THE INFLUENCE OF VIOLENT BEHAVIOR AND VICTIMIZATION AT SCHOOL ON PSYCHOLOGICAL DISTRESS: THE ROLE OF PARENTS AND TEACHERS

Estefanía Estévez, Gonzalo Musitu, and Juan Herrero

ABSTRACT

This study examined the role of adolescents’ interactions with both parents and teachers in the relationship between violent behavior/victimization at school and adolescent psychological distress (depression and stress). Participants were 983 Spanish adolescents (mean age 13.7 years) from four public schools in the Valencian Community. Statistical analyses were carried out using structural equation modeling. Results showed victimization to be directly and positively related to psychological distress. Moreover, victimization was associated with negative father-adolescent communication, which mediated a part of the influence of victimization on distress. Regarding school-based violent behavior, no direct effect on psychological adjustment was found. Results showed, however, an indirect effect: violent behavior negatively influenced communication with parents and interaction with teachers which, in turn, was related to poor psychological adjustment. This model accounted for 47.7% of the variance in psychological distress. Findings are discussed in relation to previous research on adolescent psychosocial adjustment, and directions for future research are suggested.

Since the 1980s, research analyzing behavioral problems at school among school-aged children and adolescents has been increasing. Most of the research focused on victimization problems has repeatedly shown that victimized students exhibit some psychosomatic symptoms and poor psychological adjustment (Alsaker & Olweus, 1992; Juvonen, Nishina, & Graham, 2000; Kupersmidt, Coie, & Dodge, 1990). Recent studies, for instance, report that depression and stress in particular are common among adolescents involved in victimization problems (Guterman, Hahm, & Cameron, 2002; Kumpulainen, Räisänen, & Purura, 2001; Hawker & Boulton, 2000). Previous research that focused

This research was supported by grant SEJ2004-01742 from the Ministry of Education and Science of Spain.

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ADOLESCENCE, Vol. 40, No. 157, Spring 2005
Libra Publishers, Inc., 3089C Clairemont Dr., PMB 383, San Diego, CA 92117
on violent students, however, has shown little co-occurrence between violent behavior and psychological problems in adolescence (Angold & Costello, 1993). Along this line, depressive symptoms and violent behavior have been found to co-occur only in about 5% to 8% of adolescents (Garnefski & Diekstra, 1997; Ge, Best, Conger, & Simons, 1996). One possible explanation is that violent behavior at this stage of life may be normative and even beneficial for social adjustment in some adolescents (Little, Brauner, Jones, Nock, & Hawley, 2003). As Hawley and Vaughn (2003) report, aggressive students are often important figures in their peer group and tend to enjoy benefits of social inclusion. However, this is not the case for a relatively small group of adolescents who are at a particular high risk for future maladjustment (Ferdinand, Stijnen, Verhulst, & Van der Reijden, 1999), and both behavioral and psychological problems. Other variables, therefore, should be taken into account to understand the link between these adjustment problems in adolescence.

In this sense, prior studies have examined the association between some family variables and children’s behavioral and psychological problems. For example, a negative family environment has been found to be a risk factor for peer victimization and violent behavior at school (Gerard & Buehler, 1999; Smith, Bowers, Binney, & Cowie, 1993), as well as for psychological problems in adolescents (Cummings & Davies, 1994; Formoso, Gonzales, & Aiken, 2000; Garber, 1996). In particular, high levels of family conflict (Ary, Duncan, Biglan, Metzler, Noell, & Smolkowski, 1999; Crawford-Brown, 1999; Cummings, Goeke-Morey & Papp, 2003), negative communications with parents (Liu, 2003; Loeber, Drinkwater, Yin, Anderson, Schmidt, & Crawford, 2000; Stevens, De Bourdeaudhuij, & Van Oost, 2002), and lack of parental support (Barrera & Li, 1996; Sheeber, Hops, Alpert, Davis, & Andrews, 1997), are important influential factors in the development of behavioral and psychological problems among adolescents. In addition, some studies indicate that when behavioral problems co-occur with psychological distress, adolescents usually reveal an especially negative family environment (Olsson, Nordström, Arinell, & von Knorringer, 1999; Overbeek, Bieseker, Statton, Engels, & Meeus, 2002). In contrast, close parent-child relationships characterized by warmth, acceptance, and positive communication, perform a protective function against violent behavior, depression, and anxiety (Beam, Gil-Rivas, Greenberger, & Chen, 2002; Buist & Dekovic, 2004; Dadds, Sanders, Morrison, & Rebgetz, 1992; Gil-Rivas, Greenberger, Chen, Montero, & Lopez-Lena, 2003; Kenny, Gallagher, Alvarex-Salvat, & Silsby, 2002).

