with brain tumors that had been newly diagnosed during the period covering from January 2002 to December 2007. All cases were analyzed by age, gender, histologic diagnosis, and affected area.

**Results:** One hundred thirty-six patients were included in the study. Overall, males were more frequently affected than were females. Children in the 1 to 4 years old age group had the highest number of newly diagnosed brain tumors. Regarding anatomic location, supratentorial tumors were more frequent than were infratentorial tumors. The most common single tumor was the pilocytic astrocytoma (WHO grade I), representing 31% of the total pediatric brain tumors.

**Conclusion:** Our results provide an objective platform for further epidemiological studies and for the development of local health strategies for the timely diagnosis and treatment of the most common pediatric tumors in Puerto Rico.

**Annotation:**

The authors were interested in understanding the incidence of pediatric brain tumors in Puerto Rico, since they are the most common solid malignancy affecting children. They performed a retrospective study at the University Pediatric Hospital in San Juan of all patients with newly-discovered brain tumors from 2002-2007. The sample consisted of 136 patients under 18 years of age. Results revealed age differences in the prevalence of brain tumors, such that children 1- to 4-years-old had the highest rates of newly-diagnosed brain tumors, representing 29% of the cases studied. Overall, more males (55%) were diagnosed than females (45%). The most common type of tumor was a pilocytic astrocytoma (31% of cases) and the most common location for tumors was supratentorial (57% of cases). This descriptive study indicated that early childhood is a period when brain tumors are most commonly discovered.

Saenz, T. I., Iglesias, A., Huer, M. B., & Parette, H. P. (1999). Culturally and linguistically diverse preschoolers' verbal and nonverbal requests. *Communication Disorders Quarterly*, 21(1), 39-48.

**Abstract:**

The purpose of this study was to identify the verbal and nonverbal strategies that preschoolers used to obtain objects from peers. Two Head Start classrooms of 41 Puerto Rican and African American preschoolers were observed and videotaped over 1 school year using qualitative methods. The preschoolers used three different strategies to obtain objects from peers during play, including movements toward objects, verbal intentions with movements toward objects, and verbal intentions. The students were able to obtain objects from classmates in 40% of their attempts and were most successful when they combined physical movements toward an object with a request, statement, or claim. The strategies used by the preschoolers and their rates of success varied between the sand, kitchen, and block areas in the two classrooms studied, with children obtaining the greatest success in the block area. The implications of this study's findings for intervention in the classroom by teachers or speech-language pathologists are discussed.

**Annotation:**

In the field of communication, children's peer interaction skills are a topic of interest to speech-language pathologists. Peer interaction patterns have been shown to vary based on language ability (disordered or non-disordered) and culture. This study focused on one type of peer communication: the ability to express and obtain desired objects, using verbal and/or non-verbal approaches. Participants were 32 Puerto Rican and 10 African American urban Head Start preschoolers living in the U.S. mainland. A pilot study was conducted to gain a preliminary understanding of children's verbal and nonverbal bids to their peers, which informed the coding scheme for the main study. The children were then videotaped 4 days a week for 2 months during free play time in common play areas, such as the block area, kitchen area, and sand area. Children were coded based on the five request categories identified in the pilot: movements toward objects, verbal intentions, claims, verbal intentions with movement toward objects, and claims with movements towards objects. Of all five request strategies, 46% were verbal intentions with movement toward objects (52% successful) and 44% were movement toward objects (32% successful), and 10% were verbal intentions (19% successful). Strategy use and success varied by play area; for example, verbal intentions with movement toward objects was the most successful in the kitchen and sand area, but least successful in the block area. Children were more successful overall when the play area contained duplicate items and had more space for play. There were no significant differences found between the behaviors of Puerto Rican and African American children. This data demonstrated that children tended to be effective at obtaining desired objects from peers by utilizing strategies that combined verbal and physical bids. The authors concluded with practical implications, stating

that understanding nonverbal communication may be useful in teaching and evaluating English language learners and children with communication disorders.

Scholl, T. O., & Chen, X. (2009). Vitamin D intake during pregnancy: Association with maternal characteristics and infant birth weight. *Early Human Development*, 85(4), 231-234.

**Abstract:**

Background: Vitamin D insufficiency is beginning to be recognized as a public health problem. It is plausible that some portion of the lower Vitamin D levels which characterize minority populations is related to diet. Aims: We examined and described total Vitamin D intake during pregnancy from the mean of three 24-hour recalls plus use of dietary supplements. Study design: Prospective cohort. Subjects: 2251 low income, minority gravidae from Camden, New Jersey, USA. Outcome measures: Differences in total Vitamin D intake by maternal ethnicity. BMI and other factors (age, parity) and associations of total Vitamin D intake with gestation duration and birth weight adjusted for gestation. Results and conclusions: Total Vitamin D intake was significantly lower for minority gravidae (African American, and Hispanic, mainly Puerto Rican), for parous women, and for women with pregravid BMIs consistent with obesity or being overweight. After control for energy, other nutrients, and other potential confounding variables, total intake of Vitamin D was associated with increased infant birth weight; gravidae below the current adequate intake (65 µg/day or 200 IU) had infants with significantly lower birth weights (p<0.05). Additional intake of Vitamin D may be of importance since higher intake is associated with increased birth weight in a population at risk of adverse pregnancy outcomes.

**Annotation:**

The relationship between maternal nutrition and infant health was examined in a large-scale longitudinal study. Pregnant participants enrolled in the Camden Study (conducted in the impoverished city of Camden, NJ) between July 1996 and June 2006. Data from 2,251 pregnant women were gathered at prenatal care entry, at 20 weeks gestation and at 28 weeks gestation. A mixture of ANOVA, Chi Square, and t-tests were used to analyze the data. Minority women (primarily comprised of African-American and Puerto Rican heritage) had significantly lower intakes of Vitamin D. Vitamin D intake was also a significant predictor of infant birth weight. The authors concluded the article by underscoring the potential importance of Vitamin D intake in infant development. Greater research was recommended with samples of pregnant low-income minority women.

Schulze, P. A., Harwood, R. L., & Schoelmerich, A. (2001). Feeding practices and expectations among middle-class Anglo and Puerto Rican mothers of 12-month-old infants. *Journal of Cross-Cultural Psychology*, 32(4), 397-406.

