Home Predictors of Young Adolescents’ School Behavior and Academic Performance

Rex Forehand, Nicholas Long, Gene H. Brody, and Robert Fauber

University of Georgia

The family serves as the primary initial context within which children learn appropriate and inappropriate interaction styles. Relations and behavior patterns in the home presumably set the stage for those that occur outside the home. Unfortunately, as Bronfenbrenner (1979) emphasized, we have little data on the impact of a child’s behavior in one setting, such as the home, or his or her behavior in a second setting, such as the school.

In spite of such concern, literature is now emerging suggesting that parent-child interaction in the home may influence behavior in the second major setting in which children function: the school. Both school achievement (for a review see Hess & Holloway, 1984) and social functioning (i.e., MacDonald & Parke, 1984), particularly among young children, appear to be related to the relationship between parent and child. When viewed from the perspective of a “systems” theory (Hartup, 1979; Sameroff, 1983), which emphasizes the interdependence of various social systems and how one such system can influence another, these findings are not surprising.

The present study is designed to go beyond current knowledge concerning interrelations across settings. First, this investigation extends home-based predictor variables to include the parents’ marital relationship and personal adjustment. While substantial data indicate that marital conflict and parental personal maladjustment, particularly depression, are related to child adjustment in the home (for reviews see Emery, 1982; Griest & Wells, 1983), Hess and Holloway (1984) noted that the influence of such factors on school behavior has not been adequately examined. Both of these factors are important in that they extend the context that is examined from the individual parent-child relationship to the broader family environment, which is necessary for understanding parenting and parent-child relations (Belsky, 1984). We would expect, based on social learning theory (e.g., Bandura, 1971), that parental depression and marital conflict would disrupt parenting practices in the home (e.g., less energy, interest, or time for parenting and, therefore, less interaction with and supervision of a child) and/or serve as a model for socially inappropriate interactional styles (e.g., modeling conflictual
styles for solving problems) (Emery, 1982; Griest & Wells, 1982). Based on a "systems" theory, we would expect these interactional styles learned in the home to occur in the school and interfere with social functioning and, consequently, academic performance.

Second, the present study extends the existing literature by focusing on academic achievement and the behavioral adjustment of children, both of which are important for success in school (Hess & Holloway, 1984). Third, based on MacDonald and Parke’s (1984) finding that mother-child and father-child interactions have differential influences on the child’s behavior in school, and based on the fact that fathers are seldom studied (e.g., Lamb, 1979), data were collected from both parents. Finally, as much of the earlier research has focused on pre-adolescent children, the present project focuses on young adolescents. Since this stage of development has been identified as a particularly stressful one for many children (e.g., Montemayor, 1982), interrelations between home and school may be unique and should, therefore, be examined.

Method
Subjects
Forty-six mother–father–young adolescent triads served as subjects. Adolescents’ ages ranged from 11.6 years to 14.9 years (X = 13.5 years). Twenty were males and 26 were females. Birth order ranged from first- to sixth-born, with firstborn as the mode. The socioeconomic status of the family was determined by Myers and Bean’s (1968) Index of Social Status, which assigns a rating from 11 (high status) to 77 (low status) based on the education and occupation of the head of the household. The socioeconomic status of the families ranged from 11 to 55, with a mean of 21, indicating that the heads of household generally were educated and worked in skilled occupations. All families were intact, consisting of the biological mother and father.

Measures
Criterion measures.—Three school-based criterion measures were used. A grade point average for each adolescent was computed by assigning a score, ranging from 4 (for each A) to 0 (for each F), to each grade received on the most recent report card in the areas of mathematics, English, science, and social studies. The internalizing and the externalizing dimensions of problem behavior (Achenbach & Edelbrock, 1978) were measured by the Revised Behavior Problem Checklist (RBPC) (Quay & Peterson, 1983). The RBPC consists of 89 items regarding the child/adolescent that can be rated by parents and/or teachers. Each item is scored as 0 (no problem), 1 (mild problem), or 2 (severe problem). Quay and Peterson (1983) have presented extensive reliability (e.g., mean test-retest reliability across subscales of .67, mean interrater reliability across subscales of .64) and validity (e.g., discrimination between clinic-referred and normal groups of children) data. In the present study, teacher-completed forms were used, and two of the six subscales of the RBPC were examined. The Anxiety-Withdrawal factor was utilized as a measure of the internalizing problem dimension and the Conduct Disorder Factor was utilized for the externalizing problem area.

Predictor variables.—The three predictor variables were the Beck Depression Inventory, the O’Leary-Porter Scale, and the Issues Checklist. The Beck Depression Inventory (BDI) is a 21-item instrument used to assess individual depression in adults (Beck, 1967). For each item the respondent is asked to choose one of four statements reflecting increasing levels of depressive symptomatology. The BDI has been found to have an acceptable level of internal consistency (Cronbach’s alpha = .89). In terms of validity, scores on the BDI have been found to correlate significantly with more objective behavioral measures of depression (Williams, Barlow, & Agras, 1972). Both mothers and fathers completed the BDI.

