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ABSTRACT

An ethnographic study assessed the family constellations of ninth graders in an urban public school through cluster analysis. Survey data were collected from a random sample of 120 high school freshmen and were used to compute 4 variables for each student: (1) presence of the mother in the home; (2) presence of the father in the home; (3) presence of other adults in the home; and (4) presence of other children in the home. The familial configurations of subjects were extended maternal (n=7), nuclear family (n=26), mother with children (n=46), orphaned (n=13), only child (n=21), and adopted (n=7). Family constellation, determined by cluster analysis, and gender served as independent variables in a general linear model used to assess student attendance at school and grade point average. Results indicate that the educational performance of males and females differs with respect to the types of familial configurations in which they find themselves. Females appear to perform most poorly in family units characterized by mother's presence and father's absence, but males perform best in groups where the mother and/or maternal relations were present. Contrary to expectations, males in this group of students perform best when the father is absent from the family configuration. This ethnographic approach appears promising for revising familial configuration effects within heterogeneous and transient populations. Two tables present study data. (SLD)

"Familial Configuration Influences on the Educational Performance of Urban High School Freshmen." Poster A7

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In what kinds of familial configurations do inner-city high school freshmen find themselves? Although much has been written extolling the educational value of strong support systems and successful role models for urban youth, relatively little is known about the kinds of inner-city family units which supply them. This paper discusses the results of an ethnographic approach in which cluster analysis is used to characterize the family constellations of ninth graders enrolled in an urban public school. The resulting clusters or type of families were further examined as predictors of school performance.

The rationale for this study was provided in part by current political rhetoric extolling the beneficial effects of "traditional family values" on socially valued outcomes such as education. Whether these benefits are necessarily a product of traditional families and whether they are applicable to the experience of inner-city adolescents is uncertain. Another consideration is the possible deleterious effect of the absence of same-sex role models among African-American male students. On a theoretical dimension, extensive literature has explored the impact of familial configuration on diverse aspects of educational performance. Numerous studies were motivated by the appearance of the Confluence Model by Zajonc and Markus (1975). The confluence model holds that the presence of adults in the family tends to enrich a child's intellectual environment whereas the presence of other children dilutes this environment. These contrasting effects are a product of the differences in intellectual, verbal, financial, and experiential contributions of adults and children.

Many of the explorations into the influences of family configuration have relied on models in which subjects were assigned to groups defined *a priori* as a function of the hypothesis being tested. Early research in the field assumed that component elements of the familial configuration could be readily elicited from study populations. For example, Nichols (1968) called the choice of birth order as a variable "felicitous" because it could be reliably measured at any age. Kammeyer described the same variable as an "extremely accessible datum," that is usually reported accurately. However, attempts to apply the Confluence Model to African-American samples produced contradictory findings as suggested by Barnes et al (1979), Steelman and Doby (1983), Smith (1984), Parrott and Strongman (1984), Steelman and Powell (1985), Polit and Falbo (1985), and Hauser and Sewell, (1985). Kellam et al (1977, 1982) tracked a sample of low SES African-American families in Chicago. From among this group 86 discrete family types were deduced. White

(1984) argued that the African American family must be observed across sufficient time and geographical space for its actual structure to become apparent. The lack of agreement among findings left familial studies stalemated, Steelman (1985, 1986) suggesting that the Confluence Model be abandoned. Thompson et al (1988) took a different tack, construing the household composition variable in four configurations: mother-alone, mother-father, mother-extended, mother-father-extended.

By contrast, this study employs an ethnographic approach which may more closely reflect actual family situations of inner-city adolescents. Survey data, collected from a random sample of 120 freshmen at an urban high school, were used to compute four variables for each student: the presence in the student's current home of the 1) mother, 2) father, 3) other adults, and 4) other children. A cluster analysis (SAS Fasclus procedure, pseudo F = 68.12) was performed to assign each student into one of six discrete clusters or family configurations based on the values of these four variables. In this way, the family configurations in this study arose from authentic descriptions rather than from *a priori* categorizations. Table 1 describes the resulting clusters.

Family configuration, as determined by the cluster analysis, and gender served as independent variables in a general linear model employed to assess student attendance at school and freshman grade point average (GPA). As shown in Table 2, significant interactions ($p < .01$) between familial configuration grouping and student gender were observed for both attendance and GPA. Note that students comprising the extended maternal family configuration were not included in this particular analysis because of the relatively small number of females in the group. The results show that females living in family configurations characterized as Adopted, Orphaned, and Nuclear outperformed their male counterparts in both GPA and attendance.[1] The presence of a father or other adult, coupled with the relative rarity of other children in these households, may have provided additional support structures and freed these girls from household and babysitting chores which might interfere with school. Nevertheless these households were those least likely to have a mother present as a role model for the girls. Boys performed poorest in these same predominately mother-absent groups. In contrast, males performed best in family configurations such as Mom with Kids, Only Child, and Extended Maternal, in which the mother is the dominant figure.

In summary, the educational performance males and females differ with respect to the types of familial configurations in which they find themselves. Females appear to perform poorest within family units characterized by mother's presence coupled with father's

[1]The cluster names "adopted" or "orphaned" are used as shorthand references and do not imply a legal situation.

absence. By contrast, males performed best in those family groups where the mother and/or maternal relations were present. Contrary to expectation, males performed best in family configurations where the father was absent.