Some previous research has also analyzed the relationship between teachers and students who are having behavioral and psychological
problems, pointing out that adolescents with high levels of behavioral problems have more negative interactions with teachers (Fry, 1983; Jack, Shores, Denny, Gunter, DeBriere, & DePaepe, 1996), which results in a poor student-teacher relationship (Blankemeyer, Flannery, & Vazsonyi, 2002). Furthermore, teachers’ responses to these adolescents are usually punishment (Coie & Koeppel, 1990), and lack of warmth and encouragement (Birch & Ladd, 1998). More recent studies note that a positive teacher-student relationship decreases the level of violence in the classroom, as well as symptoms of depression in students (Meehan, Hughes, & Cavell, 2003; Reddy, Rhodes, & Mulhall, 2003).

Aims of the Current Study

The present study separately analyzed the influence of violent behavior and victimization at school on adolescent psychological adjustment. But given that both behavioral and psychological problems in adolescence negatively affect and are negatively affected by family and school variables, such as the quality of interaction with parents and teachers (Begotti, Borca, Calandri, Cattelino, & Ingoglia, 2004; Eisenberg, Fabes, Shepard, Guthrie, Murphy, & Reiser, 1999), it seems appropriate to explore the role that parents and teachers play in the relationship between violent behavior/victimization and psychological adjustment. Therefore, we examined whether violence and victimization problems would interact with family (communication with father and mother) and school (teacher's perception of students) variables in contributing to levels of psychological distress. Based on findings of prior studies, it was expected that violent behavior and victimization would show differential paths in their influence on adolescents’ psychological adjustment. In particular, we hypothesized that victimization would be directly associated with psychological distress, but that violent behavior would not directly affect adolescents’ psychological adjustment. Violent behavior was expected to show, however, an influence on interactions with parents and teachers which, in turn, would have a negative effect on psychological distress.

METHOD

Participants

Participants in the study were 1,068 Spanish adolescents from four public schools in the Valencian Community, of whom 983 provided complete data for all study variables. Ages ranged from 11 to 16 years (mean age 13.7); 47.2% were boys. For multigroup analyses, we split
two age groups (11–13 and 14–16 years); 45.5% were in the 11–13-year-old group.

Procedure
Teachers at the schools were informed about the objectives of the study during a two-hour presentation. Parents received a letter including an introductory summary of the investigation. Prior to data collection, written parental consent was obtained. Participants anonymously filled out the questionnaire during a regular class period in May 2002, in addition to providing other measures not used in this study. All measures were administered within each classroom on the same day. Teachers were also asked to complete a teacher report for each participating adolescent.

Measures
Depressive symptoms were assessed by the Center of Epidemiological Studies Depression Scale (CES-D; Radloff, 1977). Participants reported the frequency of 20 symptoms experienced over the past month, including depressed mood, feeling of hopelessness, somatic and retarded activity, and interpersonal distress (e.g., “I was bothered by things that usually don’t bother me”). Responses were rated on a four-point scale (1 = never, 4 = always). Cronbach’s alpha reliability for this scale in the present study was .90.

Perceived stress was measured using the Perceived Stress Scale (PSS; Cohen, Kamarck, & Mermelstein, 1983). The PSS is a 14-item scale which measures the degree to which respondents appraised situations as stressful within the last month (e.g., “In the last month, how often have you found that you could not cope with all the things that you have to do?”) on a five-point scale (1 = never, 5 = very often). Coefficient alpha in the current sample for this scale was .82.

Violent behavior at school and peer victimization were assessed using a scale adapted from Emler and Reicher (1995). Participants indicated the frequency with which they had engaged in 19 deviant behaviors at school in the past 12 months on a six-point scale (0 = I don’t want to share this information, 1 = never, 5 = many times). Approximately 7% of respondents chose not to provide the information contained in some items marking them “0”; these subjects were removed from the analysis. We conducted principal component analysis with varimax rotation and found a two-factor structure. The first factor explained 45.03% of variance and grouped 13 items referring to disruptive behavior, physical and verbal aggression at school (e.g., “I have hit somebody at school”). The second factor explained 16.90% of variance and
grouped 6 items referring to victimization at school (e.g., “A classmate insulted me”). Cronbach’s alpha coefficients for these subscales were .84 and .82, respectively.