**Abstract:**

Beliefs and practices regarding infant feeding were examined among middle-class Puerto Rican and Anglo mothers of 12-month-old infants. In particular, Anglo mothers in Connecticut and Puerto Rican mothers in San Juan were interviewed regarding their expectations for the attainment of selected feeding-related milestones and observed in an actual feeding situation with their infants. Results indicate that the two groups of mothers demonstrate coherent clusters of beliefs and practices with regard to infant feeding at 12 months. In particular, Anglo mothers reported earlier attainment of self-feeding milestones and a greater emphasis on child-rearing goals related to self-maximization, whereas Puerto Rican mothers reported later attainment of self-feeding and a greater emphasis on child-rearing goals related to proper demeanor. Findings are interpreted as providing evidence for the existence of coherent patterns of beliefs and behaviors within each group, with Puerto Rican mothers' patterns differing from those more commonly found among Anglo, middle-class mothers.

**Annotation:**

This study examined potential differences between "Anglo" and Puerto Rican middle-class mothers in their expectations and techniques used for feeding 12 month old children. Researchers first hypothesized that Puerto Rican mothers would focus more on developing interdependence with the child, while Anglo culture mothers would focus more on independence. A total of 60 mothers were recruited for this study (32 Anglo and 28 Puerto Rican). The Anglo mothers were born and raised in the mainland US and spoke primarily English, while the Puerto Rican mothers were born and raised in Puerto Rico and mainly spoke Spanish. The data for this study stemmed from a larger longitudinal study where the mothers were interviewed when their children were 4, 8, and 12 months of age. To assess maternal beliefs, the Socialization Goals Interview was administered, along with a developmental milestones checklist. In addition, current feeding practices were videotaped and also recorded through self-report. Puerto Rican mothers were found to significantly incorporate interdependent techniques with their children more than independent skills. The authors concluded the article with a discussion about the role that autonomy in early feeding may play in child development across cultural groups.

This article was followed by a similar one evidencing that Puerto Rican mothers generally emphasized more interdependent approaches to feeding expectations. Interestingly, in the process of developing the abilities of their children, Puerto Rican mothers encouraged completing tasks without assistance while Anglo mothers focused on the emotional independence of their infants (Schulze, Harwood, Schoelmerich, & Leyendecker, 2002).

Shatz, M., Diesendruck, G., Martinez-Beck, I. & Akar, D. (2003). The influence of language and socioeconomic status on children's understanding of false belief. *Developmental Psychology*, 39(4), 717–729.

**Abstract:**

Study 1 investigated whether differences in the lexical explicitness with which languages express false belief influence children's performance on standard false belief tasks. Preschoolers speaking languages with explicit terms (Turkish and Puerto Rican Spanish) were compared with preschoolers speaking languages without explicit terms (Brazilian Portuguese and English) on questions assessing false belief understanding either specifically (the *think* question) or more generally (the *look for* question). Lexical explicitness influenced responses to the *think* question only. Study 2 replicated Study 1 with groups of both speakers differing in socioeconomic status (SES). A local effect of explicitness was found again as well as a more general influence of SES. The findings are discussed with regard to possible relations among language, SES, and understanding of mind.

**Annotation:**

The role of language on preschoolers' performances on false belief tasks was investigated with two studies. The first study included 230 3- and 4-year-olds. 60 Puerto Rican, 50 Turkish, 60 Brazilian, and 60 American children participated. The Puerto Rican Spanish and Turkish languages include explicit verbal forms for identifying false beliefs, while Brazilian Portuguese and English do not. Children were generally from middle to high socioeconomic backgrounds (though the Puerto Rican sample yielded greater income variability than expected), and all the children attended preschools in their home countries. The participants were presented with 4 false-belief tasks comprised of move-objects or surprise-contents. In some respects, the Puerto Rican and Turkish samples outperformed the Brazilian and American samples, with the differences influenced by features of the task. The second study included an examination of the potential influence of socioeconomic status. Participants included 23 Puerto Rican children and 23 English-speaking monolinguals who were primarily Caucasian. They attended either private preschools or Head Start. False belief markers in language benefitted the Puerto Rican children on questions using the markers. In addition, high levels of socioeconomic status related positively with false belief performances. The authors concluded the article with a discussion of the relative effect that using belief markers has compared to children's age and socioeconomic status.



Shellenberger, S., & Lachterman, T. (1979). Cognitive and motor functioning on the McCarthy Scales by Spanish-speaking children. *Perceptual And Motor Skills*, 49(3), 863-866.

**Abstract:**

A sample of 30 Puerto Rican children, ages 5 to 8 ½ yr. from Lancaster, Pennsylvania, were tested on the McCarthy Scales of Children's Abilities and the Information and Comprehension subtests of the WISC-R or WPPSI to investigate their profiles of cognitive and motor functioning. Strengths in perceptual performance and motor skills along with a weakness in verbal comprehension and expression were characteristic of the group. No significant differences were found between the McCarthy Verbal scores and the Wechsler Information and Comprehension scores. In comparison to the McCarthy standardization group, the sample's mean scores in perceptual performance and motor areas were not significantly different from the means of the normative group, but their scores on the Verbal, Quantitative, and Memory Scales were significantly below the norms.

**Annotation:**

The focus of this study was to examine the utility of the McCarthy Scales of Children's Abilities for Puerto Rican children living in the mainland U.S. Interested in identifying measures with less "culturally loadings," the authors compared the performance of Puerto Rican children on the McCarthy scales, with their performance on the Information and Comprehension subtests of the Wechsler tests. 14 boys and 16 girls from lower class families participated in this study. They attended kindergarten to 3<sup>rd</sup> grades. Parental background information was also collected. On the McCarthy, the children scored at an average range on the Perceptual-Performance and Motor scales. They scored below average on the Verbal, Quantitative, and Memory scales. The verbal scales of the McCarthy and Weschler tests were correlated. The authors described that the children's bilingualism may have played a role in the results since both intelligence tests were administered in English.

Silberg, J. L., Febo San Miguel, V. , Murrelle, E. L., Prom, E., Bates, J. E., Canino, G., et al. (2005). Genetic and environmental influences on temperament in the first year of life: The Puerto Rico infant twin study (PRINTS). *Twin Research and Human Genetics*, 8(04), 328-336.

**Abstract:**

Three dimensions of temperament — difficult temperament, unadaptability and unsociability — were assessed in the first year of life by maternal interview in twins born in Puerto Rico during 2001 and 2002. Eight hundred and sixty-five eligible mothers (80%) were traced and interviewed. Model-fitting results showed that additive genetic factors and the individual specific environment contributed to variation in all three dimensions. In addition, the pattern of variances and correlations suggested that sibling contrast effects influence ratings of difficult temperament. Moderate effects of the shared environment contributed to ratings of adaptability and sociability. There was a significant genetic correlation between difficult temperament and unadaptability. Genetic and environmental effects do not differ significantly between boys and girls. The study is the first population-based study of Puerto Rican twins and one of few to attempt the assessment of behavior in the first year. Preliminary results for difficult temperament and sociability were consistent with those in other populations and ages. In contrast, a significant effect of the shared environment on the temperamental trait of unadaptability has not been reported previously.

