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ABSTRACT

This study examined background factors in children that influence teachers' ratings on the Classroom Adjustment Rating Scale (CARS). Sixteen classrooms in five schools were selected to include a range of socio-economic and cultural groupings from Inner London, England Primary Schools. Teachers used the CARS and an additional short scale of overall adjustment to rate 190 children, ranging from 8 to 12 years of age. The information collected about the children and their families included age, birth order, family size, parental occupation, mother tongue, language, number of schools attended and number of residence changes. Separate analyses for English and non-English mother tongue groups indicated that social ethos and gender contributed to a significant percent of the variability in total teacher rating for both groups. Analysis suggested that teachers' ratings of children are influenced by the children's social and family situation. Gender also had a significant impact on the teacher rating process. Females overall were rated more positively than males on school-related adjustment behavior. Overall, children who came from families with higher status occupations, who had families which provided child-centered reasons for school absences and provided relative consistency of communication with the child and school, were rated more positively than children with less favorable environments. (Author/MM)

Background Factors Predicting Teacher Ratings of Children's School Performance

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Running head: BACKGROUND FACTORS

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Abstract

The purpose of this study was to better understand the factors that influence teachers' ratings of children. The teachers rated primary school children on the Classroom Adjustment Rating Scale (CARS) and an additional short scale derived from Achenbach (1981). Information was collected about the children and their families which included age, gender, birth order, family size, parental occupation, mother tongue, number of schools attended and the number of residence changes. A social ethos scale was developed to code the parental occupation and the reasons for moves and children's school absences about which information was also collected. The children's communicative competency in daily interpersonal and academic activities was rated using a four point scale. Separate analyses for English and non-English mother tongue groups indicated that social ethos and gender contributed to a significant percent of the variability in total teacher rating for both groups. Stepwise regression produced significant associations between the background variables and the teacher rating subscales. The equation for the total teacher ratings on thosed whose mother tongue was English resulted in an adjusted R^2=.36. This analysis suggests that teachers in their ratings of children are influenced by the social and family situation of the children. In addition, gender had a significant impact on the teacher rating process. Females overall were rated more positively than males on school-related, adjustment behaviors.

Background Factors Predicting Teachers Ratings of Children's School Performance

The purpose of this study was to identify background factors that predict ratings on the Classroom Adjustment Rating Scale (CARS). Teachers' assessment of behavioral and school adjustment are used increasingly to develop activities and to place children into special programs. Background factors including the nature and number of schools attended, number of residences in which the children had lived, communicative facility, gender and family structure variables may influence the adjustment ratings received by children.

Family and school factors have been proposed as both mediating and buffering agents for the appearance of childhood disorders. Rutter et al (1979) provided evidence that school factors influence pupil's behavior and in the long-term effect overall rates of conduct disturbance. Family size and composition are structural components that limit or promote family functioning and communication although they may not be direct causes of maladjustment. The primary purpose of this research was to identify patterns of family and individual backgrounds that relate to variation in the ratings of children by teachers. Poverty, gender, and household composition have been associated with school-based competence (Patterson, Kupersmidt & Vaden, 1990). In this study, the global indicators that are used in the multivariate analyses are based on social climate or ethos, gender, age, social communication skills, residence and school change, family composition, and mother tongue. A supplemental purpose was to develop a social ethos index which would reflect family status and living standards as they impact on the child.

Method

Subjects

Five schools were selected to include a range of socio-economic and cultural groupings from Inner London, England Primary Schools. The children were from 16 different classrooms with the median number of children in a class equalling 19 (7- 25 range). Two hundred and ninety children ranging from 8 to 12 years participated in the study. In younger and older age comparison, the mean (M=10.07 yrs., SD=1.03) was used to divide the group with 49.3% of the children falling into the younger and 50.7 % falling into the older age group. Seven children moved from their school before the study was completed. There were 140 males

(48.3%) and 150 females (51.7%). None of the children refused to participate, although absences reduced the number of children on individual tests.

Teacher ratings

The teachers rated each child on a revision of the Classroom Adjustment Rating Scale (Lorion, Cowen, & Caldwell, 1975) which consists of behaviorally-oriented items describing school adjustment problems. The more frequently used subscales of aggression (acting-out), withdrawal (shy-withdrawn), and academic difficulties were used in conjunction with the dependency and sensitivity (anxiety) subscales. Four items were added to form a new subscale which assessed the occurrence of physical problems. An additional short scale of overall adjustment was derived from Achenbach (1981) which included school absence, unhappiness, confusion and disobedience. Therefore, the total teacher rating included seven teacher rated scales: aggression, withdrawal, academic performance, sensitivity, dependency, physical problems, and a short, overall adjustment scale. The teachers rated children's behavior problems on a 5 point-scale (1=not a problem, 5= a serious problem). The Cronbach alpha on reliability for this total scale was .73.