Adolescent’s communication with parents was measured using the 20-item Parent-Adolescent Communication Scale (PACS; Barnes & Olson, 1982). Adolescents described communication with their parents on a five-point scale (1 = never, 5 = always). The original scale showed a two-factor structure referring to degree of openness and extent of problems in family communication (coefficients alpha .87 and .78; test-retest reliabilities .78 and .77, respectively). However, we could not replicate this factor structure in our data. Principal component analysis with varimax rotation yielded a three-factor structure for father and mother separately. The first factor explained 30.66% of variance and grouped 10 items referring to open communication with parents (e.g., “my mother/father is always a good listener”). The second factor explained 21.85% of variance and grouped 6 items referring to offensive communication with parents (e.g., “my mother/father insults me when she/he is angry with me”). Finally, the third factor explained 9.52% of variance and grouped 4 items referring to avoidant communication with parents (e.g., “I am sometimes afraid to ask my mother/father for what I want”). Cronbach’s reliability coefficients for these subscales were .87, .76, and .75, respectively.

Teacher’s perception of students. Teachers were asked to estimate levels of adolescents’ social integration at school, relationship with teacher, and degree of personal adjustment, on a ten-point scale (1 = very bad, 10 = very good). Cronbach’s alpha reliability for these three items in the current study was .76.

RESULTS

Preliminary correlational analyses among all study variables were carried out (see Table 1). Variables concerning communication with parents and teacher’s perception were significantly associated with violent behavior at school, victimization, and psychological distress. Therefore, these variables were included in the subsequent regression analysis.

We used EQS 6.0 (Bender, 1995) structural equation program to examine the influence of violent behavior and victimization at school on adolescent psychological distress, through their effects on interactions with both parents and teachers. Santorra-Bentler corrected statistics were used to account for the non-normality of the data.
Table 1
Correlations Among Observed Variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
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<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
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<tbody>
<tr>
<td>1. Mother–open communication</td>
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<td>2. Mother–offensive communication</td>
<td>-.53***</td>
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<td>3. Mother–avoidant communication</td>
<td>-.45***</td>
<td>-.30***</td>
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<td>4. Father–open communication</td>
<td>.56***</td>
<td>-.32***</td>
<td>-.30***</td>
<td>–</td>
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<tr>
<td>5. Father–offensive communication</td>
<td>-.32***</td>
<td>.65***</td>
<td>.19***</td>
<td>-.44***</td>
<td>–</td>
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<tr>
<td>6. Father–avoidant communication</td>
<td>-.27***</td>
<td>.20***</td>
<td>.68***</td>
<td>-.32***</td>
<td>.25***</td>
<td>–</td>
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<tr>
<td>7. Teacher–relationship with the teacher</td>
<td>.06</td>
<td>-.11**</td>
<td>-.06</td>
<td>.05</td>
<td>-.10**</td>
<td>-.05</td>
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<tr>
<td>8. Teacher–social integration at school</td>
<td>.08</td>
<td>-.15***</td>
<td>-.02</td>
<td>.09</td>
<td>-.15***</td>
<td>-.04</td>
<td>.56***</td>
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<tr>
<td>9. Teacher–personal adjustment</td>
<td>.14**</td>
<td>-.20***</td>
<td>-.05</td>
<td>.12</td>
<td>-.17***</td>
<td>-.02</td>
<td>.57***</td>
<td>.63***</td>
<td>–</td>
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<tr>
<td>10. Violent behavior at school</td>
<td>-.23***</td>
<td>.23***</td>
<td>.14***</td>
<td>-.18***</td>
<td>.20***</td>
<td>.12***</td>
<td>-.20**</td>
<td>-.13***</td>
<td>-.27***</td>
<td>–</td>
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<tr>
<td>11. Victimization at school</td>
<td>-.12**</td>
<td>.12***</td>
<td>.09**</td>
<td>-.15***</td>
<td>.14***</td>
<td>.07**</td>
<td>-.04</td>
<td>-.06</td>
<td>-.06</td>
<td>.39***</td>
<td>–</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Perceived stress</td>
<td>-.41***</td>
<td>.42***</td>
<td>.33***</td>
<td>-.38***</td>
<td>.35***</td>
<td>.28***</td>
<td>-.08**</td>
<td>-.14***</td>
<td>-.19***</td>
<td>.22***</td>
<td>.22***</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>13. Depressive symptomatology</td>
<td>-.36***</td>
<td>.41***</td>
<td>.28***</td>
<td>-.37***</td>
<td>.36***</td>
<td>.21***</td>
<td>-.10**</td>
<td>-.15***</td>
<td>-.21***</td>
<td>.23***</td>
<td>.24***</td>
<td>.77***</td>
<td>–</td>
</tr>
</tbody>
</table>

