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Authoritative Parenting, Psychosocial Maturity, and Academic Success among Adolescents

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STEINBERG, LAURENCE; ELMEN, JULIE D.; and MOUNTS, NINA S. *Authoritative Parenting, Psychosocial Maturity, and Academic Success among Adolescents*. CHILD DEVELOPMENT, 1989, 60, 1424–1436. The over-time relation between 3 aspects of authoritative parenting—acceptance, psychological autonomy, and behavioral control—and school achievement was examined in a sample of 120 10-16-year-olds in order to test the hypothesis that authoritative parenting facilitates, rather than simply accompanies, school success. In addition, the mediating role of youngsters' psychosocial maturity was studied. Results indicate that (1) authoritative parenting facilitates adolescents' academic success, (2) each component of authoritativeness studied makes an independent contribution to achievement, and (3) the positive impact of authoritative parenting on achievement is mediated at least in part through the effects of authoritativeness on the development of a healthy sense of autonomy and, more specifically, a healthy psychological orientation toward work. Adolescents who describe their parents as treating them warmly, democratically, and firmly are more likely than their peers to develop positive attitudes toward, and beliefs about, their achievement, and as a consequence, they are more likely to do better in school.

The present report extends and elaborates on a study published in this journal by Dornbusch and his colleagues (Dornbusch, Ritter, Liederman, Roberts, & Fraleigh, 1987) that examined the relation between parenting style and adolescent school performance. Building on the classic studies of Baumrind (1971, 1973, 1978), Dornbusch and his colleagues developed several indices designed to capture three prototypic patterns of parenting identified by Baumrind in her earlier studies of family interaction and its impact on children's competence—the authoritarian pattern, the permissive pattern, and the authoritative pattern. The results of Dornbusch et al.'s analyses indicated that authoritative

parenting is positively correlated with adolescent school performance, whereas authoritarian and permissive parenting are negatively so. More specifically, the authors found that adolescents who describe their parents as behaving more democratically, more warmly, and more encouraging earn higher grades in school than their peers. This finding is consistent with an extensive literature linking authoritative parenting practices to children's psychosocial competence and well-being, virtually however indexed (see Maccoby & Martin, 1983).

The Dornbusch et al. study is one of a very small number that link parenting prac-

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[*Child Development*, 1989, 60, 1424–1436. © 1989 by the Society for Research in Child Development, Inc. All rights reserved. 0009-3920/89/6006-0014\$01.00]

tices to academic achievement during adolescence; most research on parental influences on school performance has focused on younger children (see Hess & Holloway, 1984). One of the most significant aspects of the Dornbusch et al. research is the size and heterogeneity of their sample and the consistency of their results across ethnic, socioeconomic, and family structure groups. Because the researchers studied nearly 8,000 students from a variety of backgrounds, they were able to examine within-group correlations between parenting practices and school success. Although there were minor variations from the general trend, the analyses indicated that in virtually each ethnic, socioeconomic, and family structure group, students whose parents were less permissive, less authoritarian, and more authoritative performed better in school than their peers.

The compelling consistency of the Dornbusch et al. findings warrants replication and extension, on several counts. First, because their indices of parenting style combined several distinct aspects of parenting practices into composite measures, it is impossible to tell whether all, or only certain, features of authoritative parenting contribute to academic success. Authoritative parenting is multifaceted. Maccoby and Martin (1983), for example, describe authoritative parenting as combining both parental responsiveness and parental demandingness. Steinberg (in press) has suggested that three distinct features characterize this pattern of parenting: a high degree of warmth or acceptance, a high degree of psychological autonomy or democracy, and a high degree of behavioral control. While it is tempting to use the "Baumrindian" shorthand to refer to the constellation of these characteristics as "authoritative," it is important to ask whether certain aspects of authoritativeness are more predictive of children's competence than others. One purpose of the present study, therefore, was to "unpack" authoritativeness into its constituent components—here, acceptance, psychological autonomy, and behavioral control—and examine the independent contributions of these components to adolescent school performance.

A second issue concerns the use of a cross-sectional versus a longitudinal research design. Questions about the benefits of certain parenting practices to school performance can only be fully examined with longitudinal data. Although most reviews of the literature on parent-child relations note that the relationship is bidirectional (e.g., Mac-

coby & Martin, 1983), most empirical studies of parental influences on student achievement are constrained by designs that beg the causal question. As Dornbusch et al. (1987) point out, it is not clear from their study whether poor achievement leads to parental authoritarianism (or permissiveness) or vice versa. A second aim of the present research, therefore, was to examine the over-time relation between various components of authoritative parenting and school achievement and test the specific hypotheses that acceptance, psychological autonomy, and behavioral control *lead to* academic success.

