

Parental style and child bullying and victimization experiences at school

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Abstract The aim of this study was to propose and test a theory-driven model describing the network of effects existing between parental style and child involvement in bullying incidents at school. The participants were 377 Greek Cypriot children (mean age 11.6) and their mothers. It was found that a line of influence exists between maternal responsiveness, over-protection and child victimization experiences at school. Also, responsiveness predicted low scores of child bullying behaviour. Permissive mothers (who by definition are high in responsiveness) had children with the highest mean score in victimization experience compared with mothers who function under the other three parental styles.

Keywords Parental style · Bullying and victimization at school

Bullying is defined as a physical, verbal or psychological attack or intimidation that is intended to cause fear, distress or harm to the victim (Olweus 1993). Rigby (2002) calls it systematic abuse of power imbalance, while Farrington (1993) defines it as a repeated oppression of a less powerful person by a more powerful one. Victimization at school refers to the exposure of a student to systematic bullying (including social exclusion) by one or more other students, with the intention to hurt. This painful experience is suffered by students who are perceived as vulnerable, submissive or different (Naylor et al. 2001; Tanaka 2001) by peers who are in a dominant role, either by virtue of their own strength or by virtue of being well connected with a powerful majority (Kaltiala-Heino et al. 2000).

There are studies that link bullying and victimization experiences at school with personality and neuro-psychological disorders (Coolidge et al. 2004; Kokkinos and Panayiotou 2004). Other studies emphasize personal factors such as the child's

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temperament (Olweus 1980). However, most researchers would agree that social or contextual factors are at least equally relevant. Connolly and O'Moore (2003), for example, have identified factors such as the father's absence (physical or psychological), the presence of a depressive mother and incidents of domestic violence as factors enhancing bullying behaviour in children. Parental style and other family practices are also named as possible correlates of such child behaviour (Baldry and Farrington 2000; Perren and Hornung 2005). Without underestimating the importance of intra-individual variables, this paper focuses on inter-individual ones.

A number of studies within the social influence framework have shown that children learn to be aggressive towards less powerful others, by watching the daily interactions of their family members (Patterson 1982, 1986). Children who bully others at school usually have parents who teach them how to retaliate and to hit back when attacked (Demaray and Malecki 2003). Parenting techniques such as harsh and inconsistent punishment often lead to child aggression both in and out of the family (Loeber and Stouthamer-Loeber 1986). Parental practices characterized by absence of a warm relationship with the child, coldness, indifference or even hostility and rejection, as well as lack of effective monitoring are especially harmful. As Olweus (1980) points out, "a young boy who gets too little love and interest from his mother and too much freedom and lack of clear limits with regard to aggressive behavior is particularly likely to develop into an aggressive adolescent" (p. 657). Also, children who experience victimization problems are more likely than non-victimized peers to come from families with histories of child abuse, poor attachment and poorly managed conflict (Perry et al. 1992). Parental affect, that is how depressed, anxious or angry a parent feels, in combination with parental childrearing beliefs predispose parents to report more externalizing or internalizing behaviours that their children may exhibit. As Mulvaney et al. (2007) have found, angry parents tend to report more externalizing behavior problems, while anxious and depressed parents tend to report more internalizing behaviors.

Parental style (Baumrind 1991) describes parental behavior as perceived by the child and has two dimensions: demandingness (i.e. controlling behavior, setting limits and expectations for the child) and responsiveness (i.e. responding to child's needs, being supportive and maintaining warm communication). High scores in both dimensions characterize the authoritative style and low scores in both characterize the neglectful style. The other two combinations (high responsiveness–low demandingness and high demandingness–low responsiveness) characterize the permissive and authoritarian styles respectively. A number of studies have examined the relationship between parenting style and the child's academic achievement and psychosocial adjustment. These studies have consistently shown that children of authoritative parents do better at school and have less adjustment problems (Radziszewska et al. 1996; Stavrinides 2005; Spera 2005; Strage and Swanson 1999). They also have greater psychosocial competence and lower levels of psychological and behavioral dysfunction (Lamborn et al. 1991).