School information

The Child Information List was completed annually for each child in the London Primary Schools. The Child Information List provided information concerning chronological age, family size, parental occupations, the number of schools attended, number of residences in which the child had lived and reasons provided by the family for moves and absences. On this form, the teacher rated the communicative competency of each child in daily interpersonal and academic activities using a four point scale. (1= has a good command of both written and spoken English, 2= shows a few specific difficulties, but not sufficient to be heard by teachers or peers as deficient, 3=moderately fluent, but command of vocabulary and syntax is uneven, 4= understands little English and spoken English is very restricted). Due to the limited number of individuals classified as category 1, categories 1 and 2 were combined. The occupations of mothers and fathers were classified according to the Classification of occupations and coding index (Office of Population Censuses and Surveys, 1980).

A composite social ethos score was derived for each child from the parental occupation classification, the level of verbal facility in interpersonal interactions, and the reasons given for child absences and moves. Two skilled coders rated this information into one of three levels of social ethos (1 = excellent, 2 = average, 3 = poor). A third skilled rater independently assessed files in which there were disparities. Correlations were computed for intercoder reliability since a summary measure was used. The correlation between the two primary coders was .91.

A school ethos or school environment scale was used to rate the social and physical factors in the school milieu. This scale is similar to that developed by Rutter et al (1979). The factors included within this rating were the general level of physical maintenance of the building, the degree of order and structure maintained in lunchroom and outdoor activities, the degree of enthusiasm staff expressed about their activities, the children, and the school environment, and the smoothness of administrative interactions within the school (1= excellent, 2 = good, 3 = average).

Results

Descriptive information

The means and standard deviations for the family and school information are shown for males and females in Table 1.

Insert Tables 1 and 2 about here

Teachers' ratings and data analysis

Table 2 presents the means and standard deviations of the teacher rating scores by gender. These scores were tranformed to standard Z scores to permit comparisons among the scales as shown in the accompanying figures.

Table 3 indicates the means and standard deviations and significant differences based on ANOVAS for the family and school information on the mother tongue groups (English and non-English). Regression analyses were performed for the total sample and separately for the two groupings on mother tongue. The latter analyses were conducted because there was a significant difference between the two groups on communicative facility. The English and non-English mother

tongue groups differed on 3 subscales of the ratings. The teachers rated those whose mother tongue was not English as having more withdrawal, $F(1, 274) = 7.4$, $p<.007$, more dependency, $F(1, 274) = 8.1$ $p<.005$, and more anxiety, $F(1, 274) = 4.9$, $p<.03$, than those whose mother tongue was English. There were no differences between these groups on the total score, the original CARS, the derived short scale or the other subscales.

Insert Table 3 about here

Social ethos, age, gender, the number of schools, the number of home changes, birth order, and school ethos were entered into stepwise regression analyses of the teacher rating scales. Social ethos was the first variable accepted into the equation for all ratings for those whose mother tongue was English.. The total rating score was associated with social ethos, adjusted $R^2=.27$. The addition of home moves changed the adjusted R^2 by .04. The sequential inclusions of gender and social increased the adjusted R^2 by .03, and .02 respectively, producing a final adjusted $R^2 = .36$. Although there were significant equations for all the subscales with various variables contributing to the variance, the total score can be considered the most reliable and valid. The total rating score analyses for those whose mother tongue was not English = produced a stepwise regression equation that entered social ethos first, adjusted $R^2 = .23$. The addition of gender resulted in an adjusted $R^2 = .29$.

Social ethos and gender were the most frequently appearing variables in the regressions. Figure 1 shows the association between social ethos and the teacher rating scores. The relationship between gender and the teacher ratings is displayed in Figure 2.

Insert Figures 1 and 2 about here

Discussion

Teachers' ratings were influenced primarily by the social climate of the child's family and gender. This was replicated in separate analyses for children whose mother tongue was English and those whose mother tongue was not English. Overall, children who came from families with higher status occupations, who had families which provided child-centered reasons for school absences and provided relative consistency of communication with the child and school were rated more positively than those children with less favorable home environments. A significant portion of the variability in all the subscales ratings could be attributed to this family variable. Other researchers (Fergusson, Horwood, & Lawton, 1990) have indicated that although the relationship between social background and childhood problems tends to be weak, these relationships tend to be pervasive and a wide range of health, social, educational and behavioral problems have been found to be sensitive to differences in the social conditions of the families.

The social ethos variable used in the current study is similar to the social input variables defined by the New Zealand study (Fergusson, Horwood, & Lawton, 1990) which indicated that the collective characteristics of life event, social position and living standards had a relatively strong relationship to generalized vulnerability to childhood problems. The social ethos index included social position information by classifying parental occupation and integrating this classification with the family's reasons for school and residential moves and for school absences. These changes and disruptions in the family and child's daily life pattern clearly reflect the impact of life events and the living standards of the family on the child.

Gender differences accounted for a significant portion of the variability in the total teacher rating and the ratings on aggression and academic performance for these children. Teachers' rated females overall more positively than males. Specifically they perceived females as better academic performers than males. Consistent with current literature, males were rated as being more aggressive.

The English and non-English mother tongue groups showed few differences on teacher ratings. The higher symptom levels on the subscales of anxiety, withdrawal and dependency for those whose mother tongue was not English could be interpreted as uncertainty with one's language competency. The more striking

finding is that there were no total differences on the teacher ratings for these groups.