**Annotation:**

**This article described** the early development of temperament among twins from 865 Puerto Rican families. The authors focused on three specific temperaments (difficult temperament, shyness/extraversion, and self-regulatory processes) that are associated with the ability to sustain attention and inhibit behavior. The Infant Characteristics Questionnaire was used in order to obtain the data for the study; parents reported on their infant's temperament within the first three months of life. Results were indicative of a variety of genetic influences at play on the three temperament types. A strong genetic inter-correlation was present between difficult temperament and unadaptability. The researchers also found shared environmental influences on both the adaptability and sociability of twins, which the authors discuss in terms of cultural norms. Finally, this study utilized solely maternal ratings rather than observations, so the authors noted that factors related to parental report could have influenced the results.

Soto, L. D. & Negron, L. (1994). Mainland Puerto Rican children. In J. L. Roopnarine, J. E. Johnson, & F. H. Hooper (Eds.). *Children's play in diverse cultures* (pp. 104-122). Albany, NY: State University of New York Press.

**Abstract:**

[from chapter] describe existing empirical research on Puerto Rican children's play, contemporary views of play by a group of mainland (migrant and nonmigrant) Puerto Rican parents, the play activities of their primary school-aged children, and how play relates to issues that pertain to early childhood education present [a study] on Puerto Rican migrant and nonmigrant families' attitudes about play / highlight within-group differences in perceptions / additionally, . . . observed children in differing contexts at home and at school, in order to compare and contrast opportunities for play offered in these two settings

**Annotation:**

The book chapter begins with a historical perspective on Puerto Rico, followed by a description of familial characteristics and children's play. The authors described the predominant use of cross-cultural comparisons at the time and suggested that studies examine variations in play among Puerto Rican children. They highlighted the relationship between children's play with parental and teacher behavior, socioeconomic circumstances, and culture. The authors also described a study conducted with twenty Puerto Rican families who had either recently migrated to the U.S., and twenty families who had resided in the U.S. for many years. The methodology included parent interviews, child observations, and visits to both the home and school environments. Notable differences were evidenced between the families in their neighborhood and social support network, with migrant families engaged in a stronger network than non-migrants. More elaborate play activities appeared available for children among the migrant families, with higher levels of parent-child engagement. Cultural approaches in Puerto Rican parenting were discussed, along with parental safety concerns related to outside play. The authors concluded the chapter with recommendations for future research and practice approaches.

Staghezza-Jaramillo, B., Bird, H. R., Gould, M. S., & Canino, G. (1995). Mental health service utilization among Puerto Rican children ages 4 through 16. *Journal of Child and Family Studies*, 4(4), 399–418.

**Abstract:**

This paper examines those children receiving mental health services in Puerto Rico, their demographic and psychosocial characteristics, and describes service providers and nature of facilities. The survey was done on a probability sample of children ages 4 through 16 across the island of Puerto Rico (N = 777). Need for services was clinically defined as presence of a DSM-III diagnosis and functional impairment. The overall rate of service utilization for Puerto Rican children was 6% (26.2% of "definite cases" and 5.1% of "probable cases"). In most cases services were provided by psychologists and/or social workers, and they were mainly provided in schools and general medical facilities. In over 60% of the children assessed as cases, who did not receive services, the reason given by the parent was that they considered the problem not serious. Factors associated with service utilization were measures of psychopathology, teacher's perceived need, and parental rates of criticism and hostility. These findings suggest that there is a need for more research on the motivating factors for service use (impairment and parental criticism). Teachers could benefit from receiving special training to help them readily recognize behavioral problems in children, communicate them to parents and set up services alternatives.

**Annotation:**

Previous studies have shown that small proportions of children who needed mental health services actually received them. This study investigated the relationship between need for and utilization of mental health services among children in Puerto Rico, as well as characteristics and correlates of utilization. The authors used the island-wide, representative sample from Bird et al.'s (1988) psychiatric epidemiology study of children 4- to 16-years old (N = 777). Within their sample, they determined what proportion were "definite" cases in need of psychiatric services, as well as "probable" cases. Definite cases had a DSM-III diagnosis and a score on the Child Global Assessment Scale (C-GAS) that was below the clinical cut-off score, indicating global functional impairment. Probable cases had a DSM-III diagnosis and a C-GAS score above the clinical cut-off score but still considered low. 6% of children in the sample were receiving mental health services from professionals, with 26.2% of the definite cases and 5.1% of the probable cases receiving services. Among those in mental health treatment, a psychologist or social worker typically provided the services. Parental perceptions of children's behavior may relate to underutilization, since the majority of cases that did not receive services had parents who did not think the problem was serious. Some parents expressed belief that the issues would naturally resolve themselves, and/or cited financial impediments to treatment-seeking. Interestingly, teachers rated more children in need of services than did parents, which may reflect different attitudes or exposure to the children in different settings. This research in-

licated that there was a need for research on factors that motivate service utilization. Furthermore, results should be considered in light of the structure of the healthcare system in Puerto Rico, in which low-SES families can access government-funded mental health services free of charge, but the authors report that these clinics may have difficulties with staff and waitlists.

Stile, S.W., Abernathy, S. M., Pettibone, T. J., & Wachtel, W. J. (1984). Training and certification for early childhood special education personnel: A six-year follow-up study. *Journal of Early Intervention*, 8(1), 69-73. doi: 10.1177/105381518400800108

**Abstract:**

A six-year follow-up survey of state, district and U.S. territory certification offices was conducted to determine current requirements for early childhood special education personnel. In addition, the status of known training programs was assessed. All 50 states, the District of Columbia, American Samoa, Guam, and Puerto Rico responded. Twenty respondents (20%) reported a separate early childhood special education certification/endorsement, 19 (35%) reported a special education training requirement for early childhood certification/endorsement, and 11 (20%) reported an early childhood training requirement for special education certification/endorsement. A total of 29 different states and the District of Columbia (56%) required some combination of early childhood special education coursework for certification/endorsement in one or both of these fields. Certification offices in 26 states and the District of Columbia (50%) indicated awareness of at least one formal training program within their stated institutions of higher education.

**Annotation:**

This study examined the prevalence of requirements for early childhood special education staff across the United States (including Puerto Rican and Guam). In 1982, about half states necessitated training in both early childhood and special education in some fashion. Puerto Rico did not have any such requirements at the time.

