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ABSTRACT
                This study examines the relationship between family
environment and children's language ability. Language is examined on
the basis of a model which specifies that the following
characteristics of family environments influence language development
most: quality of language usage of the mother, opportunities for the
enlargement and use of vocabulary and sentence patterns, and parents'
keeness for correct and effective language usage. Twenty middle class
and twenty lower class children were administered the Illinois Test
of Psycholinguistic Abilities and the Wechsler Intelligence Scale for
Children. An interview was conducted with mothers. Results show that
the middle SES group scored significantly higher than the lower SES
group on the language test, and had a greater press for language
development in the home. However, it was found that social status
variables were as effective as the environmental process
characteristics in predicting language ability. An alternative model
is suggested for future research which specifies that family
environments should be analyzed according to the stimuli parents
provide, the nature of the reinforcement for appropriate performance,
and parents' expectations for a child's performance. (Author/JM)

FAMILY ENVIRONMENTS AND LANGUAGE SKILLS

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A number of investigators have examined both family environments and
the relationship between family environments and children's intelligence.
Overall the most successful attempts to develop and operationalize a model
of family environments have been provided by Dave (1963) and Wolf (1964)
as well as others (Mosychuk, 1969; Majoribanks, 1970, Keeves, 1972).
The measures developed by Dave (1963) and Wolf (1964) have become widely
accepted and utilized by a number of researchers. Essentially the family
environment is seen as consisting of a series of forces or presses which
influence the individual. The researchers have attempted to identify the
environmental presses that relate to specific behavioral characteristics.
These presses represent ongoing environmental process variables in the
family in contrast to more static family variables, such as father's
occupation, which are viewed as symptoms of environmental forces rather than
actual forces. It should be noted that to operationalize the process
variables a number of specific, measurable process characteristics for each
process variable have been identified. The following process variables and
characteristics have been identified by Wolf (1964):.

Press for Achievement

a) nature of intellectual aspirations of the child

b) nature of intellectual aspirations for the child

c) amount of information about the child's intellectual development

d) nature of rewards for intellectual accomplishment

Press for Language Development

a) emphasis on language in a variety of situations

b) opportunities provided for enlarging vocabulary

c) emphasis on correctness of usage

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d) quality of language models available

Press for General Learning

a) opportunities provided for learning in the home

b) opportunities provided for learning outside the home (excluding school)

c) availability of learning supplies .

d) availability and encouragement of use of books

e) nature and amount of assistance provided to facilitate learning in a
variety of situations

Essentially what Wolf has done is to identify family characteristics from
the literature and aggregate them into composites called environmental process
characteristics (EPC). The EPC's are then further aggregated into
environmental process variables (EPV) as illustrated above. The EPV's are
the environmental forces and are considered to be the major dimensions of
family environment. The measures developed from this framework are highly
reliable and account for respectable proportions of the variance in the
dependent variables of interest. Essentially the family environment models
developed by other researchers are similar to Wolf's.

The present research is particularly interested in the effects that
family environment has on the development of linguistic abilities. The
importance of the acquisition of a verbal facility in children can not be
over estimated. Bruner (1956), Bernstein (1962), Bereiter and Engelmann
(1966), Taylor and Skanes (1975, 1976) and Taylor et al. (1974) have shown
the significance of language facility in educational achievement. The
language retarded child is at a clear disadvantage in the present school
system. Further it is important to recognize that the disadvantaged child
does not make significant gains in ability once he enters school. He only
falls further behind the advantaged child. This phenomenon has come to be

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called cumulative deficiency, in which small deficiencies at an early age

lead to inferior learning which in turn increases the magnitude of deficiency.

Since a child develops much of his language capability in the preschool years

the quality of his language usage, to a large part depends upon the kind of

language models available to him. Language develops, from the babble period,

in a number of different directions depending upon the way persons respond

to the child's first attempts at speech. Thus if the environmental variables

that contribute to the development of language can be isolated an important

contribution will have been made to the research.