Finally, the empirical literature on authoritative parenting is surprisingly devoid of studies that examine the psychological processes that may mediate the impact of parenting practices on child and adolescent competence (but see Hill, 1980, for an informative discussion). The Dornbusch et al. study is no exception. In concrete terms, *why* is it that authoritative parenting is associated with better school performance? One hypothesis, examined in the present study, is that authoritative parenting contributes to the psychosocial development of the adolescent, which in turn facilitates school success. Specifically, we hypothesize that authoritative parenting has a positive impact on the development of psychosocial maturity, and, specifically, that adolescents who are more psychosocially autonomous than their peers are likely to do better in school. This hypothesis derives mainly from the work of Greenberger (1982), who suggests that differences in psychosocial maturity (a large part of which is rooted in a healthy sense of autonomy) may differentiate successful from unsuccessful students above and beyond differences attributable to social class or academic ability. One reason that autonomy may play an especially important role in influencing school performance during adolescence is that young people, as they move through the school years, are expected to take increasing responsibility for self-management. Thus a final aim of this study is to examine the notion that differences in youngsters' sense of autonomy—here, defined in terms of their sense of self-reliance, identity, and self-direction—explain the link between authoritative parenting and academic success.

Method

Sample

The sample for the study is composed of 120 families with a firstborn child between the ages of 11 and 16. At the time of the first wave of data collection, the average age of the

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participants was 13 years, 1 month. Participating families were selected via a three-step process, beginning with a large representative sample of nearly 900 adolescents enrolled in the Madison (Wisconsin) school district, who were surveyed in their classrooms, and ending with a subsample of 157 families with firstborn adolescents, who were surveyed in their homes in 1985 and again in 1986. Participation rates in each phase of the data collection were adequate: 94% of all youngsters attending school on the day of the survey participated in the research, 70% of the families contacted by our research staff agreed to participate in the study in 1985, and 75% of these families agreed to participate in the follow-up 1 year later. Data on achievement test scores, which were used as a covariate in the analyses (see below), were available for only 120 of the 157 students, limiting the size of the sample to this maximum.

As a group, the participating families did not differ from the eligible nonparticipants on any of the demographic variables assessed (socioeconomic status, household composition, maternal employment status, ethnicity). Comparisons between the study sample and the school district's population, based on demographic data provided by the district, indicate that the school survey sample and family subsample are representative of the district population as a whole. The study sample is evenly divided by sex, predominantly white (88%), socioeconomically heterogeneous (39% blue collar, 37% white collar, 24% professional, as determined by parental occupation), from a variety of family structures (64% biologically intact, 21% single-parent, 15% stepfamily), and with a variety of maternal work patterns (58% employed full-time, 31% employed part-time, 11% not working).

Procedure

Data on family relations and psychosocial maturity were collected from the adolescents during school and home visits conducted between April and June 1985 and again 1 year later. Students also provided information on parental occupation and household composition, which were used to index family socioeconomic status and family structure, each of which was treated as a three-level variable (blue collar, white collar, professional; biologically intact, single-parent, stepfamily) and used as a covariate in the analyses (see below). Data on youngsters' school grades and their scores on standardized achievement tests (the California Achievement Tests) were obtained from official school records.

Measures

Parenting practices.—Three aspects of 1985 parenting practices were employed in the present analyses. Adolescents' characterizations of their parents' levels of *acceptance* and *psychological autonomy* were derived from acceptance and psychological control subscales of the revised version of the Child Report of Parent Behavior Inventory (CRPBI). The CRPBI is a widely used Likert-scale format report of parental disciplinary practices that yields separate measures for several aspects of the mother-child and father-child relationships. As reported in Schwartz, Barton-Henry, and Pruzinsky (1985), both the acceptance and psychological control subscales have an alpha coefficient in excess of .80. (Scale scores for psychological control were reversed to yield the measure of psychological autonomy.) For adolescents living with two parents, acceptance and psychological autonomy scores for mother and father were averaged; for adolescents living with one parent, scores for that single relationship were used.

Adolescents' reports of their parents' use of *behavioral control* were derived from a checklist concerning 17 areas of family decision making on issues relevant to children in the age range studied (e.g., curfew, spending money, leisure activities, completing school assignments). For each item, youngsters indicated whether their parents dictated how the adolescent should behave, asked the youngster's opinion but retained the final say on the matter, or left the decision entirely up to the youngster. Following both Dornbusch et al. (1985) and Steinberg (1987), a score representing parental permissiveness was calculated by summing the number of items for which the child reported having complete decision-making freedom. Because high scores reflect lax control, scale scores were reversed in analyses examining the effects of behavioral control.