Szalacha, L.A., Erkut, S., Garcia Coll, C., Fields, J.P., Alarcon, O., & Ceder, I. (2003) Perceived discrimination and resilience. In S.S. Luthar (Ed.), *Resilience and vulnerability: Adaptation in the context of childhood adversities* (414-435). Cambridge UK: Cambridge University Press.

**Abstract:**

This chapter focuses on vulnerability and protective factors implicated in the psychosocial adjustment of minority youth. The authors concentrate on the external manifestations of the social mechanisms of racism, discrimination, and prejudice. In considering discrimination as a risk factor, their concern in this chapter is with phenomenological experiences of discrimination and not with the more invisible, but potentially more powerful, impact of institutional racism on minority mental health. Mainland Puerto Ricans serve as the authors' referent group, as their own research has concentrated on the developmental trajectories of Puerto Rican children and adolescents. After providing a brief overview on adjustment patterns among Puerto Rican youth, they review, in turn, research evidence on the negative effects of perceived discrimination, on processes that might underlie (or mediate) its effects, and on vulnerability and protective factors that may moderate its effects. They conclude with suggested directions for future research on the effects of discrimination on ethnic minority youth.

**Annotation**

In studying resilience, it is crucial to understand the contextual factors that facilitate children's coping mechanisms. Among ethnic minority children, perceived discrimination and racism are salient developmental concerns, and the authors conceptualized perceived discrimination as a risk factor for poor mental health. Noting the diversity of cultural heritage and life experiences of Hispanic individuals in the U.S., they focused on Puerto Rican children in their research. In longitudinal studies conducted by the authors, an association between perceived discrimination and poor mental health (i.e. depression, stress, behavior problems, and low self-esteem) was observed among Puerto Rican children in grades 1-3. The relationship between these variables may be reciprocal. While the mechanisms of this relationship were unclear, proposed mechanisms included the internalization of negative ideas from others and increased anxiety about future negative consequences. In the study of 1<sup>st</sup>-3<sup>rd</sup> graders, mothers' anxiety about discrimination was related to children's mental health above and beyond the effect of their state and trait anxiety. Since discrimination experiences accumulate with age, young children may not be exposed to many instances of development, but nevertheless the impacts may become apparent early in childhood. While minority status may be a stressor, other key factors related to race and ethnicity may be protective factors. For example, studies have shown that the negative effects of discrimination may be attenuated by ethnic pride, biculturalism, and interracial social competence. Hence, Puerto Rican children in the U.S., like other

ethnic minority children, experience their ethnic identity as a potential source of both discrimination and resilience.



Thomas, P. H., Chinsky, J. M., & Aronson, C. F. (1973). A preschool educational program with Puerto Rican children: Implications as a community intervention. *Journal of Community Psychology*, 1(1), 18-22.

**Abstract:**

Since the proliferation of preschool educational projects in the sixties, (e.g., 3, 5), unprecedented sums of effort and money have been allocated for such programs. Project Head Start alone represents an enormous effort on the part of the government to aid children through preschool experience. After a decade of questionable results, however, such interventions are being viewed with increasing skepticism. This paper describes a preschool intervention with several unique aspects and focuses on the implications of the successes and failures of this program for future preschool programs.

This preschool tutoring program has the following major features: (a) The participants in this program are Puerto Rican children and their families. To the authors' knowledge, no previous preschool education research project of this nature has dealt exclusively with this population. (b) The location of the intervention is in the home. (c) College students serve as mental health workers. College women, fluent in Spanish, are tutors for the children. (d) The tutoring is theory-based. Piaget's theory of child development was used to develop the curriculum and approach. (e) The project is being carefully evaluated. Pre- and posttest comparisons between experimental and control groups have been made on measures of IQ, vocabulary skills, and behavioral change.

The program will be described in the following order: First, the implementation phase, which comprised the first year of the study will be presented; second, the evaluative phase which was conducted during the second year will be reviewed; third, special problems related to the use of the home as the focus of intervention will be discussed. Finally, the implications of the program as a community intervention will be considered.

**Annotation:**

In response to mixed reports of the efficacy of preschool programs such as Head Start, the researchers sought to evaluate the effectiveness of an in-home tutoring program for preschoolers among a disadvantaged, language/ethnic minority population. Thirty-six Puerto Rican children between 21 and 47 months of age living in mainland U.S. received the intervention. A comparison group was comprised of twenty-one children who were matched-controlled with age, sex, and socioeconomic status. Female college students tutored children in their homes in Spanish for 1 hour a day, 5 days a week for 7 months. The curriculum was based on Piaget's theory of child development, and focused on cognitive, linguistic, and affective development. For all participants, pre- and posttests measured intelligence (Stanford-Binet or Bayley Scales of Infant Development) and behavior (Bayley Behavior Record Form). The Spanish PPVT and three Merrill Palmer subtests were only administered at post-treatment session. Children in the experimental group

scored significantly higher than those with no tutoring on receptive vocabulary, color recognition, and color labeling. Marginally significant effects were evidenced for the scores on the intelligence tests ( $p < .10$ ), while no effect was seen on behavior. Importantly, the sample sizes were limited for such statistical analyses. At the conclusion of the tutoring program, 97% of the families rated it highly. The benefits and challenges inherent in community interventions, such as home tutoring, were discussed

Torres, A.M. (2009). *The ecology of threat: A life history perspective on proximate mechanisms of stress in Head Start children from two Puerto Rican communities* (Unpublished doctoral dissertation). Yale University, New Haven.

**Abstract:**

Objective: To investigate associations between ecologically imposed extrinsic mortality risks and early stress, growth, and development in human life histories. Design: A community-based, one-year study on preschoolers and their families. Methods: Baseline salivary Cortisol and testosterone were measured and averaged from morning samples provided at five collection times by 140 boys and girls ages three to five ( $n = 81$  in a high extrinsic mortality community, HEM, and  $n = 59$  in a low extrinsic mortality community, LEM) during an academic year (August 2006 through May 2007) in full-day Head Start. Additional analyses considered salivary samples after winning and losing a competition. Anthropometric and hand-grip measurements, family surveys, teacher-reported problem behaviors using the Social Skills Rating System subscale (Gresham and Elliott, 1990), and parenting beliefs using the Parental Modernity Scale (Schaefer and Edgerton, 1985) were completed. Data were analyzed with chi-square tests, Fisher's exact tests, Wests, and linear regression to observe associations between age, sex, community, problem behaviors, paternal absence, parity, parental beliefs, and hormone levels. Results: The birth rate was significantly higher in the HEM. The death rate was higher in the LEM, but the difference was not significant. HEM fathers had less formal education, but the difference was not significant. LEM boys exhibited more externalizing behavior problems. HEM girls had the highest baseline levels of Cortisol. Internalizing problem behaviors explained 7% of the variation in baseline Cortisol. Externalizing problem behaviors explained 13% of the variation in baseline Cortisol in HEM boys. Children exhibited a significant increase in Cortisol after losing. LEM boys had higher baseline testosterone than HEM boys. Father absent boys had higher testosterone than boys who lived with their biological fathers, but the difference was not significant. Parity and maternal age explained 21% of the variation in baseline Cortisol levels in the HEM and 26% in the LEM. The HEM had a higher proportion of parents with traditional beliefs about child rearing than LEM parents. However, the mean traditional rating was significantly higher in LEM parents. Traditional ratings explained 11% of the variation in girls' Cortisol levels. A conclusion outlines future applications.