The present research examines language on the basis of the model

developed by Dave (1963). He argues that the following characteristics are

the main determinants, in the family environment, that influence the development

of language:

a) quality of language usage of the mother (EPCA)

b) opportunities for the enlargement and use of vocabulary and

sentence patterns (EPCB)

c) keenness of the parents for correct and effective language usage (EPCC)

Other than some initial work done by Jones (1971) the researchers have

concentrated to the largest extent on the relationship between family

environment and intelligence and school achievement of children. Jones, however,

examines family environment and linguistic skills. However, all the research

suffers from a serious methodological problem, in that the researchers conducted

their studies using samples of grade 5 children. No effort was made to

control the effects of schooling on the development of intellectual and

linguistic abilities. Since school may be an important determiner of

intellectual and language ability it is inappropriate to examine Grade 5

subjects and make the assumption that the family environment is still the

determining force in the development of abilities. It is much more

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appropriate to examine abilities in children who have had little or no

exposure to formal schooling if an accurate picture of the influences

of family environment is to be obtained.

<div align="center">METHOD</div>

Subjects

As stated previously one of the faults of earlier research was that

it used Grade 5 students. To avoid this the present sample consisted

of Grade 1 students and their families. The families were interviewed and

the sample tested during September 1975. The sample was chosen from two

small towns in Newfoundland. Twenty of the students were from homes of

relatively low S.E.S. status (Peterview). The other twenty children were

from largely middle class homes (Botwood). Detailed data regarding the

families are presented in Table 1.

Insert Table 1 about here

Measures

To measure language abilities all children were administered the Illinois

Test of Psycholinguistic Abilities. This is an individual test which provides

one of the better estimates of language skills. The sample was also

administered the Wechsler Intelligence Scale for Children – Revised.

To measure family environments an interview scale based on the work

of Dave (1963) was used. Every family was visited by a skilled interviewer

and interviewed in depth regarding the family environment.

Analysis

As the purpose of the research was to examine the nature of differences in

abilities and home environments of the groups a multivariate analysis of

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variance was conducted. Tukey "b" tests were also calculated. As well correlations were calculated between the variables and a multiple regression analysis was conducted.

Results and Discussion

As can be seen in Table 1 there are significant differences in the family background variables other than mother's occupation. Mother's occupation was not significantly different in the two communities because of the fact that the mothers were almost all housewifes. The other family variables that were examined were the three process characteristics associated with language development. As shown in Table 1 there are significant differences favoring the Botwood sample in these as well. Also, as shown in Table 2 the Botwood sample scores significantly higher on all but one of the language

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Insert Table 2 about here
_____

variables. Thus children from homes that score highest on language process variables and have appropriate models to follow develop more adequate linguistic skills than children from homes where the appropriate models are not so readily avialable. However, this is a far too simplistic interpretation of the present data as the groups differ on a number of other family variables as well. In an effort to provide an analysis of those variables which were the best predictors of the dependent variable, correlations were calculated and a regression analysis conducted. The intercorrelations between variables are presented in Table 3 and a number of findings are of interest. For ins ance all the variables, other than sex, correlate highly

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Insert Table 3 about here
_____

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with the composite psycholinguistic age (CPLA). Further, if the intercorrelations

are examined it can be seen that the variables other than sex intercorrelate

quite highly. There are specific intercorrelations that are quite interesting

as well. For instance, the negative correlation between number of children

and the three EPC variables indicates the relationship between family size

and the language press of the home. That is, the larger the family the

lower will be the quality of language models. Another interesting

relationship represented in Table 3 is the correlation between quality

of language usage of the mother and mother's education, indicating, as

might be expected, that the higher the mother's education the higher

the quality of the language usage.

In an attempt to discover which of the variables or combination of

variables was the best predictor of language abilities a regression

analysis was undertaken. It should be noted that because of the relatively

small sample size the results of the regression analysis must be viewed with

some caution. However the adjusted "R" square reported is a more accurate

estimate of the variance accounted for than just an "R" square. The regression

analysis was undertaken in the following fashion. The full model was used

as the first step in the analysis. Further analyses were conducted by

dropping one variable from the analysis while retaining the others.

This was continued until each variable had been dropped from the full model.

The adjusted "R" square for the full model was 0.72. By eliminating one

of the independent variables while retaining the others, the adjusted

"R" square ranged from 0.70 to 0.72. In an effort to determine the

overall effects of the EPC's the three variables were combined and

dropped from the model. This only reduced the adjusted "R" square to 0.69

Similar findings were discovered for all variables but one, intelligence. When intelligence was omitted from the model the adjusted "R" square was reduced to 0.57. It would be expected that the WISC-R scores would account for a significant amount of the variance as it is so highly correlated with the I.T.P.A. In future analysis it is planned to drop the verbal subscales and use only several of the performance subscales as a measure of intelligence. This may reduce the correlation between the measures of language and intelligence somewhat and reduce the amount of variance accounted for by the intelligence measure. Other than intelligence, then, the other family variables contribute about equally to the predictive efficiency of the model.

