DOCUMENT RESUME

ED 043 698   UD 010 639

AUTHOR   Nuttall, Ronald L.; And Others
TITLE   Family Background, Parent-Child Relationships and
                Academic Achievement Among Puerto Rican Junior and
                Senior High School Students. Report No. 4: Study of
                Factors Affecting Student Achievement.
INSTITUTION   Boston Coll., Mass. Inst. of Human Sciences.
PUB DATE   69
NOTE   11p.

EDRS PRICE   EDRS Price MF-$0.25 HC-$0.65
DESCRIPTORS   *Academic Achievement, Cultural Factors, Family
                (Sociological Unit), Family Attitudes, *Family
                Background, Family Relationship, Grade Prediction,
                High School Students, *Parent Child Relationship,
                *Puerto Ricans, Secondary Grades, Socioeconomic
                Influences, Test Reliability, Test Results, Test
                Validity
IDENTIFIERS   *Childs Report of Parental Behavior Inventory

ABSTRACT
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Spanish language adaptation of Schaefer's Child's Report of Parental
Behavior Inventory (CRPBI) was examined in a sample of 5,300 Puerto
Rican adolescents. It was found that the CRPBI had had reliabilities
averaging .78 and factor analyses indicated a three factor structure
similar to Schaefer's previous work. Background variables, especially
socioeconomic status (SES) were related to the CRPBI factors.
Generally, higher SES went with higher acceptance and lower hostile
psychological control. Children from large families were less
accepted. The CRPBI factors predicted grades, especially among junior
high school males. Background factors predicted college plans.
(Authors)

ED0 43698

FAMILY BACKGROUND, PARENT-CHILD RELATIONSHIPS
and
ACADEMIC ACHIEVEMENT AMONG PUERTO RICAN
JUNIOR and SENIOR HIGH SCHOOL STUDENTS

Report No. 4

Study of Factors
Affecting student achievement

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UD010635

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1969

Abstract

Family Background, Parent-Child Relationships, and Academic Achievement

Among Puerto Rican Junior and Senior High School Students

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FAMILY BACKGROUND, PARENT-CHILD RELATIONSHIPS, and ACADEMIC ACHIEVEMENT AMONG PUERTO RICAN JUNIOR and SENIOR HIGH SCHOOL STUDENTS

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The present report deals with four related issues which are important
in the fields of developmental and educational psychology. First an attempt
is made to assess the reliability and validity of a Spanish adaptation of
Schaefer's (1965) Child's Report of Parental Behavior Inventory (CRPBI) in
a Spanish-speaking Puerto Rican Sample. The feasibility of the cross-cultural
applicability of the CRPBI, a promising objective instrument measuring chil-
dren's perceptions of the child rearing behavior of their parents is an
important question since developmental psychology strives for universal gen-
eralizations (Renson,Schaefer, and Levy, in press). On a more substantive
level the present report assesses the extent to which CRPBI scores are as-
sociated with family background variables, especially socioeconomic status
(SES) measures, among Puerto Rican high school students. This research follows
a well established research tradition which links parental attitutdes and be-
havior to socioeconomic variables (Baldwin,Kalhorn, and Breese,1945; Sears,
Macoby, and Levin,1957).

In addition the present report focuses on the extent to which the CRPBI
contributes to the prediction of academic achievement. Finally the combined
contribution of family background variables and the CRPBI variables to the
total variance of academic achievement variables is assessed. This latter
question has especially important practical implications for school personnel
and parents.

METHOD

Instruments. The CRPBI was translated and adapted to Puerto Rican culture
by one of the authors (E.V.N.) a bi-lingual school psychologist native to
Puerto Rico. A family background instrument developed by the authors was
similarly translated and adapted.

Administration and Sample. The CRPBI and a series of other instruments
including the family background questionnaire were group administered in the
Spring of 1968 to roughly 5,300 students attending Junior and Senior high
schools in the Bayamón Norte school district within the city of Bayamón, Puerto
Rico. An attempt was made to include all the students attending private and
public high schools in the district. About 80 per cent of the enrolled students
were actually included, although the number of students answering each instru-
ment varied somewhat. Non-response was almost exclusively a function of
student absence from school on the days of group administration. Students
from all nine high schools, Junior and Senior, public and private, in the
district made up the roughly 5,300 students on which this analysis is made.

Analysis: The 36 CRPBI scales (18 for father and 18 for mother) were
scored according to Schaefer's directions (Schaefer,1965). The mean Tryon
(1957) reliability coefficient for the 36 scales was .78 and the coefficients

ranged from .64 to .92. While not outstanding, these levels indicate that

the 36 scales had sufficient reliability and internal consistency to merit

serious attention in their Spanish version.

Factor analyses were performed separately on the Mother scales and on

the Father scales using a principal components method rotated to a varimax

criterion. When three factors were extracted and rotated, the resulting

factors were similar in content to those found by Renson, Schaefer and Levy

(in press). These factors collectively accounted for 74 percent of the

total variance in both the Mother scales analysis and in the Father scales

analysis.

The first factor may be termed Acceptance, being composed of scales

for Acceptance, Child-Centeredness, Possessiveness, Positive Involvement,

Intrusiveness and Acceptance of Individuation. A second factor, Hostile

Psychological Control was composed of the scales of Control through Guilt,

Hostile Control, Control through Instilling Persistent Anxiety, Control

through Withdrawal of Relationship, Rejection, Hostile Detachment, as well

as Inconsistent Discipline, Control, and Enforcement. The third factor

Autonomy was composed of the scales of Extreme Autonomy, Nonenforcement

and lax Discipline.