**Annotation:**

The author was interested in the effect of perceived environmental threat, conceptualized as extrinsic mortality, on early development and stress responsivity. The author recruited 140 Puerto Rican Head Start 3- to 5-year-olds and, based on their community demographics, separated them into two groups: high extrinsic mortality (HEM;  $N = 81$ ) and low extrinsic mortality (LEM; 59). These children were followed for one academic year, in which time the researcher took baseline salivary samples, as well as salivary samples after losing a competition, to assess cortisol and testosterone levels. Results supported

previous data in that the birth rate of HEM communities was higher than in LEM communities. LEM boys had higher baseline testosterone and exhibited more externalizing problems than HEM boys. HEM girls had the highest baseline cortisol levels, and all children exhibited an increase in cortisol after losing the competition. These results shed light on the effect that environments may have on the early development of Puerto Rican preschoolers. The authors discuss the importance of providing safe communities that allow children to learn to regulate their stress in a healthy manner.

Torres-Crespo, M. N. (2009). *Exploring gender roles through children's play episodes in an early childhood setting, as part of Puerto Rican culture: A qualitative study*. (Unpublished doctoral dissertation). The Pennsylvania State University, State College, PA.

**Abstract:**

This dissertation presents an exploratory multiple case study conducted in a preschool center in the north-eastern part of Puerto Rico. The study explores in what ways four-year-old children's gender roles become apparent through play episodes, focusing on the following research questions: 1. What expressions of gender roles expectations are reflected in children's play? 2. How does culture influence or impact the gender roles decisions made through play? 3. What are the boys' and girls' preferred activities and toys during play? 4. How do parents perceive the culture (home, Puerto Rican, family, etc.) in their children's play? 5. How does the teacher see the culture (home, Puerto Rican, family, etc.) in her student's play?

Play and gender roles are my basic concerns and interests in the ECE field. Sadly, research in Puerto Rico about gender roles, play, and early childhood is practically non-existent (Canales Guzman, 2008). The rationale behind this study is to contribute to this new field by making an impact on parents, teachers, principals, and others in the education of our children, in relation to create awareness in equity and social justice. This multiple case study was carried out in one classroom of a preschool center in Carolina, Puerto Rico. After observing and interacting with the whole group during approximately two months, I chose the two boys and two girls using two different criteria. First, I wanted to have as my cases the boys and girls who represented the rest of the group in most ways. Second, I wanted children that are leaders, those that call your attention immediately when entering the classroom.

Data pertaining to children were obtained by three methods: direct observation of play episodes dynamics, structured task activities, and a focus group. All of these methods were directed toward describing children's behaviors and beliefs regarding gender-norms in the Puerto Rican culture and how their beliefs expressed on the tasks and in the focus groups are related to their social interaction and symbolical and object actions in play episodes. Secondly, the study focused on the voices of the parents and the teacher. This study investigated the four children's parents' and their teacher's understanding and ideas about gender roles at home and school. These data were compared with the data obtained from children. Discussion and interpretation of the findings was guided by Rogoff's cultural historical theory, Bronfenbrenner's Ecological model, and Super and Harkness developmental niche framework.

The study generated evidence helpful in answering the five research questions. Gender role socialization among children in a Puerto Rican preschool center, specially seen in the

dramatic play, seems largely determined by traditional stereotyped gender roles. However, there were also some indications in parents and teacher interview of tension, conflict, and change suggesting a culture in transition. An implication of this study is that it is our responsibility to work with children during the early years and use educational arrangement and play to foster gender equity in society. The biggest contribution to the ECE field is to explore what is going on in our own Puerto Rican culture to start creating awareness between our educators and parents about how to create opportunities that promote and encourage equity and social justice.

**Annotation:**

The author begins with a description of traditional Puerto Rican gender roles and its potential relationship with female opportunities, particularly low-income single women. This research sought to capture children's gender role beliefs, as manifested in play, to better inform efforts to promote gender equity. The author conducted case studies of 4 children (2 boys, 2 girls) in an early childhood center in Puerto Rico. The author gathered qualitative data by keeping a journal, making observations, doing tasks with the children, engaging in deliberate conversations with the children, and interviewing parents and teachers. The qualitative data gathered centered around play and gender roles. The tasks included showing children toys and asking them which ones they prefer, and showing children pictures of people performing gender-typical and gender-atypical jobs and asking if they were "correct." Interviews with parents and teachers focused on the intersection of play, gender roles, and Puerto Rican culture. To draw out themes, the author clustered the data (e.g. girl playing with girl) and then created subcategories (e.g. gender family role). The author concluded that gender roles were quite evident in children's play, and they reflected how children were socialized to understand men and women differently. Preschoolers and their parents expressed that toys were specific to genders, as were roles in dramatic play (e.g. a female must play the mother figure). The author concluded that gender roles were deeply embedded into the socialization process of these young children in Puerto Rico, such that even preschoolers were aware of and expressed traditional gender beliefs. However, the girls demonstrated some assertiveness, indicating some progress towards more equal conceptualizations of gender according to the author. This qualitative data provides a useful baseline for understanding how children may conceptualize gender at a young age in Puerto Rico.

Trawick-Smith, J. (2010). Drawing back the lens on play: A frame analysis of young children's play in Puerto Rico. *Early Education and Development, 21*(4), 536-567.

**Abstract:**

Previous research on young children's play has focused narrowly on behaviors that are highly valued in Western societies. The purpose of this study was to draw back the lens on play-to examine a broader range of early childhood pastimes that are more common and meaningful to children of color. Using G. Bateson's (1972) work on play frames, the play behaviors of 49 4- and 5-year-old children were observed, described, categorized, and analyzed over a 6-month period in two classrooms in San Juan, Puerto Rico. Children were found to play in very large groups. Rarely studied play behaviors were identified: music play, humor/teasing, replica play, and art play. Commonly studied play forms, such as pretend and construction, were also common but were often observed in unexpected locations and embedded in other primary play activities, making them difficult to identify and evaluate. Practice: Findings suggest that professionals should observe and assess children's play through a more inclusive lens, evaluating and facilitating all types of play in all areas of the classroom, at all times of day, and in naturalistic peer groups with no group size limits. Play centers and materials should match the unique play interests of children across cultures.