The results of the present research are somewhat surprising. It was expected that adding the home's press for language ability would increase the predictive efficiency of the model. However, the EPC variables appear to contribute little more to the model than variables, such as father's occupation, generally considered to be only gross indicators of the family environment. The data indicate that for the present sample the so-called gross indicators of family environment are as good a predictor of language abilities of the children as in-depth interviews with families regarding the language characteristics of the home. Hence Dave's (1964) model is not applicable to the present sample.

In an effort to provide an explanation for these findings a recent unpublished paper by Williams (1974) offers some useful suggestions. Williams (1974) argues that the press theory models of family environment provided by Dave (1963) and others are inappropriate. They are neither parsimonious nor valid. Rather, Williams argues that family environments should be organized around three dimensions:

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a) the stimuli parents provide in the form of opportunities to
interact with a wide range of material

b) the nature of the reinforcement for appropriate performance

c) the expectations parents hold for a child's performance

Williams re-examines the data provided by a number of researchers
and concludes the social learning model he proposes provides the best
data-model fit. However Williams' model has not yet been operationalized.
If Williams is correct in suggesting that the press theory of family
environments is inappropriate this may account for the present results
which indicate that press for language developement is no better a
predictor of language ability in children than father's occupation. It is
necessary in future research to operationalize and test Williams' model
to discover if the stimuli, reinforcement and expectation dimensions
contribute substantially to the predictive efficiency of family
environment models.

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TABLE 1

Means for Family Variables

	Botwood	Peterview
Father's Occupation	41.93	27.48*
Mother's Occupation	25.06	24.00
Father's Education	12.00	7.00*
Mother's Education	11.40	5.39*
Number of Children	3.40	6.33*
Number of Children at Home	3.20	6.11*
E P C A	6.15	3.82*
E P C B	5.35	3.68*
E P C C	5.37	3.53*

*P < .05

TABLE 2

Means for I.T.P.A. Raw Scores

	Botwood	Peterview
Auditory Reception	25.15	14.90*
Visual Reception	17.30	13.65
Visual Sequential Memory	18.95	15.25*
Auditory Association	22.15	13.55*
Auditory Sequential Memory	25.90	18.70*
Visual Association	18.85	12.40*
Visual Closure	23.75	18.40*
Verbal Expression	23.25	15.60*
Grammatic Closure	17.75	11.40*
Manual Expression	24.70	19.45*

* p≤0.05

TABLE 3

CORRELATIONS BETWEEN VARIABLES

	C	S	W	FO	FE	ME	CH	CHO	EPC A	EPC B	EPC C
CPLA	0.72248	0.00085	0.81411	0.45651	0.61916	0.68370	-0.56010	-0.58807	0.64679	0.64478	0.65903
C		0.11158	0.78078	0.57445	0.67694	0.71683	-0.57066	-0.59437	0.57843	0.65198	0.56204
S			0.17174	-0.04097	0.07553	0.06903	-0.04992	0.00342	0.07207	0.01593	0.10656
W				0.33945	0.56457	0.67759	-0.62059	-0.58560	0.51307	0.59124	0.61333
FO					0.78689	0.56724	-0.42376	-0.46215	0.61606	0.51652	0.50913
FE						0.77350	-0.67266	-0.67954	0.66210	0.55391	0.61642
ME							-0.63976	-0.67077	0.77996	0.63290	0.62543
CH								0.97535	-0.51150	-0.47288	-0.63208
CHO									-0.56917	-0.48757	-0.66042
EPC A										0.63063	0.58869
EPC B											0.74175

CPLA   =   Composite Psycholinguistic Age
C   =   Community
S   =   Sex
W   =   WISC
FO   =   Father's Occupation
FE   =   Father's Education
ME   =   Mother's Education
CH   =   Number of Children
CHO   =   Number of Children at Home
EPC A   =   Quality of language usage of parents
EPC B   =   Opportunities for the enlargement and use of Vocabulary
EPC C   =   Keenness of parents for correct language usage