However, there seems to be some confusion in the relevant literature regarding the relationship between specific parental styles and child bullying and victimization at school. For example, some studies show that permissive parental style best predicts the experience of victimization by the child while the authoritarian parental style best predicts bullying behavior (Baldry and Farrington 2000; Kaufmann et al. 2000). Also,

children who have authoritarian parents tend to develop maladaptive perfectionist self-representation (Soenens et al. 2005), depression, depersonalisation and delinquency (Heaven et al. 2004; Wolfradt et al. 2003). Further, permissive parents tend to have children with difficulties in curtailing their impulsive aggression (Miller et al. 2002).

Other studies (Bowers et al. 1994) have reported that victimized children tend to perceive their parents as overprotective. Children who bully their peers are more likely to come from families where parents use authoritarian, harsh and punitive child-rearing practices (Espelage et al. 2000). Rigby (1993) found that children who perceived their parents as holding positive attitudes toward them were less likely to be involved in bullying. Bullies describe their family as less cohesive, more conflictual, and less organized. On the contrary, children who perceived their parents as authoritative (i.e. setting limits but respecting their children's independence and being responsive to their needs) were less likely to engage in bullying behavior (Rican et al. 1993). Interestingly, Finnegan et al. (1998) argue that there is a gender issue. Specifically, they have found that victimization is associated with maternal overprotection for boys and rejection for girls.

Bullying peers at school is associated with parental rejection, weak parental supervision and inadequate involvement with the child (Cernkovich and Giordano 1987). As Hagan and McCarthy (1997) comment, parents who pay attention to their children, supervise them closely and expect them to succeed are instrumental in reducing aggressive behavior both within the family and outside. In other words, responding to the child's needs, having a warm, accepting relationship, being available to discuss the child's problems and helping with difficulties is negatively related to bullying behavior. This description fits the operational definition of "responsiveness", one of the two dimensions of parental style. Olweus (1980) used the opposite construct, which he called "mother negativism", in his model and found that it had a positive relation with bullying behavior.

These inconsistent findings may be a result of failure to discriminate between seemingly similar but actually different concepts such as responsiveness and overprotection or monitoring and controlling. Many researchers name maternal behavior and particularly overprotection as a correlate of victimization (Besag 1989; Perren and Hornung 2005). In the same line, Stevens et al. (2002) reported that in their study victims perceived their family as controlling and their parents as overprotective. However, Flouri and Buchanan (2003) maintain that parental involvement that is not perceived by the child as overprotection is negatively related with bullying behavior. Overprotection may be perceived as an extreme type of responsiveness. There is evidence in the literature that parental involvement that is perceived by the child as overprotection may block the child's initiative and limit her ability to defend herself or deal effectively with victimization attacks by other children (Besag 1989; Perren and Hornung 2005; Stevens et al. 2002). However, the temporal relationship between over-protective mothering and victimization needs some clarification because the reverse direction of influence may also be true. That is, mothers may become more fearful of letting their child play with others, worry more about their child's safety, and worry more about their child in general as a result of noticing that their child is being targeted for victimization.

Several models have been proposed over the years describing the family parameters of bullying and victimization. [Olweus \(1980\)](#) included the following factors in his theoretical model: the child's temperament and mother's negativism (i.e. inadequate responsiveness), permissiveness for aggression and use of physical punishment. [Craig et al. \(1998\)](#) developed and tested a model describing the effects of structural and functional family characteristics on bullying and victimization experiences. They reported that parenting and family management practises interact with individual behavioral attributes and contribute indirectly to bullying and victimization. Similarly, [Snyder et al. \(2005\)](#) tested a model of the early development of child conduct problems that incorporates the reciprocal effects of child behavior on parenting practice and of parenting on child behavior. They concluded "that discipline encounters are really co-constructed by the parent and the child rather than imposed on the child in a "top-down" fashion by the parent" (p. 39).