Psychosocial maturity.—Three 10-item subscales of the autonomy scale of the Psychosocial Maturity Inventory (Form D) (Greenberger, Josselson, Knerr, & Knerr, 1974) were completed by each adolescent in both 1985 and 1986. The *work orientation* subscale assesses the adolescent's work skills, aspirations for competent work performance, and capacity to experience pleasure in work. A sample item from this subscale, reverse scored, is "I find it hard to stick to anything that takes a long time to do." The *self-reliance* subscale taps three related characteristics: the

TABLE 1
MEANS AND STANDARD DEVIATIONS OF MAJOR VARIABLES

Variable	M	SD
GPA 1985	2.69	.90
GPA 1986	2.69	.90
California achievement test (%)	59.53	24.81
Acceptance	18.16	2.94
Psychological autonomy	7.94	2.81
Behavioral control	10.57	2.75
Psychosocial maturity 1985	87.52	13.97
Psychosocial maturity 1986	90.93	11.71
Self-reliance 1986	30.75	4.31
Identity 1986	31.80	4.68
Work orientation 1986	28.27	4.90

absence of excessive dependence on others, a sense of control over one's life, and initiative. A sample item from this subscale, reverse scored, is "When things have gone wrong for me, it is usually because of something I couldn't do anything about." Finally, the *identity* subscale assesses the adolescent's sense of self-esteem, concern with life goals, internalization of values, and clarity of self-concept. A sample item, reverse scored, is "I am not really accepted and liked." The subscales have adequate internal consistency (the alphas for the work orientation, self-reliance, and identity scales are .78, .76, and .81, respectively) and test-retest reliability (see Greenberger & Bond, 1976, for details). Scores on the three subscales are summed to yield an overall autonomy score.

School grades.—Information on adolescents' school grades was obtained from official school records provided by the school district. In order to permit comparability across grade levels, only English and mathematics grades were used. Students in the Madison high schools are graded twice each

school year; in the middle and elementary schools, they are graded quarterly. In the present analyses, all English and math grades (i.e., either four or eight different grades) for a given year were averaged to yield one composite grade-point average for that academic year, on a 4-point scale.¹ Data on grades were available for both 1985 and 1986.

Achievement test scores.—Each student's scores on the verbal and mathematics California Achievement Tests were averaged, and the result was used as a covariate in all analyses.² In order to increase sample variability on this measure, percentile scores based on district norms, rather than national norms, were used. For all fifth and sixth graders, fifth-grade achievement scores were used; for eighth and ninth graders, eighth-grade test scores were used.

Means and standard deviations for all major variables used in the present analyses are presented in Table 1; zero-order correlations among these variables are presented in Table 2.

¹ Information on the relative difficulty of each student's courses (i.e., whether the course was advanced, average, or remedial) was not available for grades prior to ninth grade. Consequently, it was not possible to adjust students' grade-point averages for this factor.

² It is not entirely clear whether one should control for scores on standardized tests of achievement in studies of student GPA. On the one hand, because achievement tests are in some sense an index of academic performance not unlike grades, partialing out the variance shared between the two renders the new outcome variable (i.e., GPA with achievement test scores controlled) difficult to interpret. On the other hand, however, scores derived from measures like the California Achievement Tests are a closer index of academic ability than is GPA, and because academic ability is likely to be correlated with both school performance and parenting practices, it is important to ensure that ability and performance are not confounded in the analyses. Accordingly, all analyses were conducted with and without controlling for student scores on standardized tests of achievement. Although the magnitude of some of the regression coefficients was affected by this procedure, none of the findings changed substantively (see Tables 3 and 4). For the sake of consistency, all results presented employed the more conservative approach, with controls for achievement test scores included.

TABLE 2
ZERO-ORDER CORRELATIONS AMONG MAJOR VARIABLES

	(1)	(2)	(3)	(4)	(5)
1. GPA 1985 .....	...			
2. GPA 1986 .....	.69*	...			
3. California Achievement Test ..	.68**	.65**	...		
4. Acceptance .....	.21	.34**	.21	...	
5. Psychological autonomy .....	.39**	.36**	.27*	.19*	...
6. Behavioral control .....	.07	.18	.03	.10	-.11
7. Psychosocial maturity 1985 ....	.32**	.33**	.37**	.32**	.44**
8. Psychosocial maturity 1986 ....	.27*	.47**	.30**	.24*	.37**
9. Self-reliance 1986 .....	.27*	.41**	.29**	.09	.32**
10. Identity 1986 .....	.17	.33**	.20	.24*	.28**
11. Work orientation 1986 .....	.31**	.50**	.32**	.32**	.37**
	(6)	(7)	(8)	(9)	(10)
7. Psychosocial maturity 1985 ....	.03	...			
8. Psychosocial maturity 1986 ....	.23*	.63**	...		
9. Self-reliance 1986 .....	.00	.57**	.80**	...	
10. Identity 1986 .....	.28**	.51**	.85**	.53**	...
11. Work orientation 1986 .....	.23*	.56**	.86**	.53**	.60**

NOTE.—*N* varies from 104 to 119.

* $p < .05$, two-tailed.

** $p < .01$, two-tailed.

Plan of Analysis

Because psychosocial maturity, parenting practices, and school performance all vary as a function of adolescent age and sex and family socioeconomic status and composition, all analyses control for the effects of sex, age (in months), socioeconomic status, and family structure. In addition, all analyses control for youngsters' achievement test scores (see footnote 2).

