

**FAMILY ENVIRONMENT, PROGRAM QUALITY, AND CHILDREN'S SOCIAL-EMOTIONAL
DEVELOPMENT IN HEAD START AND KINDERGARTEN**

**Soumya Alva
Yair Ziv
Nicholas Zill**

Child and Family Study Area
Westat Inc.
1650 Research Boulevard
Rockville, MD 20850

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Background

Head Start is a comprehensive child development program serving children aged 3-5 and their families with the main objective of increasing the school readiness of young children in low-income families. Past research shows that enrollment in Head Start moderates the influence of multiple risk factors on children. The gap between Head Start children and the general population of preschool-age children has been shown to narrow as children spend a year in Head Start. At the same time, Head Start children also show improvements in cooperative classroom behavior over the program year alongside small but significant declines in aggressive and hyperactive behavior (ACF 2003). In this paper, using data from the Head Start Family and Child Experiences Survey 2000 (FACES 2000), we aim to examine changes in children's social-emotional development in relation to changes in their family characteristics over the course of their enrollment in Head Start and Kindergarten. We also observe the mediating influence of Head Start program quality on this relationship.

Research Framework

There is much research showing that the nature of the family and other household socio-economic characteristics has important implications for children's well being (Amato 2000; Duncan and Brooks-Gunn 1997; Richardson & McCabe, 2001). There are different views on the mechanisms through which this relationship could operate. One view is that family dissolution resulting in single parenthood has a negative effect on children because of a decline in emotional support from the single parent (Astone and McLanahan 1991). Others show that deterioration in child outcomes is a result of a possible decline in familial economic resources on marital dissolution (Duncan and Brooks-Gunn 1997; Duncan et al. 1998; White and Rogers 2000).

A recent study using longitudinal data on young children also demonstrates that inter parental conflict and marital disruptions are stressful for children and have negative effects on children's social functioning. Moreover, the absence of one or two parents was found to be associated with a deterioration of familial resources, also having a negative impact on children's emotional and behavioral development (Ram and Hou 2003).

In this research paper, we extend these analyses of family structure and children's social-emotional development to Head Start children. While it has been well established in the literature that a deterioration of the family situation has an adverse impact on children's behavior due to the stress in children's lives, we are interested in determining whether these relationships exist for this special group as well. We also seek to examine whether this relationship is mediated by children's exposure to Head Start and the influence of Head Start program quality. Specifically, we are interested in exploring whether enrollment in programs of better quality moderates the expected negative effects of a disadvantaged family situation on children's social development.

Data and Methodology

Description of Sample

Our analysis uses four waves of longitudinal data from FACES 2000, a national probability sample of 2,800 preschool-aged children in 43 Head Start programs across the United States containing data on the characteristics, experiences, and outcomes for children and families in Head Start and after a year of Kindergarten. The FACES 2000 data follow these children from the time they entered Head Start (Fall 2000) through their graduation from Head Start and from Kindergarten. Children who spent one year in the Head Start program were assessed through teacher reported ratings of social-emotional development in Spring 2001 and at the end of Kindergarten in Spring 2002. Those who spent an additional year in Head Start were assessed in their second year in Spring 2002 and at the end of Kindergarten in Spring 2003.

Statistical Analysis Method

We first examine the relationships between family environment, Head Start program quality and children's social-emotional development between the time of their entry to and graduation from Head Start and between the time of their entry to and graduation from Kindergarten. Therefore, our sample consists of 1845 children in the longitudinal analysis. We use multilevel analysis techniques with the FACES 2000 longitudinal weight to perform our analyses on two samples based on the FACES 2000 data. The measures of family environment and children's social-emotional development are available at the child level. The measures of program quality are used at the classroom level.

Dependent Variables

The main outcome variables are four measures of social-emotional development of Head Start children obtained from Head Start and kindergarten teachers:

- i) Aggressive behavior (4 item scale ranging from 0-8)
- ii) Hyperactive behavior (3 item scale ranging from 0-6)
- iii) Withdrawn behavior (7 item scale ranging from 0-14)
- iv) Social skills and cooperative classroom behavior (12 item scale ranging from 0-24).

Key Predictor Variables

We use two longitudinal measures of family characteristics based on Head Start children's family situation during their time in Head Start and Kindergarten respectively in order to examine the differential impact of the varying family situation of Head Start children on their behavioral outcomes.

The first measure is the marital status of the bio/adoptive mother of Head Start children which is categorized as follows

- i) Single, never married throughout the study
- ii) Currently married throughout the study
- iii) Divorced/widowed/separated throughout the study
- iv) Became married during the study
- v) Became divorced/widowed/separated during the study

The second measure is parents' co-residence patterns which is categorized as follows

- i) Both parents in household throughout the study

- ii) One parent in household throughout the study
- iii) Neither parent in the household throughout the study
- iv) Addition of residential parent during the course of the study
- v) Loss of residential parent during the course of the study

Measures of Program Quality

The FACES data contain a number of classroom quality measures. Among these are the Early Childhood Environment Rating Scale-Revised (ECERS-R; Harms, Clifford and Cryer , 1998), the Assessment Profile (Abbott-Shim, Lambert and McCarty, 2000), and the Arnett Caregiver Interaction Scale (Arnett, 1989). In order to observe the mediating effect of Head Start program quality on the relationship between family environment characteristics and children's social-emotional development, we use the following scores of Head Start program quality:

- i) The Program Quality Composite Score which is a summary score of subscales from the ECERS-R Scale score and the Assessment Profile Scheduling and Learning Environment Scales. A higher score indicates higher levels of quality.
- ii) The Arnett Caregiver Interaction Scale where a higher score indicates greater teacher sensitivity, responsiveness and encouragement of children's independence and self-help skills, and lower levels of punitiveness and detachment.
- iii) Full vs. part time enrollment in Head Start which is used as a measure of children's exposure and involvement in the Head Start program

Other Variables

Our analyses also control for the effects of parents' education level, literacy level measured through the K-Fast reading score, socio-economic status of the household including poverty and welfare status, race, gender and age of the child in fall 2002. We also include measures of mother's health and wellbeing including depression. Children who were in Kindergarten in spring 2002 were exposed to the Head Start program for one year while those who were in Kindergarten in spring 2003 were in the Head Start program for two years. We therefore also control for the time in Head Start in each of our analyses.