1 The present study

The aim of this study was to examine the relationship that may exist between parental style and child bullying related experiences at school. Following the paradigm of earlier research ([Finnegan et al. 1998](#); [Loeber and Tengs 1986](#); [Olweus 1980](#)) this study examined specifically the maternal style and not the paternal, because of the central role that mothers have in shaping the child's behavior. The study had three specific goals:

1. To test the ability of a theory driven model to describe the influence of parental style on child bullying and victimization experiences at school.
2. To help clarify some of the confusion that exists in the relevant literature about the role of maternal responsiveness, overprotection and anxiety in relation to child victimization at school.
3. To examine the possible differences in bullying and victimization experiences of children who come from families exercising different parental styles.

To this end, the following research hypotheses were stated:

1. Maternal responsiveness influences child victimization at school indirectly, through perceived overprotection. That is, overprotection functions as a mediator between responsiveness and victimization, in that high scores of responsiveness lead to overprotection, which in turn lead to victimization, as earlier research has found ([Bowers et al. 1994](#); [Finnegan et al. 1998](#); [Perren and Hornung 2005](#)). The justification of this hypothesis is that overprotected children develop an inability to defend themselves against bullying attacks, while exhibiting behaviour that invites such attacks.
2. Maternal responsiveness influences negatively bullying behavior at school. This is based on earlier findings that children who are accepted and respected by their parents learn to respect their peers ([Rigby 1993](#); [Hagan and McCarthy 1997](#)).
3. Maternal demandingness influences negatively the exhibition of both bullying and victimization tendencies at school. As earlier studies have found, monitoring and supervision of children's behaviour, which are included in the demandingness

dimension of parental style, are negative correlates of bullying and victimization experiences at school (Cernkovich and Giordano 1987; Olweus 1980).

4. Authoritative parents have children with higher school achievement and lower bullying and victimization experiences than children of parents who use other parental styles. The first part of this hypothesis is based on earlier research (Spera 2005; Strage and Swanson 1999). The second part is based on the fact that, as hypotheses 2 and 3 state, parental responsiveness and demandingness are negatively related to bullying and victimization tendencies at school.

2 Method

2.1 Participants

The participants of the present study were 377 Greek Cypriot children attending the 6th grade of elementary school (mean age 11.6) and their mothers. About half of the students (183) were female. Ten schools (four urban and six rural) were randomly selected from the list of public elementary schools of an educational District in Cyprus. All the 6th grade students attending the selected schools were included in the sample. In terms of family socio-economic background, the sample is representative of the population of Greek Cypriot 12-year-old children. This claim is based on the fact that about 15% of the participants came from low SES families (that is, neither parent had a high school diploma and the family income was below average). About 25% of the participants came from high SES families (that is, at least the main income provider had a university degree and a professional job, while the family income was above average). Finally, the rest of the sample (about 60%) came from average SES families. This categorization approximates national demographics.

2.2 Instruments

Four scales were used in collecting the data for this study; two were completed by the students and two by their mothers. The first one was the Revised *Bullying and Victimization Questionnaire—BVQ* (Olweus 1996). It is a 28-item self-report measure that covers the seven areas of victimization. That is, having been called bad names, having belongings taken without permission, having lies told about them, having nasty tricks played on them, having being threatened or blackmailed, having been hit or beaten up and having been systematically excluded from groups. Four items for each area were included in the scale; two were phrased for victimization and two for bullying. The instrument was translated from English to Greek and then back to English by two independent groups of translators. Minor adjustments were made to the translation to correct the few identified discrepancies.