Researchers continue to debate the appropriateness of various approaches to the analysis of longitudinal data in the study of child development (e.g., Connell & Tanaka, 1987). Despite recent advances in structural equation modeling, it is still generally agreed that the use of multiple regression techniques in which one predicts scores on a dependent variable at time 2 while controlling for scores on that same variable at time 1 is an appropriately conservative strategy. Accordingly, the data were analyzed in a series of path models employing simultaneous regression analyses, which examined the relations between 1985 parenting practices and 1986 school performance while controlling for the effects of 1985 school performance.³ This amounts to a

test of the effects of authoritative parenting practices on *changes* in school performance over the 1-year period.

Results

Over-Time Relation between Parenting Practices and GPA

In the first set of analyses, adolescents' 1986 grade point average was regressed on the three indices of authoritative parenting measured in 1985—acceptance, psychological autonomy, and behavioral control—while controlling for the mediating effect of the student's GPA in 1985. The results are displayed in Figure 1, which shows all paths significant at $p < .10$ or better, and in Table 3, which presents the results of the overall regression analysis.

Not surprisingly, the relation between 1985 and 1986 school performance is highly significant. More important, the results also indicate that all three aspects of authoritative parenting lead to increases in school grades. Specifically, youngsters who in 1985 described their parents as granting them greater psychological autonomy and exercising firmer

³ Occasionally, it is suggested that moderate, rather than high, levels of warmth and control are most predictive of adolescent competence. Accordingly, all analyses examined the curvilinear as well as linear relations between the three parenting variables and school achievement. In no case were significant curvilinear effects found.

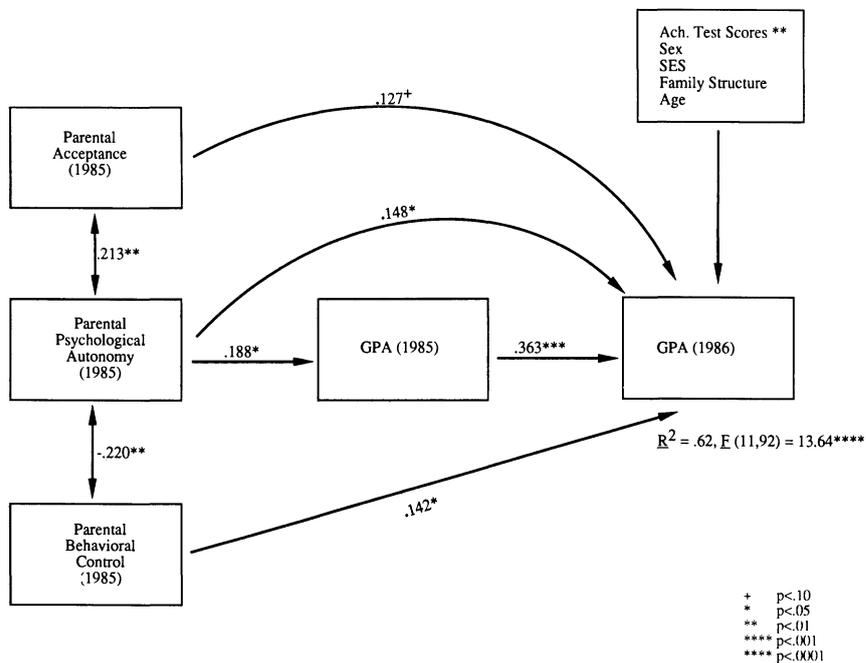


FIG. 1.—Direct and indirect influence of 1985 parenting practices on 1986 GPA

TABLE 3
REGRESSION OF 1986 GPA ON 1985 GPA AND 1985 PARENTING PRACTICES

Independent Variable	<i>B</i>	<i>SE B</i>	Beta	<i>T</i>
GPA 1985 .....	.367	.098	.363	3.73***
CAT .....	.011	.003	.300	3.26**
Sex	-.007	.124	-.004	-.06
Age	-.002	.003	-.041	-.60
SES1 .....	.072	.161	.034	.45
SES2 .....	.221	.138	.118	1.60
FAM1 .....	.159	.164	.071	.97
FAM2	-.268	.172	-.107	-1.56
Acceptance .....	.039	.022	.127	1.77 ⁺
Psychosocial autonomy .....	.048	.024	.148	1.96*
Behavioral control	-.047	.023	.142	2.01*
(Constant)	1.494	.916	1.63	...

Summary statistics:
Multiple *R* = .78733
*R*² = .61989
Adjusted *R*² = .57444
Standard error = .59006
F(11,92) = 13.64****

NOTE.—CAT = California Achievement Test scores; SES1 and SES2 and FAM1 and FAM2 represent effect-coded vectors used to control for the effects of socioeconomic status and family structure (each a three-level variable).

- ⁺ *p* < .10.
- * *p* < .05.
- ** *p* < .01.
- *** *p* < .001.
- **** *p* < .0001.