Preliminary Results

We present preliminary results of our analysis based on the longitudinal sample for the Fall 2000 - end of Head Start analysis. Table 1 shows baseline characteristics of the longitudinal sample. Although generally belonging to low-income households, Head Start children display varied family characteristics. 44% of children have mothers who are currently married, with 36% mothers single, never married and 19% divorced/widowed/separated. Moreover, a little over half the children have both parents in the household while 42% have only one parent in the household, which is the bio/adoptive mother in most cases.

Observing changes in the family characteristics of Head Start children as they move through the program, we find that a majority come from households with a disadvantaged family situation (Table 2). About 38% of mothers had a change in marital status. 17% got married while their children were in Head Start and 21% got divorced/widowed/separated during their children's enrollment in Head Start. 27% of children had mothers who remained currently married throughout. About 35% were single/never married or divorced/widowed/separated throughout. With regard to parents' residence patterns, only 18% of children had both parents residing with

them in household throughout their enrollment in Head Start. A majority of the others lost a parent in the course of their time in Head Start.

Table 3 relates these changes in family characteristics with changes in children's behavior during Head Start enrollment. Overall, we find that children in households with mothers who were married throughout their enrollment in Head Start scored lowest on all three problem behavior subscales in Fall 2000. They also displayed the best social skills and classroom cooperation behavior. To some extent, this result remains the same even when we consider their behavior at the end of the Head Start program as well. It is also interesting to note that among all groups of children, there is a decline in problem behaviors alongside an improvement in social skills between the beginning and end of Head Start. We see similar declines in problem behavior accompanied by better social skills in the case of Head Start children who had both parents in the household, and those who had an addition of a parental figure during the study.

It is possible that enrollment in the Head Start program had a role to play in these changes. In subsequent analyses using multilevel analysis techniques, we will investigate these relationships, also taking into account the possible moderating influence of program quality variables on Head Start program quality in influencing Head Start children's social-emotional development. We will also extend this analysis to observe changes in Head Start children as they graduate from Kindergarten.

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Table 1: Selected Demographic and Household Characteristics of Child
in the Head Start Program in Fall 2000 : FACES 2000-2003

	Percentage
Child's Race	
White	34.7
Black	32.2
Hispanic	28.5
Other	4.6
Child's age	
3 years or younger	47.2
4 years	47.7
5 years or older	5.1
Child's Gender	
Male	49.5
Female	50.5
Parent's education level	
Some high school or lower	23.1
High school graduate/GED	41.6
High school plus voc/tech	4.4
Some college	25.7
Bachelor's degree or more	5.2
Household Socio-economic Status	
% Poor	65.7
% Receiving welfare	23.1
Mother's Marital Status	
Single	36.8
Married	44.3
Divorced/Widowed/Separated	18.9
Family Structure	
Both parents in household	51.2
Only one parent in household	44.6
No parent in household	4.3
More than one year in Head Start	
	41.93
N	1845

Table 2: Family Characteristics by Time Spent in the Head Start Program: FACES 2000-2003

	Percentage
Mother's Marital Status	
Single throughout	19.9
Currently married throughout	26.8
Divorced/widowed/separated throughout	15.6
Getting married during the study	16.6
Getting divorced/widowed/separated during the study	21.1
Family Structure	
Both parents in household throughout	18.4
One parent in household throughout	20.0
Neither parent in the household throughout	3.4
Addition of parental figure during the study	3.8
Loss of parental figure during the study	54.4
N	1845

Table 3: Relationship between Family Characteristics and Children's Social-Emotional Development: Fall 2000-End of Head Start
 FACES 2000-2003

	Mean behavior scores (Fall 2000)			Mean behavior scores (End of Head Start)				
	Aggressive	Hyperactive	Withdrawn	Social Skills	Aggressive	Hyperactive	Withdrawn	Social Skills
Mother's Marital Status								
Single throughout	1.55	1.18	2.15	15.26	1.80	1.13	2.19	17.20
Currently married throughout	1.44	1.17	2.30	15.77	1.44	1.01	2.04	17.66
Divorced/widowed/separated throughout	1.62	1.38	2.44	15.35	1.62	1.06	2.08	18.08
Became married during the study	2.26	1.62	2.78	13.29	1.76	1.14	2.17	17.78
Became divorced/widowed/separated during the study	1.75	1.46	2.52	14.39	1.38	0.82	1.94	18.29
Family Structure								
Both parents in household throughout	1.62	1.35	2.56	14.33	1.28	0.79	1.90	18.52
One parent in household throughout	2.09	1.68	2.57	13.96	1.71	1.02	1.97	18.10
Neither parent in the household throughout	2.04	1.52	2.80	13.64	2.34	1.79	2.66	16.45
Addition of residential parent during the study	2.08	1.50	2.33	14.20	1.61	1.12	1.98	17.27
Loss of residential parent during the study	1.56	1.18	2.31	15.41	1.59	1.10	2.15	17.60
Total Sample	1.72	1.36	2.46	14.76	1.60	1.05	2.10	17.83