The participating children were asked to state whether they suffered each of the above experiences and whether they committed the same acts on other children during the past two months (i.e. from the beginning of the current school year, since the data were collected in early November). The answers were given on a five-point, Likert-type scale (4 = absolutely true, 3 = somewhat true, 2 = ambivalent, 1 = slightly true,

0=not true at all). This scale was preferred over other instruments that measure victimization and bullying experiences at school, such as the one developed by Kokkinos and Panayiotou (2004) following Neary and Joseph's (1994) self-disclosure approach, because, as Woodsa and Wolke (2004) point out, it is more widely used and can produce clear factors. Furthermore, its format is more versatile than the forced-choice format used by other scales. The BVQ was validated on Greek Cypriot students by Kyriakides et al. (2006) who examined its psychometric properties and concluded that their study "has provided support for the validity and reliability of the [scale] using Rasch modelling" (p. 797).

Information about each participant's degree of involvement in peer violence at school was not limited only to the students' self-report. Their mothers completed a modified version of the BVQ, thus documenting their own perception of their children's peer violence related experience. The scale's items remained the same, but they were phrased in a way that reflected the mother's point of view (e.g. "my child complains that ...", "other children complain that my child ...").

The second scale was the Miller et al. (2002) questionnaire measuring parenting style (PSQ). It is a 26-item self-report based on Baumrind's (1991) theory. It gives scores in two dimensions, parental responsiveness and demandingness as perceived by the child. As it was stated earlier, only the maternal style was assessed. The four parental styles (authoritarian, authoritative, permissive and neglectful) come out as combinations of low and high scores in the above two dimensions. Examples of items included in the scale are: "I can depend on my mother when I have a problem"; "My mother helps me face difficulties"; "My mother allows time to talk to me"; "I feel that my mother understands me" and "My mother wants to know where I am at all times"; "My mother is strict with me"; "My mother sets boundaries around what I can and cannot do"; "My mother wants to know who my friends are".

The third scale—the *Parental Involvement Scale (PIS)*—was the same as the one used in earlier studies (Georgiou 1997, 1999) and includes a total of 30 items. Only two of the sub-scales were used for the present study: one measuring parental over-protection (a behavioral indicator) and one measuring anxiety (an affective indicator). Some examples of items included in the first sub-scale are the following: "I am reluctant to let my child play with other children because I am afraid (s)he may be hurt"; "Every morning I check if my child has everything (s)he needs for school". Some examples of items included in the second sub-scale are the following: "I worry when my child is not with me"; "I worry that something bad may happen to my child". The mothers who participated in the study were asked to mark their response on a 5-point Likert type scale that included the following alternatives: 4=always, 3=often, 2=ambivalent, 1=only sometimes, 0=never.

2.3 Procedure

Following the sampling procedure described earlier, the participating children in the selected schools were asked to complete the two scales (BVQ and PSQ) in class. They were ensured that their anonymity could not be violated and they were asked to answer all the questions honestly and truthfully according to their own subjective experience.

The administration order of the two scales was reversed for half of the sample. The completed questionnaires were collected at the end of the allowed 45-min class period.

The student participants were also instructed to take the other two scales (PIS and the parent version of BVQ) home and ask their mother to complete them. A letter explaining the purpose of the study accompanied the scales. Parents were ensured that their anonymity would not be violated. Parents who had more than one child were instructed to think of their child that had brought the questionnaire home when answering it. The completed questionnaires were returned the following day in a provided sealed envelope for purposes of confidentiality. A code was placed on the envelopes enabling the researcher to match the answers of each dyad. The Principal of each school had undertaken to send back the completed questionnaires to the researcher by post. The rate of return was 74.3%, which is considered to be acceptable. No mismatching occurred between mother and child data. Only protocols containing the answers of both the child and his/her mother were used in the analysis. It should be noted that the researchers cooperated with the schools to offer help to children identified as being victimized. The description of this intervention is beyond the scope of this paper.