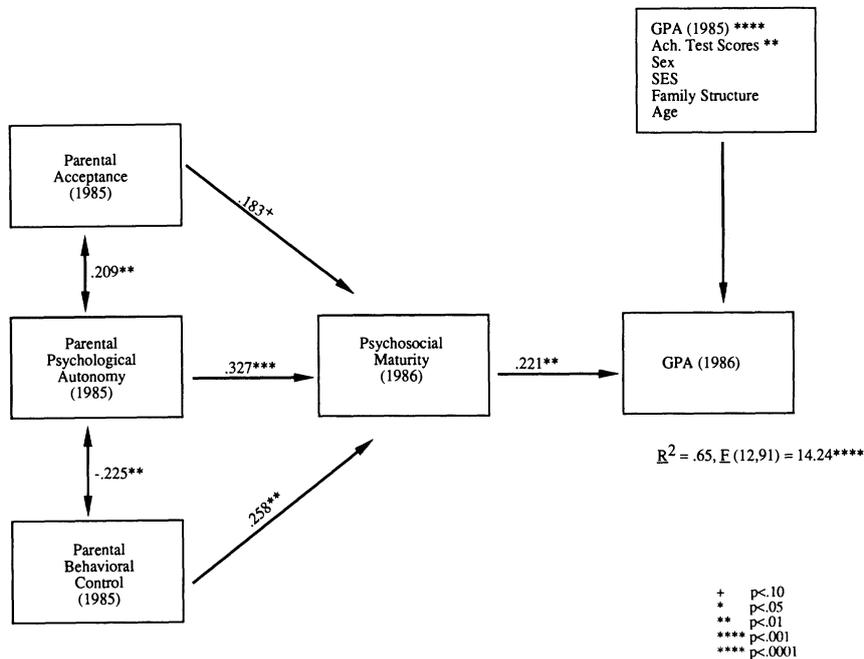


FIG. 2.—Influence of parenting practices on GPA is mediated by adolescent psychosocial maturity

control over their behavior showed greater increases in grades over the 1-year period than their peers, and adolescents who described their parents as more accepting tended to do better in school as well.⁴ In view of the fact that these results hold even after controlling for achievement test scores and an array of demographic factors correlated with parenting practices and school performance, the findings present strong evidence of the impact of authoritative parenting on school success. Interestingly, whereas the positive impact of psychological autonomy on subsequent school performance is both direct as well as indirect (through its concurrent relation to school performance), the over-time effects of parental acceptance and firm control on 1986 student performance do not appear to be mediated by their relation to 1985 grades.

The Mediating Impact of Psychosocial Maturity

In the second set of analyses, the mediating impact of youngsters' psychosocial ma-

turity was examined in order to test the hypothesis that the positive impact of authoritative parenting practices on school performance is mediated by their effects on youngsters' psychological development. In these analyses, which controlled not only for the set of covariates listed earlier but for 1985 GPA as well, students' 1986 GPA was regressed simultaneously on the three parenting dimensions (assessed in 1985) and on their total score on the autonomy subscale of the Psychosocial Maturity Inventory. This score represents the sum of students' scores on the scales measuring self-reliance, identity, and work orientation. These results are presented in Figure 2 and Table 4.

The results confirm the hypothesis that the impact of authoritative parenting on school success is mediated through its effects on psychosocial maturity. As expected, given the extensive literature documenting the positive contributions of warmth, firm control, and psychological autonomy to adolescents'

⁴ Analyses were conducted in order to examine whether the effects of various parenting practices are moderated by the sex or age of the adolescent. Significant interaction terms were obtained between sex and each of the three parenting dimensions and between age and both psychological autonomy and behavioral control. Unfortunately, follow-up analyses were constrained by the small subsample sizes. Informal inspection of the regression coefficients suggested that the positive impact of parental acceptance appears stronger among girls than boys, whereas the positive impact of behavioral control is stronger among boys than girls. The positive effects of psychological autonomy and of behavioral control appear to be stronger among older adolescents than younger ones. These intuitively sensible findings warrant further research in a larger sample.

TABLE 4
REGRESSION OF 1986 GPA ON 1985 PARENTING PRACTICES
AND 1986 PSYCHOSOCIAL MATURITY

Independent Variable	<i>B</i>	<i>SE B</i>	Beta	<i>T</i>
GPA 1985 .....	.385	.095	.381	4.07****
CAT .....	.009	.003	.256	2.85**
Sex	-.039	.119	-.021	-.33
Age	-.003	.003	-.069	-.98
SES1 .....	.050	.155	.024	.32
SES2 .....	.124	.137	.066	.90
FAM1 .....	.197	.159	.088	1.24
FAM2	-.266	.166	-.106	-1.60
PSM .....	.017	.005	.221	2.93**
Acceptance .....	.026	.022	.086	1.22
Psychosocial autonomy .....	.024	.025	.076	.98
Behavioral control .....	.028	.023	.085	1.20
(Constant) .....	.080	1.005	...	.08

Summary statistics:

Multiple *R* = .80783

*R*² = .65259

Adjusted *R*² = .60678

Standard error = .56719

F = 14.24****

NOTE.—CAT = California Achievement Test scores; PSM = Psychosocial Maturity Inventory; SES1 and SES2 and FAM1 and FAM2 represent effect-coded vectors used to control for the effects of socioeconomic status and family structure (each a three-level variable).

