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AN ANALYSIS OF THE INFLUENCE OF LOW SOCIOECONOMIC STATUS STUDENTS PERCEIVED BELIEFS OF ABILITY AND BELIEFS ABOUT THEIR CONTEXT ON ACHIEVEMENT AND ATTITUDES: EVIDENCE FROM THE NATIONAL EDUCATIONAL LONGITUDINAL STUDY 1988-2000 (228 PP.)

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The purpose of this study was to examine factors related to the individual, family and school contexts on the mathematics achievement and attitudes of low socioeconomic status students. These factors were viewed as potential predictors of mathematics achievement and attitudes. The set of predictors included demographic, psychological and contextual factors related to school and family. Family factors were represented by perceived parental involvement in the child's academics and parental aspirations for the child. Psychological factors included self-efficacy beliefs, student's educational expectations and future aspirations, and effort in mathematics. School factors included perceived instructional objectives emphasized by the mathematics teacher. Mathematics achievement was measured by scores on the NELS standardized achievement test, while student attitudes were measured by student's interest in mathematics. It was hypothesized that the coming together of individual and contextual factors is most relevant in understanding and improving the mathematics achievement and in developing positive attitudes towards mathematics of low socioeconomic status students than when these factors are considered in isolation.

The study was longitudinal and the sample was drawn from students who participated in the first and second follow-up rounds of the National Educational Longitudinal study of 1988-2000 (NELS:88), a national study conducted by the National Center for Educational Statistics for the Department of Education.

Correlational and multiple regression analyses were used to examine the relationships among these factors and student's mathematics achievement and attitudes. The results confirmed the finding of previous research that the best predictor of mathematics achievement is prior achievement in mathematics. Three other predictors that were significant were educational expectations and future aspirations, classroom environment and class achievement level, but these explained a notably small proportion of the variance. Significant predictors of student attitudes were self-efficacy beliefs, educational expectations and future aspirations and perceived teacher emphasis on the importance of mathematics.