The British primary school teachers have involvement with the same children and their families over several years, and therefore the teachers gain extensive information that may facilitate the provision of support and individual programming for the child. The teachers may be influenced as well by this information and therefore they may modify their expectations for the child's performance. Simmons and Blyth (1987) contend that school problem behavior and academic performance are aspects of a conformity-deviance dimension. The need for adult approval may lead to conscientious and conforming behaviors which influences the evaluation by teachers. Teachers' ratings, therefore, are influenced by a teacher's global view of a child. The overall adjustment scale may be a useful general screening device which requires further validation.

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Table 1

Mean Scores and Standard Deviations of Background Variables by Gender

	Males (n=140)		Females (n=150)	
Background Variable	M	SD	M	SD
Age	10.0	1.1	10.2	1.0
School changes	.8	.9	.8	1.1
Residence changes	2.1	2.0	2.0	1.8*
School absences	18.3	18.2	19.0	19.3
Communicative	2.3	.9	2.0	.8 **
Birth order	2.1	2.0	2.1	1.4
Siblings	2.3	2.2	2.9	1.4
Social ethos	3.4	1.0	3.1	.9 ***
School ethos	3.3	1.4	3.4	1.3

Note. The background factors were available on 222 to 282 children.

*p<.05, **p<.01, ***p<.001

Table 2

Mean Scores and Standard Deviations of Teacher Rating Scales by Gender

	Males (n=140)		Females (n=150)	
Teacher Ratings	M	SD	M	SD
CARS Aggression	14.9	7.5	11.3	5.9***
CARS Withdrawal	17.8	7.0	15.3	4.4***
CARS Academic	25.5	9.9	19.7	8.4***
CARS Anxiety	12.4	3.4	10.9	3.4**
CARS Dependency	1.6	.9	1.3	.7*
CARS Total	79.1	23.2	65.2	16.7***
Short Scale	6.3	2.5	5.5	2.0**
Physical	6.8	1.4	6.5	1.1
Total	92.2	25.6	72.3	18.8***

Note. There were 277 children rated by teachers.

*p<.05, **p<.01, ***p<.001

Table 3

Mean Scores and Standard Deviations of Background Variables by Mother Tongue

	English (n=235)		Non-English (n=43)	
Background Variable	M	SD	M	SD
Age	10.2	1.0	10.0	1.0
School changes	.8	1.1	.9	1.0
Residence changes	2.4	1.4	3.0	1.8 *
Communicative	2.0	.7	3.0	.9 ***
Birth order	2.1	1.3	1.9	1.0
Siblings	3.0	1.5	2.7	1.1
Social ethos	3.2	1.0	3.7	.8 **
School ethos	3.6	1.2	2.3	1.5 ***

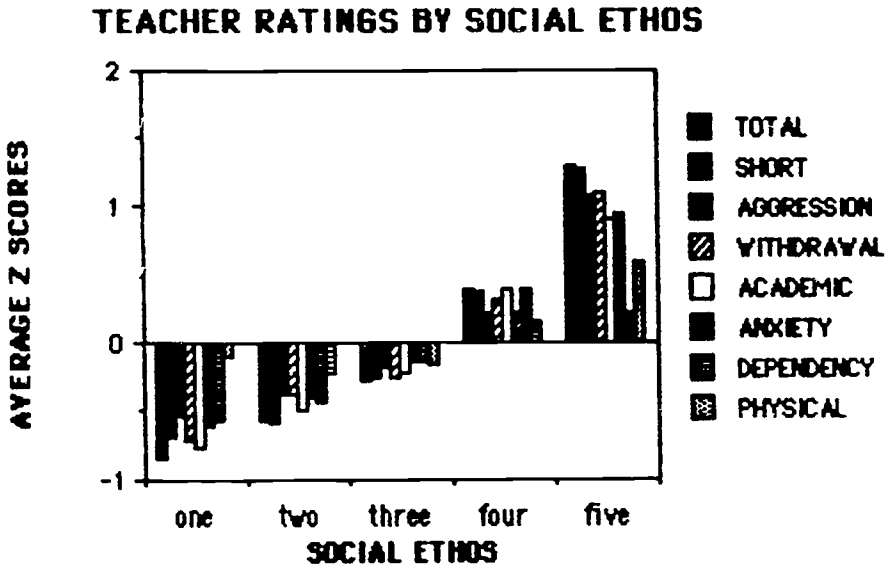
Note. There were 12 children for whom the mother tongue was not known or considered to be multiple.

*p<.05, **p<.01, ***p<.001

Figure Caption

Figure 1. Teacher ratings by social ethos

Figure 2. Gender differences for ratings by teachers


TEACHER RATINGS BY SOCIAL ETHOS
AVERAGE Z SCORES
2
1
0
-1
one
two
three
four
five
SOCIAL ETHOS
TOTAL
SHORT
AGGRESSION
WITHDRAWAL
ACADEMIC
ANXIETY
DEPENDENCY
PHYSICAL

GENDER DIFFERENCES FOR RATINGS BY TEACHERS