Factor scores were constructed for each student on the foregoing three

factors by taking the mean of an individual's scale scores on each of the

scales composing the given factor. Each scale entered into one and only

one factor score. Thus there were six factors for each student, three

describing his mother's behavior and three describing his father's.

The 48 items of the background variable instrument were subjected to a

principal component analysis separately for Junior and for Senior high school

students. Twenty factors were extracted and rotated by both varimax and

oblique methods. On the basis of these results, 21 variables were selected
to represent the larger set of 48 with one or two variables being chosen from
each of the factors which made sense theoretically. In brief form these
variables were as follows: mother's education, father's education, father's
occupational prestige level, availability of food to eat at home, supervisory
level of father's job, number of persons sleeping in student's bed, number of
communication devices possessed by family (TV,Radio telephone, phonograph),
general financial status of family, number of children in family, number of
older brothers, number of older sisters, father's age, whether mother worked
during student's first five years, number of years that father has worked for
a big business organizat'on, number of relatives present in neighborhood,
whether a language other than Spanish was spoken in the home, extent to which
father was at home during first seven years, number of different homes lived
in, rural vs. urban origin of mother, Puerto Rican vs. other country origin
of mother and number of jobs held by father.

Two measures of academic achievement were used, grade point average for
the 1967-1968 academic year, and plans to attend college.

RESULTS

The first order correlations between the 21 background variables and the
six CRPBI factor scores (three for each parent) were computed separately for
males and females within the Junior high school sample and similarly for the
Senior high school sample. When these correlations were averaged over the
four groups (using the r to z transformation), eight of the 21 background
variables showed average correlations of .09 or greater (significant at the
.01 level). Of 126 average correlations (not presented here for reasons of
space), 21 or about 17 percent were significant at the .01 level. The

maximum average correlation found was r = .16, which is relatively weak. Seven
of the eight background variables which significantly associated with one or
more of the six CRPBI factors were SES measures (mother's and father's edu-
cation, father's occupational prestige,etc.) The remaining background variable
with a significant effect on one or more CRPBI factor was number of children
in the family.

The directions of the associations were quite consistent. Higher SES was
generally associated with higher·Acceptance by both parents, while lower SES
was associated with higher Hostile Psychological Control by both parents. In
only two cases out of 42 possibilities were there correlations significant at
the .01 level between background variables and the CRPBI Autonomy factor. In
both cases higher SES went with greater Autonomy.

For the one significant non-SES variable, number of children, correlations
indicated that for both parents, children in large families reported lower
parental Acceptance.

Multiple regression analyses were performed on the four sub-sample groups
(male and female Junior and Senior high students) using the 21 background
variables to predict each of the six CRPBI factors, one at a time. On the
whole, not much of the variance in CRPBI factors could be accounted for by
the family background variables used here. The range of variance accounted
for was from 2 to 12 percent, with a mean of about 6.5 percent. Somewhat
more of the variance could be accounted for among the Junior high school
students, male or female, than among the Senior high school students(the
mean variance accounted for was about 7 percent for JHS and 5.5 percent for
SHS). The Autonomy factor scores were most poorly predicted (only 4.5 to
5 percent of the variance as contrasted with 6 to 8 percent for the other
two CRPBI factors).

Finally the separate and joint effects of the CRPBI factors and the
family background variables upon the dependent variables of grade point
average and plans to attend college were examined. The effects the
background variables and the CRPBI factors had on grades and on college
plans are presented in Table 1. These effects are stated as percentages
of variance accounted for from the multiple regression R^2s.

TABLE 1

Percent of Variance Accounted for in Grade Point

Average and in Plans to Go to College Using 21

Family Background Variables and Six CRPBI Factors

Predicting	Junior High		Senior High	
	Males	Females	Males	Females
Grades from:				
Background	8%	8%	11%	11%
CRPBI factors	21	12	7	5
Both	23	16	17	17
College Plans from:				
Background	13	16	16	22
CRPBI factors	4	6	4	5
Both	16	17	18	24

In general, when predicting grades the CRPBI factors were more
important than the background variables for the junior high school
students, especially for the junior high school boys. This relation-
ship was reversed for the senior high school students, where the
background variables were more important than the CRPBI factors. As
indicated by the joint predictions, these two sets of variables acted

fairly independently except for the junior high school males. This is
indicated by the finding that the amount of variance in grade point
average accounted for by the CRPBI factors and the background variables
jointly was only slightly less than the sum of their independent con-
tributions.

Using the college plans dependent variable, the background variables
were uniformly more powerful than the CRPBI factors. This was es-
pecially true for the Senior high school girls. Again the two sets of
variables were fairly independent of each other (except for Junior high
school females).

For both grades and college plans a substantial 16 to 24 percent of
the variance could be accounted for by the CRPBI factors and the family
background variables acting jointly.

DISCUSSION

The present study indicates that when a translated adaptation of
the CRPBI was used with a group of Puerto Rican adolescents it yielded
meaningful and hence apparently valid results. Some weak relation-
ships (about six percent of common variance) were obtained between the
CRPBI factors and a comprehensive set of background variables. Parental
education and father's occupational prestige were most powerfully re-
lated to the CRPBI factors. However, these relationships were not so
powerful as to indicate that the CRPBI merely reflects socioeconomic
differences. The CRPBI factors and the background variables both af-
fected grade point averages and college plans (from 16 to 24 percent of
predictable variance) and their effects were fairly independent. A

relatively powerful influence of the CRPBI factors on the grade point average of Junior high school boys indicates that for these Junior high boys their relationships with their parents were especially crucial to academic development.

The relatively modest size of the percents of accounted for variance indicate that the CRPBI factors are determined by many things other than family background as here measured, and that grades and college plans are affected by many things (such as intelligence, personality, attitudes) other than family background and parent-child relationships.

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