+ *p* < .10.

* *p* < .05.

** *p* < .01.

*** *p* < .001.

**** *p* < .0001.

psychological and social functioning (see Maccoby & Martin, 1983), each of the parenting dimensions assessed contributes independently to youngsters' scores on the measure of psychosocial maturity. And, not surprisingly, psychosocial maturity is itself significantly related to school success (see Greenberger, 1982). As Figure 2 shows, however, when psychosocial maturity is included in the model, the direct paths between 1986 school performance and 1985 parental acceptance, psychological autonomy, and firm control are reduced to nonsignificance. Apparently, school success is enhanced by authoritative parenting at least in part because authoritative parenting contributes to youngsters' psychosocial development.

Psychosocial Maturity and Authoritative Parenting: Direction of Effects

The previous analyses indicate that authoritative parenting has a positive impact on psychosocial maturity, which in turn is positively correlated with school performance. Although the ostensible causal chain is both intuitively sensible and consistent with pre-

vailing theories of socialization, the analyses leave open the possibility that youngsters who are relatively more emotionally mature merely provoke more positive behavior from their parents. If this were true, one could very reasonably suggest that the observed relation between authoritative parenting and GPA is actually due to the impact of psychosocial maturity both on youngsters' performance in school and their parents' performance at home. In view of debates over the direction of socialization effects, especially in studies of the effects of firm control (e.g., Lewis, 1981), it is important to examine the alternative causal explanation.

To this end, a model was examined that included both 1985 and 1986 scores on the Psychosocial Maturity Inventory. In these analyses, the central question of interest was whether 1985 parenting practices had a significant effect on 1986 psychosocial maturity after taking into account 1985 psychosocial maturity. The results are presented in Figure 3 and Table 5. As was the case in previous figures, only the significant paths are drawn.

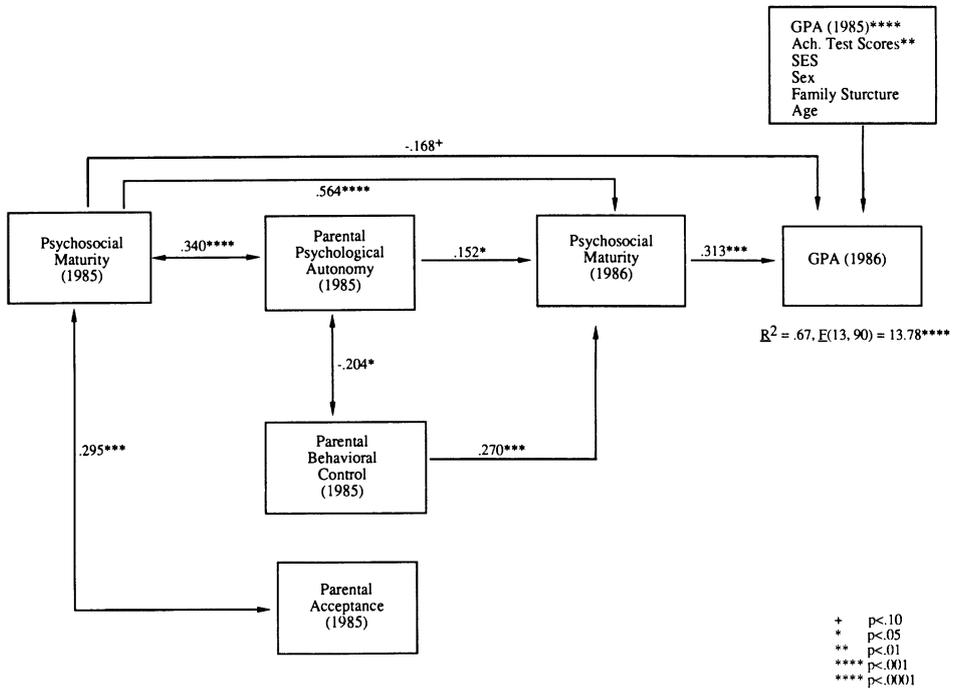


FIG. 3.—Authoritative parenting practices influence psychosocial maturity, which in turn influences GPA.