**Annotation:**

The author examined the application of Bateson (1972)'s framework about play interactions for Puerto Rican children, as well as the variability in play evidenced among preschoolers living on the island. The sample included a preschool and a kindergarten classroom in San Juan, Puerto Rico. Forty-nine children engaged in the study and their ages ranged from 4 to 5. Each classroom was observed thirty times over a 6-month timespan; each observation lasted the complete school day (7 hours). Interviews and focus groups with the staff were also conducted. The qualitative data were then analyzed for play frames, and a qualitative trustworthiness check was conducted. The results reviewed the wide range of play behaviors exhibited by island Puerto Rican children. These included art play, music play, rough play, replica play, and humor/friendly teasing. In addition, children tended to play in large group formats rather than small groups. Further, specific types of play were engaged in areas that have not traditionally been designated for such play. For example, 30% of block play occurred in the replica play area while 87% of pretend play was enacted outside of the dramatic play area. The staff interviews and focus groups revealed that the Puerto Rican teachers were more culturally-accepting of the varied play (including rough play) evidenced in the classrooms; however, they were eager to learn about the "American" recommendations for children's interactions. The author concludes the article with discussing the implications of the findings for practice and policy.

U.S. Department of Health and Human Services (DHHS), Administration for Children and Families (2010). Head Start Impact Study. Final Report. Washington, DC: DHHS.

**Abstract:**

This report summarizes the findings from a study on the impacts of Head Start on children and families during the children's preschool, kindergarten, and 1st grade years. Its study goals were to: (1) Determine the impact of Head Start on children's school readiness, and on parental practices that support children's development; and to (2) determine under what circumstances Head Start achieves its greatest impact and for which children.

**Annotation:**

The purpose of this study was to quantify the impact of the Head Start program on school readiness among low-income young children, with the ultimate goal of understanding Head Start's strengths and refining its practices. The study also included assessing the relationship between parental practices and child development. The investigation examined two cohorts of children: 3-year-olds (monitored through two years of Head Start, kindergarten, and first grade) and 4-year-olds (monitored through one year of Head Start, kindergarten, and first grade). The outcome study for Puerto Rico was separate from the main outcome study, due to the inherent differences in the program and measurement.

Participants were recruited from three Head Start programs in Puerto Rico (22 centers total). With attrition, the final sample size was less than 200; thus, the authors described the sample from Puerto Rico as small with potentially less reliable estimates of programmatic effects. The same four domains that were assessed in the mainland U.S. sample were assessed in Puerto Rico: cognitive, social-emotional, health, and parenting practices. The 4-year-old Puerto Rican cohort showed some favorable cognitive outcomes relative to non-Head Start controls. Specifically, the 4-year-old cohort demonstrated greater gains in phonological abilities at the end of Head Start, as well as greater gains in letter and word identification by the end of first grade. However, parents also reported more conflict with them by the end of kindergarten, and less closeness with them by the end of first grade. In terms of the children's experiences, the comparison group was primarily cared for by their parents at home (75%). Thus, the Head Start group was more likely to experience a range of services.

The 3-year-old Puerto Rican cohort (who generally participated in two years of Head Start) exhibited more pronounced benefits. For example, greater gains were evidenced in mathematics for all three years, relative to the comparison group. At various points in the longitudinal study, positive differences were evidenced in color naming, receptive vocabulary, parent report of emergent literacy abilities, letter-word identification, and phonological skills. In addition, Head Start participants experienced socioemotional advantages in the areas of hyperactivity and social skills. Results are mixed for parenting and health



outcomes. Together, the data is suggestive that earlier enrollment and longer duration in Head Start programs may be associated with greater cognitive and social advantages among Puerto Rican children. These potential effects are striking given the fact that most of the control group enrolled in Head Start when they were 4-years-old (72%) while 77% of the randomized Head Start group continued their enrollment.

Vargas, M., & Busch-Rossnagel, N. A. (2003). Teaching behaviors and styles of low-income Puerto Rican mothers. *Applied Developmental Science*, 7(4), 229-238.

**Abstract:**

This study describes the teaching behaviors of low-income Puerto Rican mothers and explores several contextual variables as possible predictors of those teaching behaviors. The participants were 80 mothers and their preschool children, half from the Bronx, New York, and half from Bayamón, Puerto Rico. The most frequently used teaching behaviors in a cognitive-perceptual task were visual cues, directives, and modeling. Modernity of childrearing beliefs, social support, and difficulty of child temperament were related to maternal teaching behaviors and styles. In multiple-regression analyses, social support and modernity of childrearing beliefs significantly predicted use of inquiries, praise, and a democratic style; maternal education was not a significant predictor.

**Annotation:**

The report describes how both the classroom and the home environment contribute to early learning; thus, it is critical to research the parental factors that contribute to learning, especially among demographic groups at risk for school failure or dropout. The purpose of this study was to understand the maternal behaviors of Puerto Rican mothers in teaching situations in early childhood, since maternal teaching styles differ across cultures. Eighty mother-child dyads were recruited from Head Start preschools for the study: 40 from the Bronx, New York and 40 from Bayamón, Puerto Rico. The mothers were asked to teach their children a cognitive-perceptual task involving building Tinkertoy models (using either English or Spanish). The researchers coded 5 minutes of the interaction for maternal behaviors. Mothers also reported on child temperament and self-reported their childrearing and educational beliefs, stress, and social support. In this sample, Puerto Rican mothers most often used modeling, visual cues, and directives to teach their children, and the results were similar across the Bronx and Bayamón. Mothers who reported having a child with a difficult temperament were more likely to avoid engaging with the child, either by modeling the task (and essentially completing it for the child) or disengaging from the interaction. Higher levels of social support and greater modernity of parenting beliefs were associated with higher levels of inquiry and the mothers' use of praise. Parenting stress was not associated with teaching behaviors. Overall, parenting beliefs were not as traditional as expected for this population; they also reported some more progressive attitudes. These results can be best understood as reflecting the influence of traditional Puerto Rican values, such as *respeto*, as well as the potential influence of Head Start.

Vélez, N. M., García, I. E., García, L., & Valcárcel, M. (2008). The use of illicit drugs during pregnancy among mothers of premature infants. *Puerto Rico Health Sciences Journal*, 27(3), 209-212.

