

Parental discipline practices and locus of control: relationship to bullying and victimization experiences of elementary school students

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(Received 14 July 2006; Accepted in final form 31 January 2007)

Abstract. This study examined the association between parenting locus of control, discipline practices, and bullying and victimization experiences of elementary school children. A total of 186 children and 160 parents responded to structured questionnaires, assessing parenting locus of control and discipline practices among the parents, and bullying and victimization experiences among the children. Results indicated that parental discipline practices were correlated with specific dimensions of parenting locus of control. Although parental characteristics did not seem to predict children's behavior, the reverse was partially supported, in that involvement in bullying explained a small amount of variance in parenting practices. More importantly, parenting locus of control dimensions were significantly predictive of discipline practices, such that the more external the locus of control, the less effective the discipline practices (i.e. punishment and inconsistency) used by parents. It appears that parenting locus of control needs to be taken into consideration when attempting to understand parenting behavior.

Key words: parenting locus of control; discipline practices; bullying; victimization; students

1. Introduction

Bullying and victimization are common problems faced by children and adolescents in schools throughout the world (Andreou, 2000; Karatzias, Power, & Swanson, 2002; Olweus, 1994; Tanaka, 2001). The search for the possible predictors of such behaviors has provided the impetus for substantial research. Family characteristics, in particular the discipline practices of the parents whose children are involved in bullying, have attracted the attention of many researchers (Espelage, Bosworth, & Simon, 2000; Kokkinos & Logginidou, 2005; Rican, Klicperova, & Koucka, 1993; Rigby, 1993).

The literature describes bullying as involving physical abuse, verbal ridicule or shunning of students who are perceived as vulnerable, submissive

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or different (Naylor, Cowie, & del Rey, 2001; Olweus, 1993; Tanaka, 2001) by peers who are in a dominant role, either by virtue of their strength or by virtue of being in the majority (Kaltiala-Heino, Rimpelä, Rantanen, & Rimpelä, 2000). Bullying and victimization appear to be associated with poor peer relationships, school stress (Karatzias et al., 2002), and school avoidance (Kochenderfer & Ladd, 1997). In particular, victimization is associated with social maladjustment and loneliness (Crick & Grotpeter, 1995) and in extreme cases, may be even conducive to an increased risk for future depression and anxiety (Bond, Carlin, Thomas, Rubin, & Patton, 2001).

Given the severity of the possible outcomes of bullying in the socio-emotional development of children, the need to identify as many as possible correlates and predictors of these behaviors becomes urgent. In trying to achieve a better understanding of the profiles of children involved in bullying, research has uncovered that there are three distinct categories of children who may present different psychosocial characteristics: the bullies only, victims only and bully/victims, who both bully others and are themselves victims of bullying (Austin and Joseph, 1996; Bowers, Smith, & Binney, 1994; Wolke, Woods, Bloomfield, & Karstadt, 2000). Victims tend to be insecure, quiet, submissive and introverted while bullies are aggressive and dominant with little empathy (Olweus, 1994). Whereas victims have low self-esteem, bullies have been shown to have high self-esteem in some studies (Natvig, Albrektsen, & Qvarnstrom, 2001; Olweus, 1994). Bully/victims, also referred to in some studies as aggressive victims, have recently attracted the interest of researchers (e.g. Schwartz, Proctor, & Chien, 2001). This group may exhibit greater psychopathology and have poorer family relations (Mynard & Joseph, 1997), in comparison to others involved in bully-victim problems.

In search of identifying possible aetiological factors implicated in bully-victim behavior, demographic characteristics of the families of the children involved have been examined. While children from a wide array of socioeconomic backgrounds may be involved in peer conflict (Parcel & Menaghan, 1993), research mostly from the European context indicates that those from a low socio-economic background continue to show the problem at a later age than their higher socio-economic background peers (Andreou, 2000; Baldry & Farrington, 2000; Kumpulainen, Räsänen, & Henttonen, 1999). It has been suggested that male bullies are low school achievers (Nansel et al., 2001; Wentzel, 1993), although the relative evidence is mixed (Toblin, Schwartz, Gorman, & Abou-Ezzedine, 2005). Victims also tend to be low school achievers (Bernstein & Watson, 1997), and as Schwartz (2000) has reported, bully/victims score poorly on teacher ratings of global academic competence.