2.4 The tested model

The proposed theoretical model includes six first-order factors that are defined by the observed variables of the four instruments used (i.e. responsiveness, demandingness, bullying and victimization experiences, maternal over-protection and anxiety). The indicators and the reliability indexes of the above factors (Cronbach alpha) appear in Table 1.

The lines of influence between the factors of the parent effect model (see Fig. 1) were based on earlier research (Baldry and Farrington 2000; Bowers et al. 1994; Kaufmann et al. 2000; Perren and Hornung 2005) and were consistent with the stated research hypotheses. Thus, it was hypothesized that maternal responsiveness can lead to over-protection and this in turn leads to victimization. Also, a direct line of influence was hypothesized to exist between responsiveness and victimization, as well as between responsiveness and bullying. Similarly, the network of effects existing between maternal demandingness and anxiety on the one hand and child bullying and victimization experiences on the other, were tested. As prior studies have shown (Connolly and O'Moore 2003; Heaven et al. 2004; Wolfradt et al. 2003) there seems to be a connection between these factors. The present model hypothesises that demandingness is driven by anxiety, which also protects the child from exhibiting bullying behavior towards other children at school (Rican et al. 1993).

3 Results

The hypothesised interrelations between the two dimensions of parenting style (responsiveness and demandingness), maternal over-protection and anxiety, as well as bullying and victimization experiences at school appear on Fig. 1. The ability of the structure to fit the data was tested by means of the EQS software (Bentler 2004) and the modelling procedure followed the currently accepted practice. Three fit indices were computed:

Table 1 Indicators for each factor included in the model

Factors (Cronbach alpha in parenthesis)	Items that make up the factor (loading in parentheses)
Bullying (.86)	BUL1: Other children report me that I am bothering them, which is true (.73) BUL2: I use bad language with other children at school (.80) BUL3: I get angry easily and explode on others (.67) BUL4: I make fun of kids I don't like (.87)
Victimization (.89)	VIC1: One or more classmates tease me (.82) VIC2: One or more classmates try to hurt me (.86) VIC3: One or more classmates say bad things about me or my family (.79) VIC4: One or more classmates take or break my things without my permission (.71)
Responsiveness (.74)	RES1: My mother helps me face difficulties (.91) RES2: My mother allows time to talk to me (.84) RES3: I feel that my mother understands me (.82) RES4: I can depend on my mother when I have a problem (.79)
Demandingness (.72)	DEM1: My mother wants to know where I am at all times (.76) DEM2: My mother is strict with me (.77) DEM3: My mother sets boundaries around what I can and cannot do (.69) DEM4: My mother wants to know who my friends are (.71)
Overprotection (.77)	OVP1: I am reluctant to let my child play with other children because I am afraid (s)he may be hurt (.74) OVP2: Every morning I check if my child has everything (s)he needs for school (.70) OVP3: I call many time when my child is not home (on a camp, vacations etc) (.77) OVP4: Other people think that I am overprotecting my child (.89)
Anxiety (.90)	ANX1: I worry when my child is not with me (.75) ANX2: I worry that something bad may happen to my child (.77) ANX3: I am anxious about my child's future (.62) ANX4: I am concerned that my child might get into trouble (.76)

The comparative fit index (CFI), the root mean-square error of approximation (RMSEA) and the chi-square to its degree of freedom ratio (χ^2/df). In order to support model fit, the following need to hold true: The values for CFI should be close to 1.0 (certainly higher than .9), the RMSEA values should be close to zero and the observed value for χ^2/df should be less than 2.0 (Marcoulides and Schumacker 1996). The fit indices of the tested model (CFI=.98, RMSEA=.04, χ^2/df = 1.97) were excellent. An alternative model that did not include either maternal over-protectiveness or anxiousness (that is, responsiveness loaded directly on victimization and demandingness on bullying) was tested and was rejected because its fit indices were unacceptable (CFI=.77, RMSEA=.45, $p > .05$).