**Abstract:**

*Background:* Tobacco, alcohol and/or illicit drug use during pregnancy are risk factors for neonatal complications. In Puerto Rico, the Department of Health reports that 32% of pregnant women use alcohol and 3% use illicit drugs. Nineteen percent (19.1%) of newborns are born prematurely. The purpose of this study is to determine the prevalence of illicit drug use during pregnancy in mothers of premature infants.

*Methods:* This study included the data of 218 mothers of premature infants admitted to the Neonatal Intensive Care Unit of the University Pediatric Hospital during 2002 to 2005 enrolled in an educational program.

*Results:* Fourteen women (6%) reported using illicit drugs during pregnancy (cocaine 2%, marihuana 3%, heroin 2%, methadone 2%, and ecstasy 1%). Mothers using drugs during pregnancy were more likely to start prenatal care after the first trimester (21% vs. 10% in nonusers;  $p < 0.01$ ) and to smoke cigarettes (36% vs. 8% in nonusers;  $p < 0.01$ ).

*Conclusions:* The most important maternal-prenatal risk factor for drug use in this group of mothers, was failure to receive prenatal care during the first trimester, and cigarette use. The use of illicit drugs during pregnancy complicated by a premature delivery is underestimated and many times unknown to physicians. The physicians should be assertive in gathering this information while interviewing women during pregnancy and in the post-partum period since women who use drugs during pregnancy are at higher risk of social problems, future preterm deliveries and may impair adequate follow up of their premature babies.

**Annotation:**

In 2002, the Department of Health in Puerto Rico found that 32% of women reported alcohol use during pregnancy and 3% reported use of illicit drugs. In 2004, 19.1% of infants were born prematurely. In response to the high prevalence of preterm deliveries in Puerto Rico, this research sought to further examine the prevalence of illicit drugs use and other associated risk factors during pregnancy. The researchers used retrospective cross-sectional data collected from 2002 to 2005 from 218 mothers of premature infants in the Neonatal Intensive Care Unit (NICU) of a hospital in San Juan that serves many low-income women. From that sample, 9% of mothers reported drinking alcohol during pregnancy, 10% reported smoking cigarettes during pregnancy, and 6% reported illicit drug use during pregnancy. Results indicated that women who used drugs were more likely than nonusers to have received no prenatal care in the first trimester. They were also considerably more likely to smoke cigarettes than nonusers. Though not statistically

significant relationships, drug users were more likely than nonusers to be single mothers, have had unplanned pregnancies, and be victims of domestic violence. To reduce risk for poor developmental outcomes for children, the authors suggest expanding the availability of drug/alcohol education and substance abuse treatment options for pregnant women in Puerto Rico.

Walsh, J. F., & D'Angelo, R. Y. (1971). IQs of Puerto Rican Head Start children on the Vane Kindergarten Test. *Journal of School Psychology, 9*(2), 173–176. doi: 10.1016/0022-4405(71)90011-2

**Abstract:**

This study evaluated the use of the Vane Kindergarten Test with Puerto Rican children in New York City. Ss were 225 Puerto Rican youngsters between 4 1/2 and 6 years of age enrolled in Head Start Centers in the boroughs of the Bronx and Manhattan. Comparisons between Vane's standardization sample and the Puerto Rican group yielded no significant differences in full scale scores. On the Vocabulary subtest, Puerto Rican subjects earned lower mean scores; on the non-verbal subtests, they scored higher than the normative group. A question is raised regarding inclusion in normative test data of subgroup samples of Puerto Rican subjects tested with English language material.

**Annotation:**

In order to provide accurate and useful information, assessments of intelligence must be valid across cultures and socioeconomic groups. The Vane Kindergarten Test (VKT) is an IQ test for young children that assesses their verbal and nonverbal abilities. It was normed with a geographically, economically, and ethnically diverse sample of American children, but it did not include any Hispanic individuals. This study investigated Puerto Rican children's performance on the VKT to determine if it is applicable to that population. Participants were 225 Puerto Rican Head Start preschoolers living in New York City. Results revealed no significant difference between the full scale scores of Puerto Rican children and those of the normative sample. Puerto Rican children scored lower than the norms on the English vocabulary subtest, which may relate to the fact that the children were bilingual. However, the sample's average on the two nonverbal scales was higher than the normative score, perhaps due to a bilingual cognitive advantage. The authors posit that, to be more representative, normative samples should include bilingual individuals.

Walsh, J. F., D'Angelo, R. & Lomangino, L. (1971). Performance of Negro and Puerto Rican Head Start children on the Vane Kindergarten Test. *Psychology in the schools*, 8(4), 357-358. doi:10.1002/1520-6807

**Abstract:**

Evaluated the performances of 178 male and 174 female Negro and Puerto Rican Head Start children in New York City on the Vane Kindergarten Test. Results indicate a differential pattern in performance as a consequence of age, sex, and race.

**Annotation:**

The article aimed to examine the differences in scores obtained among young Puerto Rican and African-American children on the Vane Kindergarten Test (VBT). The VBT is comprised of three subtests: perceptual-motor where the child copies geometric shapes, language where children define words, and person-figure drawing. 225 Puerto Rican children and 176 children attending Head Start participated in the study; they were about 5 years in age. Differences were noted by ethnicity and gender. Puerto Rican boys generally scored higher on the perceptual-motor and person-figure drawing subtests than African-American boys, while the latter scored higher on the language subtests. Girls demonstrated a similar pattern, though to less extent. The author concludes the articles by discussing the influence of administering the measure in English and the likely bilingual environments of the Puerto Rican children in the sample.

Zambrana, R. E., & Capello, D. (2003). Promoting Latino child and family welfare: Strategies for strengthening the child welfare system. *Children and Youth Services Review*, 25(10), 755-780.

**Abstract:**

The purposes of this paper are to: present social and family data on Latinos in the Northeastern U.S. and Puerto Rico; provide an overview of Latino families and children in the child welfare system; discuss the quality of social service practice with respect to Latino children and families; identify concerns in child welfare legislation for Latino families and children; and present specific recommendations for systemic change to promote the strengthening of Latino families and children. Three major methods were used to summarize knowledge of Latino child welfare. A literature review was conducted from 1970 to the present on minority children, Latino children and child welfare (i.e., child abuse and neglect, foster care, kin care and adoption), and legislation in child welfare. The second method was the extraction and compilation of available national and state data on the social and economic profile of Latinos and child welfare data for Puerto Rico and the six Northeastern states with the highest Latino concentrations. The third approach involved reviewing state and local child welfare reports, memos, and unpublished documents on the status of Latino children in child welfare. The data show that Latino children, especially Puerto Rican children, due to their disproportionate poverty rates, are more likely to be removed from their homes, are less likely to be from families that obtain bilingual and bicultural services, and are less likely to receive preventive or comprehensive restorative intervention services. The conclusions draw on best practice intervention strategies to strengthen Latino families and children.