Among the most prominent correlates of bully-victim problems appear to be the discipline practices used by parents. This seems to be a

promising area of investigation since specific styles of child rearing appear to be predictive of specific behaviors in the bullying/victimization spectrum. Towards this direction, the present study sought to examine the association between parenting practices and bullying. Research so far has demonstrated that parents of children with antisocial behaviors tend to be uninvolved in child rearing and apply their discipline practices inconsistently (Patterson, DeBaryshe, & Ramsey, 1989). Parents who use harsh discipline and are overly controlling and authoritarian may have conduct-disordered children (O'Leary, Slep, & Reid, 1999). In a review of relevant longitudinal studies, Haapasalo and Pokela (1999) found that punitiveness in parenting practices is the most frequently identified precursor of later antisocial behavior.

Inconsistency in parenting practices has also been associated with the emergence of externalizing behavior. For example, in the Cambridge Study in Delinquent Development Farrington and Hawkins (1991) found that apart from physical neglect and parental cruelty, inconsistent discipline toward the child was characteristic of boys who become delinquent. Parental nagging and empty threats of punishment were also found to perpetuate undesirable behavior among children (Patterson, Reid, & Dishion, 1992). Feelings of helplessness, anxiety and depression, typical among victims, may also be predicted by parental inconsistency and lack of warmth (Cerezo & D'Ocon, 1995; Rey, 1995). To the contrary, positive affect between parent and child and high parental responsiveness are characteristics of children that show high compliance and less opposition (Kochanska & Aksan, 1995). At the same time, a long tradition of research has shown that parents who use discipline practices that include limit setting and behavioral control are better able to regulate antisocial tendencies and externalizing problems among their children (Barber, Olsen, & Shagle, 1994; Dumas, LaFreniere, & Serketich, 1995).

Another set of studies examined parenting among children who are specifically involved in bully/victim problems. Bullies are more likely to come from families in which parents use authoritarian, harsh and punitive child-rearing practices (Espelage et al., 2000), than do the parents of victims, bully/victims, and uninvolved children. 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 and controlled. In contrast, children who perceived their parents as authoritative, especially supporting their independence and autonomy, were less likely to engage in bullying behavior (Rican et al., 1993). In a recent study, Kokkinos and Logginidou (2005) found that involvement in bullying was significantly negatively associated with perceived emotional warmth, whereas it was positively correlated with rejection. Olweus (1992) reported the mothers of victimized boys to have been overprotective and infantilizing, whereas the fathers had been

uninvolved. In a similar vein, Bowers, Smith, and Binney (1994) found victimized children to perceive their parents as overprotective, and to display a less accurate monitoring style. In the Kokkinos and Logginidou (2005) study, involvement in victimization, was significantly negatively correlated with emotional warmth and positively with overprotection and rejection.

Bully/victims, compared to uninvolved children, report more conflict, control, punishment, and inconsistency with less monitoring, closeness and warmth with their parents (Schwartz, Dodge, Pettit, & Bates, 1997; Smith, Bowers, Binney, & Cowie, 1993). They differ from bullies on perceptions of control, reporting more discipline and rules. They also show similar family profiles to victims, from whom they only differ in levels of conflict (Stevens, De Bourdeaudhuij, & Van Oost, 2002). Schwartz (1993) as reported in Finnegan, Hodges, and Perry (1998), found that bully/victims report more anger and more aggression within their families that may reach the levels of maltreatment and abuse.