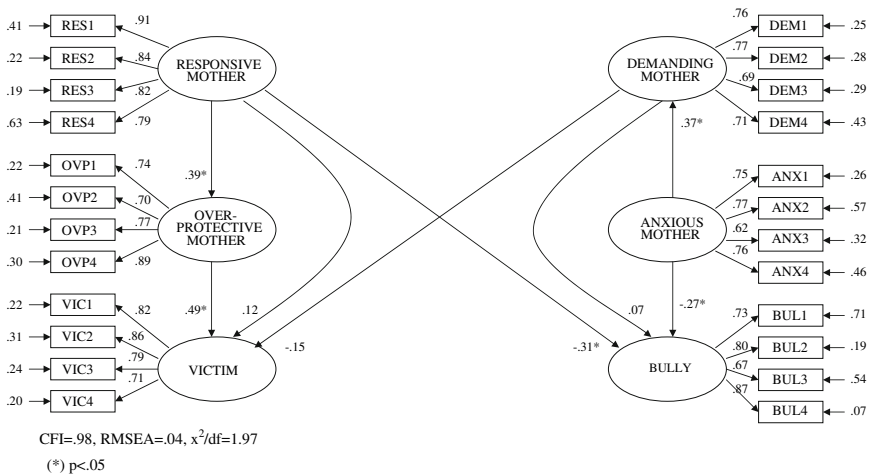


Fig. 1 The tested model showing the relationships between parental style and child involvement in peer violence at school

As can be seen on Fig. 1, having a responsive mother could predict negatively (i.e. predict low scores of) the child's bullying behaviour at school, since the Factor Coefficient had a negative value ($CF = -.31$, $p < .05$). It could also predict maternal over-protective tendencies ($FC = .39$, $p < .05$) which in turn could influence the degree of the child's victimization experiences at school ($FC = .49$, $p < .05$). In contrast, having a demanding mother could not predict the bullying activity of the child ($FC = .07$), while it could predict negatively the occurrence of victimization experiences at school, even though with less confidence ($FC = -.15$). Finally, having an anxious mother was found to be associated negatively with bullying behaviour at school ($FC = -.27$, $p < .05$). As expected, maternal anxiety could predict demandingness (i.e. controlling and setting limits to child behaviour) ($FC = .37$, $p < .05$).

The tendency of children in specific parental style groups to get involved in bullying and victimization incidents with peers was examined through inferential statistics. The differences between the four parental styles were not included in the tested model because these groups are mutually exclusive. That is, not all participants had a score in each parental style, whereas they did have a score in each of the style dimensions. In line with the underlying theory (Maccoby and Martin 1983), four groups of parental styles were created as follows: authoritative parents were operationally defined as those scoring at or above one standard deviation from the mean of the distribution of scores in both the responsiveness and the demandingness dimensions ($n = 71$). Similarly, neglectful was operationally defined as those parents who scored below one standard deviation from the mean for both dimensions ($n = 46$). Permissive parents ($n = 73$) were those who scored below one standard deviation from the mean of the distribution of scores in demandingness and at or above one standard deviation from the mean of the distribution of scores in responsiveness. Finally, authoritarian parents ($n = 69$) were those who scored below one standard deviation from the mean of the distribution of scores in responsiveness and at or above one standard deviation from

Table 2 Multiple comparisons (LSD post hoc test) showing mean scores of bullying, victimization and school achievement by parental style

	Neglectful (a)	Permissive (b)	Authoritarian (c)	Authoritative (d)
Bullying	1.9	1.4	1.7	1.6
Victimization	1.4	2.3 _{ac}	1.6	2.0
School achievement	2.6	3.2	3.1	4.3 _{abc}

Note: Mean scores with subscripts indicate significant difference ($p < .05$) between the particular score and that of the group that the subscript indicates

the mean of the distribution of scores in demandingness. The differences in bullying and victimization experiences of the children of these four groups of parents were tested via MANOVA. In addition to parental style categories, the child's gender was used as an independent variable, since there is evidence in the literature that it might be a controlling variable (for example [Finnegan et al. 1998](#)).