**Annotation:**

This review presents information on the utilization of the child welfare system among Hispanic families in the U.S. mainland and Puerto Rico, as well as overall demographic data. Data was gathered from relevant scholarly articles, legislation, and government documents. 67% of children living in Puerto Rico were reported as living in poverty. At the time, 80% of Puerto Ricans on the island were in the labor force. Across various states in the Northeast (Connecticut, Massachusetts, New York, Pennsylvania), Puerto Ricans comprised the highest percentage of Latinos. After describing demographic differences among Latino sub-communities, the report focuses on examining welfare participation for Latinos more generally.

Zill, N., Resnick, G., Kim, K., McKey, R.H., Clark, C., Pai-Samant, S., et al. (2001). *Head Start FACES: Longitudinal findings on program performance. Third progress report*. Washington, DC: Office of Research and Evaluation, Administration for Children, Youth, and Families.

**Abstract:**

The Head Start Family and Child Experiences Survey (FACES) is an ongoing, national, longitudinal study of the cognitive, social, emotional, and physical development of Head Start children; the characteristics, well-being, and accomplishments of families; the observed quality of Head Start classrooms; and the characteristics and opinions of Head Start teachers and other staff. The FACES study involves a nationally stratified random sample of 3,200 children and families in 40 Head Start programs, who were studied at program entry in Fall 1997, assessed at the completion of 1 or 2 years in Head Start, and followed up in kindergarten and first grade. This report is the third to detail findings of the study in progress. Findings are presented in four areas related to program performance objectives: (1) enhancement of children's development and school readiness; (2) strengthening of families as their children's primary nurturers; (3) provision of high quality educational, health, and nutritional services; and (4) relation of classroom quality to child outcomes. Findings indicate that children completing Head Start showed significant gains in vocabulary and writing skills relative to national norms established for children of all income levels. Although children who initially scored in the bottom quartile in vocabulary, writing, and math skills had higher gains than other children, they still scored substantially below national norms at the end of Head Start. Parents cited Head Start as an important source of support in rearing their children. Quality in classrooms continues to be good across three points of measurement. Most teachers had good teaching qualifications. Quality of classrooms has been linked with child outcomes. Appended is information on data collection instruments, including child assessment, parent interviews, classroom observation, and staff questionnaires, and instruments used in the validation sub-study.

**Annotation:**

The Head Start Family and Child Experiences Survey (FACES) is a comprehensive study of Head Start, a federally-funded program that provides high-quality preschool education to low-income children in the U.S. FACES provides descriptive information about the characteristics, experiences, and outcomes of children and families in Head Start by collecting data from multiple informants (parents, children, and teachers) using multiple methods (interviews, observations, and assessments). Consistent with the philosophy of Head Start, FACES investigates the "whole child," which is reflected in the broad range of variables assessed, which range from child cognitive, socioemotional, and physical development, classroom quality, parental satisfaction, and family environment. The FACES study is conducted approximately every three years. Data are collected at program entry and at the end of children's first or second year.



In 1997, the stratified random sample of 3,200 children from 40 programs was nationally representative. It was the only FACES cohort over the years to include Puerto Rican Head Start programs from the island. Results from the study are presented by the children's primary language and the primary language of instruction; results are not presented by country of origin. For example, Spanish-speaking children attending English-language Head Start programs were analyzed separately; it is unclear what proportion of these children were of Puerto Rican heritage. Children whose programs were conducted in Spanish were assessed in Spanish in both the fall and spring. About 115 children were in this subset of the sample, and their results were presented separately. The report indicates that most of these programs were primarily in Puerto Rico, and provided several illustrative findings for this group. Over the course of one year of Head Start, these children showed marked improvements on color naming and design copying tasks. Comparable gains to English-dominant children were seen in the areas of vocabulary, mathematics, and pre-literacy. It is important to note that firm conclusions about the development of children in Puerto Rican Head Start programs could not be drawn due to the small sample size, as well as the method of analysis.

Zorrilla, C. D., Tamayo-Agrait, V., Febo, I., Santiago, L. E., Díaz, C., Salabarría, I., ... Hillyer, G. V. (2007). Reduction in the perinatal HIV transmission: the experience at the Maternal Infant Studies Center and Gamma Projects at the University of Puerto Rico School of Medicine. *Puerto Rico Health Sciences Journal*, 26(4).

**Abstract:**

The AIDS pandemic had a significant impact in Puerto Rico, especially among the heterosexual populations, in particular women. Women are one of the fastest growing risk groups with HIV/AIDS in the USA and constitute about half of the AIDS cases in the world. During the past 10 years Puerto Rico has ranked among the top 5 jurisdictions in the United States in AIDS cases rates, among men, women and children. In 1987 a universal prenatal HIV screening program was implemented in the University Hospital catchment area consisting of approximately 5,000 deliveries per year. Because of the early identification of pregnant women living with HIV, access to lifesaving clinical research and the implementation of multiple strategies and comprehensive care, the perinatal HIV transmission has effectively reduced to zero since 1997, with a blip of one case in 2002, and none since then. The availability and access to clinical and behavioral research has been one of the key elements for this success story. The programs involved and responsible for this spectacular outcome, namely the Maternal Infant Studies Center (CEMI-Spanish Acronym) and Gamma Projects at the University of Puerto Rico School of Medicine are described. The cost savings impact of stopping mother-infant perinatal HIV-1 transmission has been calculated to be approximately \$34 to \$58 million dollars in 10 years. The impact of the effectiveness of these programs in having healthy uninfected infants, prolonging and improving the quality of life of those living with HIV, and providing hope to families affected by this epidemic is incalculable.

**Annotation:**

During the AIDS pandemic, Puerto Rico ranked in the top five jurisdictions in the U.S. for AIDS cases. As AIDS cases increased among women, the risk for perinatal transmission of AIDS also increased. Two programs in the University of Puerto Rico School of Medicine (the Maternal Infant Studies Center and the Gamma Projects) implemented interdisciplinary services for pregnant women with HIV and their infants, including universal prenatal HIV screenings. Since this program's implementation, the perinatal HIV transmission rate has plummeted. Among women treated in the university hospital, there had only been one case of perinatal HIV transmission since 1997 (at the time this article was written). This represented a dramatic success for the field, according to the authors. The program may serve as a model for other areas in which HIV transmission is a concern to reduce the prevalence of HIV among children.

***Disclaimer***

The views expressed in this website do not necessarily reflect the views or policies of the Office of Planning, Research and Evaluation, the Administration for Children and Families, or the U.S. Department of Health and Human Services.