The O’Leary-Porter Scale (OPS) is a 10-item scale developed to assess the frequency of overt parental conflict that occurs in the child’s presence (Porter & O’Leary, 1980). The 10 items are rated by parents along a five-point Likert-type scale with end points labeled “Very Often” and “Never.” Total OPS scores can range from 0 to 40, with lower scores indicating greater conflict. Porter and O’Leary (1980) reported that the test-retest reliability of the OPS over a 2-week period was .96. The correlation between the OPS and the Marital Adjustment Test was found to be .63. In the present study both mothers and fathers completed the OPS. Since a marital relation involves two individuals, and since the mother-completed OPS and father-completed OPS were significantly correlated (r = .69, p < .01), an average of the score for each mother-father dyad was used in the analyses.

The Issues Checklist (IC) (Robin, Koepke, & Nayor, in press) requires parents and adolescents to recall disagreements about 44 specific issues, such as cleaning up the bedroom, homework, television, and drugs.
For each topic, the respondent indicates whether or not the issue had been discussed during the past 2 weeks. For each topic that is endorsed positively, the respondent rates the intensity of the discussions on a five-point scale ranging from calm to angry. An average intensity score across issues is then calculated. The IC has been shown to discriminate distressed from nondistressed families, be sensitive to therapeutic intervention, and have adequate test-retest reliability (Robin et al., in press). For purposes of the present study, two scores, one for the mother-adolescent dyad and one for the father-adolescent dyad, were generated. The mother-adolescent intensity score equals the average of the mother’s intensity score (in reference to the adolescent) and the adolescent’s intensity score (in reference to the mother). Similarly, the father-adolescent intensity score equals the average of the father’s intensity score (in reference to the adolescent) and the adolescent’s intensity score (in reference to the father). As with the OPS, an average score was utilized, since the parent-adolescent relation involves two individuals and the parent-completed and adolescent-completed ICs were significantly correlated (for mother-adolescent IC, $r = .42, p < .01$, and for father-adolescent IC, $r = .38, p < .01$).

Procedures

Parents and children were recruited through notices circulated in local communities. When contacted, the experimenter determined whether subjects were eligible for the study. After describing the project to eligible volunteers, a data-collection session was scheduled at a local university for mothers and adolescents who wished to participate. Mothers brought the adolescent’s most recent report card to that session.

Upon arrival, the experimenter explained the project to each mother-adolescent dyad separately. The subjects were given consent forms to read and sign while the experimenter copied the adolescent’s grades from the report card provided. The mother and the adolescent were then given questionnaires, presented in random order, to complete. Questionnaires were sent to the adolescent’s father and social studies teacher, both of whom were requested to complete the forms and return them by mail.

Results

Table 1 presents the correlation matrix for the demographic, predictor, and criterion variables. Only two significant correlations emerged between the criterion and demographic variables. Boys were viewed as manifesting more conduct problems (CD) than girls, and, as birth order increased, grade point averages (GPAs) declined. The relation of the criterion variables to the predictor variables was of primary interest. Scores on the Conduct Disorder factor of the teacher-completed Revised Behavior Problem Checklist increased as mother’s BDI scores, mother-adolescent intensity ratings on the Issues Checklist, and father-adolescent intensity ratings on the Issues Checklist increased. GPA decreased as father-adolescent intensity scores on the Issues Checklist increased.

Three stepwise multiple-regression analyses were performed in order to determine the additive variance accounted for by predictor variables. The criterion variables in these analyses included the Conduct Disorder factor score, the Anxiety-Withdrawal factor score, and GPA. The predictor variables included mother’s BDI, father’s BDI, mother—father average O’Leary-Porter Scale score, mother-adolescent Issues Checklist average intensity score, and father-adolescent Issues Checklist average intensity score. In addition, sex was utilized as a predictor in the Conduct Disorder analysis and birth order was used in the GPA analysis, as significant correlations were obtained between these variables.

The primary criterion utilized for entry of each variable was that at least 4% of additional variance be accounted for by the variable. The results are presented in Table 2. For the Conduct Disorder score, the mother-adolescent Issues Checklist was entered first, followed by the adolescent’s sex and the mother’s BDI. These three variables accounted for 35% of the variance, $F(3,42) = 7.63, p < .01$. For GPA, the father-adolescent Issues Checklist was entered first, followed by birth order. These two variables accounted for 15% of the variance. For the Anxiety-Withdrawal score, no variables met the criterion for entry.