Significant main effects were found only for victimization experiences ($F(3, 258) = 3.34$, $p < .05$), but not for bullying. The effect size (η^2) of this difference was .09. No significant interaction effects (parental style by child gender) were found either. Through multiple comparisons (LSD test) it was found that the permissive parents had children with the highest mean score in victimization experiences ($X = 2.3$). Authoritarian, neglectful and authoritative parents had children whose victimization experiences were not significantly different. Even though school achievement was not one of the concerns of this study, the four parental styles were compared in terms of this factor because the related literature (for example, [Spera 2005](#); [Strage and Swanson 1999](#)) makes strong references to it. As expected, it was found that the authoritative parents had children with the highest school achievement average scores ($X = 4.3$). The results of this analysis appear in Table 2.

Research hypothesis 1 was supported by the results, since the path between maternal responsiveness, over-protection and child victimization experiences at school was significant ($p < .05$), while the direct path between responsiveness and victimization (without the mediation of overprotection) was not. Further, permissive mothers (who by definition are high in responsiveness) had children with the highest mean score in victimization experience compared with mothers who function under the other three parental styles. Similarly, research hypothesis 2 was supported by the results, since responsiveness could predict low scores of bullying behavior at school. Research hypothesis 3 was only partially supported by the results. Maternal demandingness has a marginal negative relation to child victimization experience and no relation to bullying behavior. It is driven by anxiety, which may mean that the mother reacts to knowledge or suspicions she has about her child being victimized at school. Finally, research hypothesis 4 was again partially supported by the results. Authoritative parents had children with significantly higher school achievement than the other three groups of parents ($p < .05$). However, their children did not have significantly lower bullying and victimization experiences at school. Permissive parents (the other group with high responsiveness in addition to authoritative) had children with the highest average score of victimization experiences.

4 Discussion

Figure 1 makes clear the association that exists between parental responsiveness and child victimization. What it shows is that, having a highly responsive mother places the child at risk for victimization at school because such a mother could be perceived as over-protective. Prior research that points out the positive outcomes of responsive parenting (Cernkovich and Giordano 1987; Craig et al. 1998; Hagan and McCarthy 1997; Olweus 1980) is supported by the findings of the present study that relate responsiveness to low scores in bullying. In other words, this study adds to previously reported results that having a responsive mother protects the child from being aggressive to others. A possible explanation may be that parental responsiveness teaches the child in a social learning manner to be friendly to less powerful individuals. However, responsiveness can cross a fine line and become extreme in its expression. As earlier studies have shown, overprotective mothering is associated with higher risk for child victimization at school (Bowers et al. 1994; Perren and Hornung 2005; Stevens et al. 2002). It is possible that highly anxious and extremely protective mothers turn their children into passive and submissive individuals who are unable to control their own affairs. Thus, the child's behaviour may invite victimization attacks by being overly weak, teasing and appear to be an easy target for bullies.

The results of this study show that the two parental styles that are high in responsiveness are related to child victimization, especially the permissive. Maternal overprotection functions as a mediator between responsiveness and child victimization. Being demanding seems to be a positive characteristic for a parent, since it predicts low levels of child victimization. However, the fact that this factor is driven by anxiety may be an indication that demanding parents act on the basis of information they have about their child. In other words, demandingness may be a reaction rather than an action on the part of the parents. The finding that authoritative parents have children who do well in school is in line with earlier research (Radziszewska et al. 1996; Stavrinides 2005; Spera 2005; Strage and Swanson 1999). However, the finding that the same parents may be placing their children at risk for victimization at school because of possible misinterpretation of their responsiveness is an addition to the relevant literature.