Note. Variables are standardized.
*p < .05, **p < .01, ***p < .001
(normalized estimate = 33.7939). The model showed a reasonably good fit: S-BX²(47, N = 983) = 106.55, CFI = .986, IFI = .986, NFI = .977, and RMSEA = .036 (90% confidence interval .027-.045). For the CFI, IFI, and NNFI, values above .95 or higher are acceptable; for the RMSEA, values above .05 or less are acceptable. This model explained 47.7% of variance in psychological distress.

Table 2 reports all factor loadings of the observed variables on their latent variables. Open communication, offensive communication, and avoidant communication were used as indicators of the latent variables: Communication with Father and Communication with Mother. Social integration at school, relationship with teacher, and the adolescent’s personal adjustment, were used as indicators of the latent variable; Teacher’s Perception. Depressive symptoms and perceived stress were used as indicators of the latent variable: Psychological Distress. Finally, because Violent Behavior at School and Peer Victimization consisted of only one indicator, their factor loadings were 1 with an error 0.

Figure 1 presents the structural model with the standardized path coefficients and their confidence intervals. We found violent behavior to be positively associated with peer victimization (r = .39, p < .001). Correlated errors were also found between communication with father and mother (r = .65, p < .001), communication with father and teacher’s perception of students (r = .14, p < .001), and communication with mother and teacher’s perception (r = .14, p < .001).

In the prediction of adolescents’ psychological distress, results indicated violent behavior and victimization at school followed different patterns. Peer victimization showed a direct contribution to psychological distress (β = .13, p < .001), reporting victimized adolescents as having higher levels of distress than those not victimized. Also, we found an indirect influence of peer victimization on distress through its negative effect on adolescents’ communication with father (indirect effect .05, p < .001). Victimization, however, did not show any influence on either communication with mother or teacher’s s perception.

Regarding violent behavior at school, no direct effect on psychological distress was found. In this case, only an indirect path was found: violent behavior showed a negative influence on adolescents’ communication with father (β = -.23, p < .001) and mother (β = -.27, p < .001), as well as on teacher’s perception (β = -.29, p < .001) which, in turn, were negatively associated with psychological distress (β = -.33, p < .001; β = -.36, p < .001; β = -.09, p < .01, respectively). These results indicated that the effect of violent behavior on distress was mainly explained through its negative influence on interactions.
Table 2
Unstandardized Parameter Estimates, Standard Errors, and Significance Levels

<table>
<thead>
<tr>
<th>Variables</th>
<th>Factor Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication with Mother</td>
<td></td>
</tr>
<tr>
<td>Open communication</td>
<td>1.123***</td>
</tr>
<tr>
<td>Avoidant communication</td>
<td>-0.722***</td>
</tr>
<tr>
<td>Offensive communication</td>
<td>-1.00</td>
</tr>
<tr>
<td>Communication with Father</td>
<td></td>
</tr>
<tr>
<td>Open communication</td>
<td>1.115***</td>
</tr>
<tr>
<td>Avoidant communication</td>
<td>0.634***</td>
</tr>
<tr>
<td>Offensive communication</td>
<td>-1.00</td>
</tr>
<tr>
<td>Teacher's Perception</td>
<td></td>
</tr>
<tr>
<td>Personal adjustment</td>
<td>1.087***</td>
</tr>
<tr>
<td>Social integration at school</td>
<td>0.932***</td>
</tr>
<tr>
<td>Relationship with the teacher</td>
<td>1.00</td>
</tr>
<tr>
<td>Violent Behavior at School</td>
<td>1.00</td>
</tr>
<tr>
<td>Peer Victimization</td>
<td>1.00</td>
</tr>
<tr>
<td>Psychological Distress</td>
<td></td>
</tr>
<tr>
<td>Depressive symptomatology</td>
<td>0.957***</td>
</tr>
<tr>
<td>Perceived stress</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Note. Robust statistics. Standard errors are in parentheses.