Discussion

The results provide support for the existence of a relation between school behavior and the home environment of young adolescents, since both academic performance and externalizing problem behaviors in school were related to and predicted by the parent-adolescent relationship and/or maternal depression in the home setting. Furthermore, data from both mothers and fathers were influential in predicting school performance and adjustment.
<table>
<thead>
<tr>
<th>Birth Order</th>
<th>Gender</th>
<th>Adolescent Age</th>
<th>SES</th>
<th>Mother's BDI</th>
<th>Father's BDI</th>
<th>OPS</th>
<th>IC—M-A</th>
<th>IC—F-A</th>
<th>CD-RBPC</th>
<th>AW-RBPC</th>
<th>GPA</th>
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<td>Mother's BDI</td>
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<td>Father's BDI</td>
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<td>-0.02</td>
<td>-0.04</td>
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<td>0.12</td>
<td>-0.16</td>
<td>-0.06</td>
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</table>

* Head of household SES (higher scores indicate lower SES).
* OPS = O'Leary-Porter Scale. The average of mother's and father's O'Leary-Porter scores was used in the analyses.
* IC = Issues Checklist. The average of mother's (completed on adolescent) and adolescent's (completed on mother) intensity scores was used in the analyses.
* CD-RBPC = Teacher-completed Conduct Disorder factor on Revised Behavior Problem Checklist.
* AW-RBPC = Teacher-completed Anxiety-Withdrawal factor on Revised Behavior Problem Checklist.
* *p < .05.
TABLE 2
STEPWISE MULTIPLE-REGRESSION ANALYSES

<table>
<thead>
<tr>
<th>Criterion and Predictors</th>
<th>$R^2$</th>
<th>$F$</th>
<th>$df$</th>
<th>$p$</th>
</tr>
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<td>Conduct Disorder (RBPC):</td>
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<td></td>
<td></td>
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<td>Issues Checklist—maternal</td>
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<td>15.22</td>
<td>1,44</td>
<td>&lt;.01</td>
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<tr>
<td>Adolescent gender</td>
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<td>9.71</td>
<td>2,43</td>
<td>&lt;.01</td>
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<tr>
<td>Mother's BDI</td>
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<td>7.63</td>
<td>3,42</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>GPA:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Issues Checklist—paternal</td>
<td>.07</td>
<td>3.40</td>
<td>1,44</td>
<td>&lt;.07</td>
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<td>Birth order</td>
<td>.15</td>
<td>3.92</td>
<td>2,43</td>
<td>&lt;.05</td>
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</table>

The Conduct Disorder measure was strongly related to the data collected in the home, whereas the Anxiety-Withdrawal score was not related. These findings are not surprising when considered in light of the existing literature. Externalizing or acting out problems have generally been related to problematic home environments more often than internalizing or anxiety difficulties (e.g., Emery, 1982).

The predictor variable most strongly correlated with the school criterion variables was the parent-adolescent interaction measure (Issues Checklist). In particular, this factor was related to the Conduct Disorder measure. Since the Issues Checklist addressed parent-adolescent interaction in the home and the Conduct Disorder score addressed the adolescent's interaction with teachers and peers, the relation between these two instruments would intuitively be expected to be strong. This finding is congruent with earlier work (Loeber, 1982) indicating that children's conflictual or disruptive behavior frequently is not limited to one environment but occurs in multiple settings.

The father's relationship with his adolescent was related not only to the Conduct Disorder score but was the only predictor variable related to GPA. Montemayor (1982) recently reported that significantly more conflicts occur between mothers and adolescents than between fathers and adolescents. It may well be that, when conflicts between fathers and adolescents do occur, they are more disruptive, disturbing the adolescent's school performance. Alternatively, when an adolescent's grades fall, fathers may assume the responsibility for improving school performance, which may lead to more conflicts. Regardless of the cause-effect sequence, what is of primary significance is that adolescents' interactions with their fathers, who typically have been ignored in the psychological literature, were significantly related to school behavior and academic performance.

The mother's depression level was significantly related to the Conduct Disorder score. This relation may well exist because of disruptive parenting practices that result from mothers who score higher on the BDI having less resources to devote to the parenting process (Forehand, Lautenschlager, Faust, & Graziano, 1986). As a result, these mothers may spend less time monitoring their young adolescent's behavior, a parenting style associated with conduct disorders (Patterson & Stouthamer-Loeber, 1984). As noted earlier, based on the interdependence of the various systems in which young adolescents function, conduct disorders would be expected in settings outside the home, such as school. Furthermore, as we originally proposed, such problems may be associated with inferior academic functioning, which also was supported by the present data (see Table 1).

Two home variables that did not correlate with school behavior/performance were paternal depression and marital conflict. Other research (Kokes, Harder, Fisher, & Strauss, 1980) has found that paternal psychopathology was not related to child competence. Furthermore, while substantial research with clinic-referred children suggests a strong relation between marital conflict and child adjustment, the relation is substantially weaker with nonclinic samples, such as was utilized in this study (for a review see O'Leary & Emery, 1984). Therefore, the present findings are compatible with the prior literature.

It is important to note several limitations of the present study. First, a cause-effect relation cannot be determined from the present data. Second, the sample size utilized was small. Nevertheless, the present results indicate that the home environment is related to the young adolescents' school behavior and performance. Not only does mother-adolescent conflict in the home serve as a significant predictor, but so does maternal depression and the father-adolescent relation.
These findings stress the importance of examining multiple settings and multiple predictors when examining adolescents’ behavior.

References