The tested model shows that parental practices influence child bullying and victimization experiences at school. However, the question still exists of whether, for example, it is the maternal overprotection that turns the child into a potential victim of bullying at school or whether the child's fragility and worries over possible victimization make the mother overly protective. In other words, whether in addition to a parent-effects model there should be a child-effects one. A key point here is the amount of information parents have about their children's involvement in peer violence incidents at school. Parents cannot be expected to adjust their parenting style in the light of victimization about which they are unaware. Research suggests that only a minority of children report being bullied to their parents (e.g. Borg 1998; Hunter et al. 2004) and only a minority of parents even believe their children when such reports are offered (Glover et al. 2000). Also, whether children report being bullied or not is influenced by parenting style (Unnever and Cornell 2004). Interestingly, in the present study a statistically significant correlation was found between student self report about peer violence involvement and the mother's perception of the same variable ($r = .75$,

$p < .01$). This may mean that in the culture where the participants of the present study live mothers do know what happens to their children at school, either because children offer this information or because mothers have other means of finding out. More cross-cultural studies are needed in order to see if this is a culture specific finding.

Participating mothers were asked to state whether their child “complains that he or she is being victimized” and not whether or not he or she is actually victimized. This was done because mothers can only say what they have been told by their children. They have no knowledge of what actually happens at school. On the other hand, this may be a limitation of the study because complaining about victimization attacks and actually being victimized are two different concepts.

The question of reciprocal influence between parental style and child bullying and victimization experiences at school (Snyder et al. 2005) remains open. More longitudinal studies are needed to clarify this interrelation. What can be said on the basis of the present study’s results is that parental styles, even though they may be, at least partially shaped by the child’s actual behavior, do have an effect on that same behavior, by facilitating or blocking the child’s involvement in peer violence, either as a bully or as a victim.

In summary, the results of this study show that highly responsive parents, especially those who are characterized as permissive, run the risk of turning their children into potential victims of bullying and other aggressive acts at school through a process that turns them (i.e. the parents) into overly protective. The study presented here has several limitations, the most important of which are the following:

1. Correlation does not imply causation. Even though a structural equations modeling procedure allows the researcher to determine the direction of the existing influence between two factors, no cause and effect relationships were established between parental style and child bullying and victimization experience.
2. The results may be culture specific. That is, certain relations between factors (for example responsiveness and over-protection, anxiety and control) may apply only to individuals who belong to a culture similar to the one that the participants of this study do.

Nonetheless, the present study adds to the literature on the relationship between parental styles and child bullying and victimization experiences at school by proposing a theoretical model that encompasses these parameters, and by empirically testing the robustness of this model. The assessment of fit of the hypothesized a priori model to the data was based on confirmatory factor analysis, which is part of a more general class of approaches called structural equation modelling. Confirmatory factor analysis is used to test measurement models in which observed variables define latent constructs (McDonald 1985). Overall, the result of the present analysis is that the tested model had an excellent fit. This indicates that the factor loadings reflect the relations between the particular indicators and the corresponding latent constructs, and that the hypothesized data-based model can adequately explain the structure of the network of effects existing between parental style and child bullying and victimization experience at school.

The above model could be useful to practitioners such as school psychologists, teachers and social workers who could improve the effectiveness of peer violence

interventions by including parents in their project design. Parents need to be educated and informed about bullying and victimization incidents. They need to know the signs of these problems and to learn ways of communicating with their children about related difficulties that they may be experiencing at school (Craig et al. 1998; Patterson 1980). They also need to be trained how to terminate aggressive episodes between children at home (Loeber and Tengs 1986; Patterson et al. 1992). Permissive parents (in this case mothers) could participate in training programs focusing especially on parenting techniques that would allow them to exercise some control over their children's behavior. Also, both they and authoritative parents could be cautioned against over-protection. In addition to being recipients of training, parents could also be partners in the whole effort of eliminating bullying and victimization at school since the phenomenon has its roots at home.

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