This ethnographic approach appears promising for revisiting familial configuration effects within heterogeneous and transient urban populations.

Table 1. Familial Configuration: Standardized Means/Standard Deviations on four variables (presence of mother, father, other adults, and other children) used to determine familial configuration clusters. The z-score means tabled here represent the average for the specified group. Positive means indicate the presence of the designated relative(s) in the students current home.

Familial Configuration	Descriptor	Presence of Mother	Presence of Father	Presence of Other Adults	Presence of Other Children
Extended Maternal n = 7	Extended Maternal Family: Mother, children, and other adults, but no Father	Yes* 0.46 0.00	No -0.39 0.40	Yes* 2.39 1.25	Yes* 1.67 0.84
Nuclear n = 26	With Father, some with Mother, but few others	Yes* 0.46 0.00	Yes* 1.76 0.33	No* -0.68	No* -0.41
Mom with kids n = 46	Mother and Children: No Father, few other adults, but some other children	Yes* 0.46 0.00	No* -0.57 0.00	No* -0.19 0.65	Yes* 0.61 0.70
Orphaned n = 13	No Mother, small family unit composed of Father or another adult, other children rare	No* -2.21 0.00	Yes 0.09 1.06	Yes 0.25 0.63	No* -0.72 0.60
Only Child n = 21	Mother and only child: no Father, no other children, other adults rare	Yes* 0.39 0.29	No* -0.51 0.26	No -0.14 0.79	No* -1.05 0.16
Adopted n = 7	No Mother or Father, lives with other adults	No* -2.21 0.00	No* -0.57 0.00	Yes* 1.27 0.64	Yes 0.36 0.67

* The values of these variables were significantly different ($p < .01$) from the overall mean of 0.0.

Table 2. Summary of Significant Interactions ($p < .01$) of Familial Configuration by Gender on Attendance in School and on Freshman Grade Point Average.

Familial Configuration	Gender	Percent Days Attendance in School**	Freshman Grade Point Average (0-4 points)**
Extended Maternal Family*			
	Males	71.81	1.88
	Females	53.33	0.00
Nuclear			
	Males	77.90	1.22
	Females	86.91	2.52
Mom with kids			
	Males	82.58	1.61
	Females	71.95	1.08
Orphaned			
	Males	69.10	0.66
	Females	77.44	1.25
Only Child			
	Males	84.37	1.50
	Females	52.53	1.27
Adopted			
	Males	88.89	1.04
	Females	90.93	2.58

* This configuration was not included in statistical tests because there was just one female member.
** Indicates a significant ($p < .01$) interaction of Familial Configuration and Gender.

Bibliography

Barnes, Jonathan, James Fisher, and Michael Palmer. "Family Characteristics and Intellectual Growth: An Examination by Race." Education and Psychological Measurement 39 Fall 1979: 625-636.

Hauser, Robert M., and William H. Sewell. "Birth Order and Educational Attainment in Full Sibship." American Educational Research Journal 22 Spring 1985: 1-23.

Kammeyer, K. "Birth Order as a Research Variable." School Forces 46 (1967): 71-80.

Kellam, Sheppard G., Margaret E. Ensminger, and R. Jay Turner. "Family Structure and the Mental Health of Children: Concurrent and Longitudinal Communitywide Studies." Archives of General Psychiatry. 1977. 34:1012-22.

Kellam, Sheppard G., Rebecca G. Adams, C. Hendricks Brown, and Margaret C. Ensminger. "The Long-Term Evolution of the Family Structure of Teenage and Older Mothers." Journal of Marriage and the Family 44 (1982): 539-554.

Nichols, R.C. "Heredity, Environment, and School Achievement." Measurement and Evaluation in Guidance 1:2 (1968): 122-129.

Parrott, C. A. and K. T. Strongman. "Locus of Control and Delinquency." Adolescence 19 no. 74 Summer 1984: 459-471.

Polit, Denise F., and Toni Falbo. "Siblings and Child Development: Evidence from a Meta-Analysis of the Literature on Only Children." (Based on a paper presented at the meeting of the Society for Research in Child Development.) Microfiche. Toronto, Ontario, Canada 1985. ERIC, ED 256 510.

Steelman, LaLa Carr. "A Tale of Two Variables: A Review of the Intellectual Consequences of Sibship Size and Birth Order." Review of Educational Research 55 Fall 1985: 353-386.

_____. "The Tale Retold: A Response to Zajonc." Review of Educational Research 56 Fall 1986: 373-377.

Steelman, LaLa Carr, and John T. Doby. "Family Size and Birth Order as Factors on the IQ Performance of Black and White Children." Sociology of Education 56 April 1983: 101-109.

Steelman, LaLa Carr, and Brian Powell. "The Social and Academic Consequences of Birth Order: Real, Artifactual, or Both?" Journal of Marriage and the Family 47 February 1985: 117-124.

Thompson, Maxine Seaborn, Karl L. Alexander, and Doris R. Entwistle. "Household Composition, Parental Expectations, and School Achievement." Social Forces 67 December 1988: 424-451.

White, Joseph L. "Psychosocial Dynamics of Black Family Life." The Psychology of Blacks. Englewood Cliffs: Prentice Hall. 1984. 60-82.

Zajonc, R. B., and Gregory B. Markus. "Birth Order and Intellectual Development." Psychological Review 82 January 1975: 74-88.