The analyses suggest that the relation between authoritative parenting and psychosocial maturity is reciprocal, although different parenting dimensions show different patterns of relations. Parental acceptance appears to be more a correlate of youngsters' psychosocial maturity than a contributor to it. Firm control appears to be more a contributor to psychosocial maturity than a correlate of it. And psychological autonomy appears to be both a correlate and antecedent of youngsters' psychosocial maturity. Overall, however, the analyses support the hypothesis that authoritative parenting enhances youngsters' psychosocial development, which in turn contributes to their success in school. In particular, the results point to the benefits of a parent-child relationship characterized by the combination of psychological autonomy and firm behavioral control.

The Relative Importance of Self-Reliance, Work Orientation, and Identity

The measure of psychosocial maturity employed in this study is an aggregate of youngsters' scores on three related, but conceptually distinct, dimensions: self-reliance, work orientation, and identity. Given theoretical concerns about the mechanism through which authoritative parenting may exert its

influence, it is interesting to ask whether the positive impact of authoritative parenting on adolescent school success is mediated more through certain aspects of psychosocial functioning than through others. The analyses presented in Figure 4 and Table 6 address this question. In these analyses, a model that includes separate scores on the scales tapping self-reliance, work orientation, and identity, in place of the global index of psychosocial maturity, was examined.

The analyses help to clarify the psychological pathways through which authoritative parenting enhances adolescents' grades in school. Specifically, the results show that all three aspects of authoritative parenting may enhance youngsters' work orientation, which in turn contributes to school success. Although self-reliance is also related to school success, its development is not directly related to the parenting practices studied (although it may be affected indirectly, as the figure indicates). And although firm control is positively related to adolescents' identity development, scores on the measure of identity are not directly related to GPA (although identity development may contribute to GPA indirectly, through its impact on work orientation or self-reliance). In any event, it appears

TABLE 5
REGRESSION OF 1986 GPA ON 1985 PARENTING PRACTICES
AND 1985 AND 1986 PSYCHOSOCIAL MATURITY

Independent Variable	<i>B</i>	<i>SE B</i>	Beta	<i>T</i>
GPA 1985 .....	.390	.093	.386	4.17****
CAT .....	.010	.003	.276	3.09**
Sex	-.050	.118	-.028	-.43
Age	-.002	.003	-.062	-.89
SES1 .....	.074	.154	.035	.48
SES2 .....	.101	.136	.054	.74
FAM1 .....	.160	.158	.072	1.01
FAM2	-.270	.163	-.108	-1.65
Acceptance .....	.034	.022	.119	1.58
Psychosocial autonomy .....	.031	.025	.095	1.24
Behavioral control .....	.019	.023	.057	.80
PSM 1985	-.011	.005	-.168	-1.87 ⁺
PSM 1986 .....	.024	.006	.313	3.50***
(Constant) .....	.185	.993	...	.19

Summary statistics:

Multiple $R = .81580$

$R^2 = .66553$

Adjusted $R^2 = .61722$

Standard error = .55962

$F(13,90) = 13.76****$

NOTE.—CAT = California Achievement Test; PSM = Psychosocial Maturity Inventory; SES1 and SES2 and FAM1 and FAM2 represent effect-coded vectors used to control for the effects of socioeconomic status and family structure (each a three-level variable).

⁺ $p < .10$.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

**** $p < .0001$.

from these analyses that the most direct psychosocial mechanism through which authoritative parenting may encourage school success is through the effects of such parenting practices on youngsters' work orientation.

Discussion

The findings of the present study both corroborate and extend those of previous research. Specifically, the results indicate that authoritative parenting likely facilitates adolescents' academic success; that all three components of authoritativeness studied here—parental acceptance, psychological autonomy, and behavioral control—make independent contributions to school achievement; and that the positive impact of authoritative parenting on school success is mediated in part through the effects of authoritativeness on the development of a healthy sense of autonomy and, more specifically, on the development of a healthy psychological orientation toward work. Put in concrete terms, adolescents who describe their parents as treating them

warmly, democratically, and firmly are more likely than their peers to develop positive attitudes toward, and beliefs about, their achievement, and as a consequence, they are more likely to do better in school. The corroboration of Dornbusch et al.'s (1987) cross-sectional findings with longitudinal data indicates that parental authoritativeness is not merely a response to youngsters' demonstrated school success and calls into question the notion that parental authoritativeness merely follows from, rather than precedes, the development of competence in children (e.g., Lewis, 1981).

It is important to keep in mind, of course, that the information on parenting practices was obtained from adolescents and not through objective observations of parent-child interaction. Thus, we can only say with certainty that adolescents who *feel* that their parents are accepting, democratic, and firm outperform their peers in school. Because the information on school performance does come from official school records, however,