*Fixed to 1.00 during estimation.

***p < .001 (two-tailed test)
Figure 1
Influence of Violent Behavior and Victimization on Adolescent Psychological Distress: Final Structural Model

Note. Continuous lines represent significant paths among latent variables. Robust standard errors were used to determine the significance of the standardized paths (**p < .01, ***p < .001). Dashed lines represent nonsignificant paths, and curved lines correlations among latent variables. Manifest indicators are omitted.
with both parents and—though lower in strength—with teachers (indirect effect .20, \( p < .001 \)).

Finally, to test the measurement and structural invariance of the general model across gender and age groups we conducted multigroup analyses. Two models were tested for each multigroup comparison. In the first between-group model (unrestricted model) all parameter estimates (factor loadings and structural paths) were freely estimated across groups. In the second (restricted model), each of the factor loadings and structural paths were constrained to be invariant across groups. If the chi-square for the restricted model was significantly larger than the chi-square for the unrestricted model, the assumption of invariance would not be tenable. Results indicated a non-significant difference between these models for age groups: \( \Delta \chi^2(25, N = 983) = 35.44, ns \). In the case of gender, a significant difference was found: \( \Delta \chi^2(25, N = 983) = 41.489, p < .001 \). Closer inspection of cross-group constraints revealed that 5 out of 25 constraints would significantly decrease \( \chi^2 \) if released. After releasing these constraints, the unconstrained and the constrained models for gender groups were statistically equivalent—\( \Delta \chi^2(25, N = 983) = 31.22, ns \). Results supported, therefore, invariance of the general model across gender and age groups.

**DISCUSSION**

The present study aimed to investigate the influence of violent behavior and victimization at school on psychological distress (perceived stress and depressive symptoms) among adolescents, examining the role that parents and teachers play in the link between these variables. As expected, violent behavior and victimization showed differential paths in their influence on adolescents’ psychological adjustment.

Consistent with recent studies (Guterman et al., 2002; Kumpulainen et al., 2001; Hawker & Boulton, 2000), we found peer victimization to be directly and positively associated with levels of psychological distress, showing that victimized students have higher levels of depressive symptomatology and perceived stress in comparison with those not victimized. Surprisingly, the results also showed victimization to be associated with negative father-adolescent communication, which seemed to mediate a part of the influence of victimization on distress. In other words, our findings suggest that being a victimized student and having conflictive communication with father are two factors interrelated in the explanation of some psychological problems in

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adolescence. This finding is in line with those recently reported by Flouri and Buchanan (2002), who concluded that adolescents who had experienced victimization problems at school and whose fathers were less involved with them, appeared to be more at risk for poor mental health.

Regarding school-based violence, as hypothesized, violent behavior showed a negative influence on relationships with parents and teachers, which in turn affected levels of psychological distress. These findings are consistent with those reporting that the quality of both communication with parents and interactions with teachers are related to adolescents' behavioral and psychological adjustment (Liu, 2003; Meehan et al., 2003; Reddy et al., 2003; Stevens et al., 2002). But in addition, our results contribute to the understanding of relationships between these variables, since they suggest that adolescents who participate in violent behavior at school, do not necessarily experience higher levels of distress than those with no behavioral problems, unless violent behavior worsens adolescent's interaction with parents and teachers.

Though more investigation is needed to better clarify the role of father, mother, and teacher on adolescent psychosocial adjustment, results of the present study point out that relationships with parents and teachers are potential mediators between behavioral problems at school and psychological distress. Consequently, future interventions focused on adolescent psychological adjustment should take into account, not only the direct influence of violent behavior/victimization, but how these problems in adolescence are affecting social interactions at home and at school.

Finally, the following limitations are acknowledged. First, in using a cross-sectional design, caution about drawing causal inferences from the results should be maintained. Further clarification of the relationships requires a longitudinal study. Second, in addition to self-report measures from adolescents, inclusion of parental perceptions of family communication and adolescents' behavioral problems would shed greater light on the relationship between these variables. Finally, we did not examine the mediating mechanisms between violence-victimization at school and adolescents' interaction with parents and teachers (e.g., attitude toward informal and formal authority) or between adolescents' interaction with parents and teachers and psychological distress (e.g., self-esteem, social support). Future research should include some of these variables in order to determine their contribution to psychosocial adjustment problems in adolescence.
REFERENCES


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