FAMILY AND ABILITY CORRELATES OF ACADEMIC GRADES

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Summary.—In a continuation of Marjoribanks' study (2001) of 150 seventh grade students, relationships among Family Social Status, Parent Involvement, Parent Cultural Level, Intellectual Ability, and Global Grades were examined. Analysis showed different predictive models for boys and girls. An important finding is that the predictor variables of grades are different from standardized academic achievement.

In an earlier paper, García Bacete and Rosel Remírez (2001) assumed that “family characteristics may be influential in pupils’ school attainments almost as much as their intellectual ability”. We used a Global Achievement measure defined as the average grade in all subject matter as a measure of academic achievement. Among family characteristics, Social Status, Parents’ Involvement, and Parents’ Cultural Level (both as perceived by teachers), were included. Intellectual ability was defined by Verbal and Nonverbal Intelligence. In a comment on our findings, Marjoribanks (2001) suggested that sex and specific academic achievement measures may have been important in our results. He carried out a hierarchical regression which partially supported this hypothesis, indicating significant differences associated with specific academic achievement measures. Mathematics Achievement was predicted only by Intellectual Ability, and Language Achievement was predicted both by Family Variables and Intellectual Ability. The hypothesis about pupils’ sex was only partially supported. The different family variables were associated for girls (Social Status, Cultural Capital, Parents’ Involvement), and the prediction of Word Achievement was better than for boys ($R^2 = 34.28\%$ and $R^2 = 27.34\%$, respectively). Boys’ Mathematics Achievement was predicted better than girls' ($R^2 = 32.55\%$ and $R^2 = 23.33\%$, respectively). Intellectual Ability was the best achievement predictor both for boys and girls.

This study is a continuation of the García Bacete and Rosel Remírez work with additional analysis prompted by Marjoribanks. However, there were some important differences between the analyses which may explain the results. While Marjoribanks used a standardized test for measuring aca-

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1This research was made possible thanks to Research Grant (DGICYT-PS94-0087) from the Spanish Government Office of Scientific and Technical Research.
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To measure Parents’ Involvement and Family Cultural Level, Marjoribanks asked questions of the parents; we did the same with teachers, but Marjoribanks used activity measures, while our variables were based on teachers’ perceptions.

The sample included 150 pupils in Grade 7 (85 boys and 65 girls), their parents, and their teachers (García Bacete & Rosel Remírez, 2001). The dependent variable was global achievement. In the statistical analysis, variables were added to stepwise regression equations in three stages. First, relations for Family Social Status with Intellectual Ability and Academic Achievement were examined (Model 1). In the second stage, the regression models included the measures of Parents’ Involvement as perceived by teachers (Model 2). In the third stage, the regression model included Parents’ Cultural Level as perceived by teachers (Model 3). In Table 1, only significant variables in the models are presented. Note Family Social Status and Intellectual Ability had significant associations with boys’ and girls’ Academic Grades ($R^2 = 31\%$, $R^2 = 55\%$, respectively). Two facts can be noticed in comparison with Marjoribanks (2001). First, the variable Intellectual Ability implies ver-

### Table 1

**Regression Coefficients (Beta) For Relationships Among Family Variables, Intellectual Ability, and Global Grades**

| Predictor Variable                           | Global Grade |          |          |
|----------------------------------------------|--------------|----------|----------|
|                                              | Model 1      | Model 2  | Model 3  |
| Entire Sample, $N = 150$                     |              |          |          |
| Parents’ Education                          | .19*         | .17*     | .45†     |
| General Verbal Intelligence                 | .54*         | .46†     | .45†     |
| Parents’ Involvement at Home                | .20†         |          |          |
| Parental Cultural Level                      | .62          | .65      | .36†     |
| Multiple $R$                                 |              |          |          |
| Adjusted $100$ $R^2$                         | .38†         | .41†     | .46†     |
| Boys, $n = 85$                               |              |          |          |
| Parents’ Education                          | .27*         | .27*     | .20*     |
| General Verbal Intelligence                 | .43†         | .43†     | .33†     |
| Parents’ Involvement at Home                |              |          |          |
| Parental Cultural Level                      |              |          | .38†     |
| Multiple $R$                                 | .57          | .57      | .67      |
| Adjusted $100$ $R^2$                         | .31†         | .31†     | .43†     |
| Girls, $n = 65$                              |              |          |          |
| Parents’ Education                          | .39†         | .36†     | .33*     |
| Home Size                                   | -.23*        | -.27*    | -.23*    |
| General Verbal Intelligence                 | .55†         | .44†     | .44†     |
| Parents’ Involvement at Home                |              | .24†     |          |
| Parental Cultural Level                      |              |          | .27*     |
| Multiple $R$                                 | .75          | .77      | .78      |
| Adjusted $100$ $R^2$                         | .55†         | .57†     | .58†     |

* $p < .01$, † $p < .001$.
nal intelligence, very different from the nonverbal intelligence measure used by Marjoribanks. Secondly, Parents' Occupation was not a significant predictor. When Parents' Involvement was added in Model 2, it was related significantly to girls' grades (beta = .24), but not to boys' achievement. When Parental Cultural Level was added in Model 3, it contributed an extra 12% of the variance in boys' achievement, 5% in the entire sample, and only 1% for girls. Parental Cultural Level removed the association of Social Status measures with the entire sample's grades and the association of Parents' Involvement with girls' grades. In three regression models girls' grades were better predicted than boys', but familial variables increased the significantly predicted variance more for boys. That is, the only differences as a function of sex were the absence of Parents' Involvement for boys and the order of the variables in the regression models.

Very likely, the differences with Marjoribanks' results may correspond to the varied achievement measures used in each study, global versus specific. However, in our opinion, these differences with Marjoribanks' results could be also explained by our use of grades as a dependent variable versus the scores on standardized tests used by Marjoribanks. Two results are specially linked to this assumption, (a) the presence of Verbal Intelligence in our predicting models (versus Nonverbal Intelligence in Marjoribanks' study) and (b) the most important predicting variable seemed to be Parental Cultural Level. One may suggest that teachers take into account aspects other than pupils' performance when evaluating their achievement.

Finally, we would like to point to several questions. First, it is necessary to specify which variables define family social status. In our study, Parents' Education (including Fathers' Education and Mothers' Education) was a significant predictor, but Parents' Professional level was not. Secondly, it is important to decide which types of Parents' Involvement we consider, for example, parents' involvement at home, teacher-parent communication, or parenting style. Third, if we use achievement measures in specific areas, the predicting variables must also be specific. In this sense, Parents' Involvement and Family Cultural Capital (present in Marjoribanks' study) may be related more to reading activities and general cultural activities than to mathematics content.

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Accepted March 18, 2003.