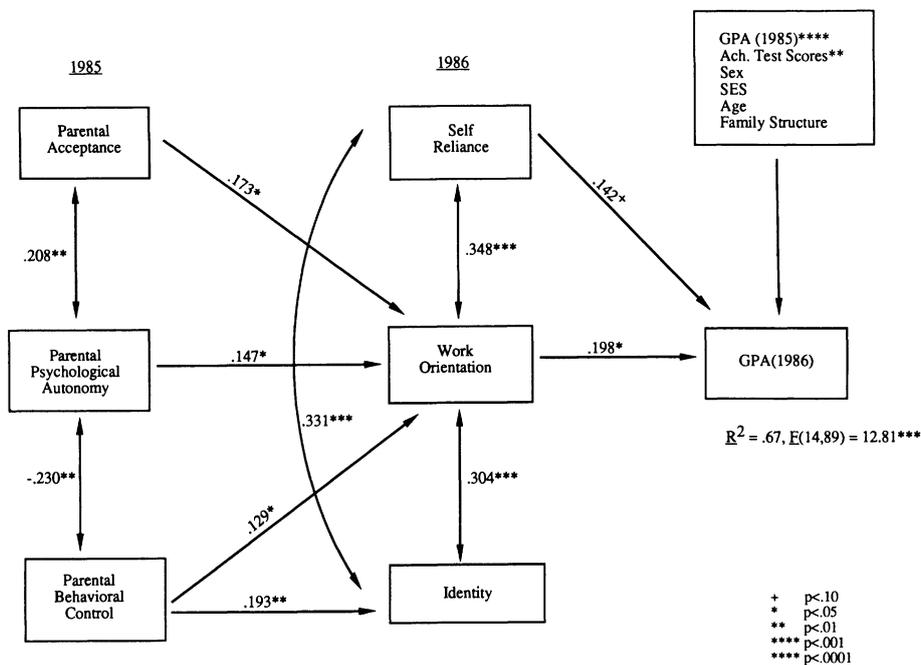


FIG. 4.—Influence of parenting practices on GPA is mediated primarily by adolescent work orientation.

TABLE 6
REGRESSION OF 1986 GPA ON 1985 PARENTING PRACTICES AND 1986 SCORES ON WORK ORIENTATION, SELF-RELIANCE, AND IDENTITY

Independent Variable	B	SE B	Beta	T
GPA 1985	.361	.094	.357	3.85***
CAT	.008	.003	.241	2.71**
Sex	-.033	.120	-.018	-.28
Age	-.003	.003	-.083	-1.17
SES1	.074	.154	.035	.48
SES2	.154	.136	.082	1.13
FAM1	.184	.157	.082	1.17
FAM2	-.292	.165	-.117	-1.77+
Acceptance	.025	.022	.081	1.14
Psychosocial autonomy	.022	.024	.068	.88
Behavioral control	.033	.023	.109	1.43
Self-reliance	.030	.018	.142	1.70+
Work orientation	.036	.016	.198	2.24*
Identity	-.012	.016	-.061	-.71
(Constant)	.280	.995	...	.28

Summary statistics:
Multiple R = .81752
 $R^2 = .66834$
Adjusted $R^2 = .61617$
Standard error = .56038
 $F(14,89) = 12.81***$

NOTE.—CAT = California Achievement Test scores; SES1 and SES2 and FAM1 and FAM2 represent effect-coded vectors used to control for the effects of socioeconomic status and family structure (each a three-level variable).

+ $p < .10$.
* $p < .05$.
** $p < .01$.
*** $p < .001$.
**** $p < .0001$.

we can rule out the possibility that the students who describe their parents in more positive light are simply more likely to describe their own behavior more positively as well.

The findings concerning the psychosocial mediators of the relation between authoritative parenting and academic performance are especially interesting in light of controversies over the putative contribution of self-esteem to youngsters' academic success (see Harter, 1983). Despite widespread public belief about the benefits of raising adolescents' self-esteem as a means of enhancing their school performance, no systematic research has corroborated this notion. The present study suggests that the relation between youngsters' self-esteem (as indexed via the identity measure) and their school performance is, at best, indirect. In contrast, it appears that changing adolescents' motivation to work hard and strive for success (tapped here by the work orientation measure) holds the most promise for psychological interventions designed to enhance school performance among adolescents.

Whether interventions designed to enhance school performance should include attempts to modify parenting practices is a different matter, however. An important limitation of the present study concerns its sample. Unlike the Dornbusch et al. (1987) effort, the present research focused on an ethnically homogeneous group of adolescents, and it is important to exercise caution in generalizing the findings. Virtually all of the participants were white, and a majority were from middle-class or professional backgrounds. To date, the benefits of parental authoritativeness have been most consistently demonstrated in studies of this specific population (Steinberg, in press); even in the Dornbusch study, it was found that the positive effects of authoritativeness were greatest for white youth. Although there is certainly room for more systematic study of authoritative parenting and child development in samples of middle-class, white youngsters, it would seem far more important, given the changing demography of American adolescents (Wetzel, 1987), to see whether patterns of socialization effects observed in white, middle-class samples hold true in other groups. One must therefore resist the temptation to conclude on the basis of these data that large-scale efforts should be implemented in order to increase parental authoritativeness. Although such a strategy may hold promise among white, middle-class families, it remains to be seen whether the same parenting

practices have similar benefits in other populations.

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