A number of theoretical models have been developed to explain the mechanism that associates parenting practices with aggressive behavior in children. It is under debate whether it is parental discipline that shapes children's antisocial behavior or the other way round. Based on social learning theory, children who are disciplined through violence may learn that there are no other options for solving problems than the use of aggression (Huesmann & Eron, 1992; McCord, 1988). Dodge, Bates, and Pettit (1990) suggest that in addition to imitation of parental aggressive behavior, children may learn to behave aggressively through a bias in processing social information: Children who have been abused or who have otherwise received aggression from their parents may wrongly attribute hostile intentions in others and fail to attend to positive social cues. Patterson's coercion theory (Patterson, 1982; Patterson et al., 1992) claims that coercion training takes place in the families of aggressive boys through a process of escape-conditioning: Children are reinforced for aggressive behavior when it leads to the termination of a parental demand. In turn, a parent is reinforced for not enforcing the demand by the termination of the conflict with the child. Eventually, the child learns to use aggression in other contexts to escape demands and obtain benefits.

An alternative hypothesis may be that children's behavior can shape parental discipline practices (Bugenthal, Blue, & Cruzcosa, 1989; Lovejoy, Verda, & Hays, 1997; Morton, 1997). Dealing with a difficult or aggressive child may evoke feelings of helplessness in parents who may either relinquish efforts to control their children's behavior, or may become overly controlling and authoritarian. The construct of locus of control may be implicated in this process since it may be through perceptions of control and efficacy that parents select and apply specific child rearing approaches. Locus of control refers to an individual's attributions regarding

the causes of events, including one's successes and failures (Rotter, 1966, 1982). Individuals can have either internal locus of control, i.e. attribute events to the self or external locus of control, i.e. attribute events to external causes, including chance or fate. Beyond this general attribution tendency, individuals can also have internal or external locus of control with regards to specific aspects of their lives, such as the raising of their children. Hence, parents with an internal locus of control attribute their children's behavior to their own efforts, are characterized by a sense of responsibility, and become models of responsible action to their children (Hagekull, Bohlin, & Hammarberg, 2001). To the contrary, parents with an external locus of control attribute their children's behavior to chance or fate and may even feel controlled by their offspring. They tend to use more authoritarian discipline approaches (Bugenthal, Blue, & Cruz-cosa, 1989) and have children with behavior problems (Campis, Lyman, & Prentice-Dunn, 1986; Janssens, 1994), whereas internal parental locus of control beliefs can predict the use of limit setting practices (Kokkinos & Panayiotou, 2004a).

The present study sought to investigate the association between parenting and bullying and victimization experiences of their elementary school children. Specifically, it tests two alternative hypotheses; first that parent discipline practices predict children's involvement in bullying and victimization and second that, to the contrary, children's behavior helps shape parental discipline practices through parental locus of control. Although some research has supported the significant role of parenting locus of control in the emergence of internalizing and externalizing problems of children (Hagekull et al., 2001; Mouton & Tuma, 1988; Rothbaum & Weisz, 1994), there is a dearth of studies addressing the link between parenting locus of control and the discipline practices of the parents whose children are involved in bullying and victimization.

2. Method

2.1. SAMPLE

Respondents were elementary school children and their parents. The sample included 186 schoolchildren, aged between 9 and 13 years ($M = 10.63$, $SD = .71$) of whom 87 were boys and 93 were girls (6 did not report their sex). The parent sample included 160 individuals (50 fathers, 110 mothers) ranging in age from 28 to 53 years ($M = 38.35$, $SD = 5.5$). Parental education levels were as follows: 12.5% had an elementary school education, 25% had graduated junior high school, 49.4% had graduated high school, 10% had some college education and 3.1% had a university degree. The families examined had a mean of 3 children (range 1–6).

Children were attending four elementary schools in Cyprus (2 semi-rural, 1 urban, 1 rural). They were asked to complete a self-report questionnaire, which was group administered during a class period by the classroom teacher. Students were assured that their answers would remain completely confidential. Parent questionnaires were sent home with the children who participated in the study and were returned in sealed envelopes to the school the next day. It was made clear that parental participation was voluntary. The return rate for parental questionnaires was 86%.

2.2. MEASURING INSTRUMENTS—CHILDREN

Self-report measures were employed to assess children's experience with bully-victim problems at school. The devised scales took into account both incidents of direct bullying (open verbal or physical attacks, overt rejection) and indirect bullying (intentional exclusion from peer group or social neglect; Olweus, 1994).

2.2.1. *Bullying and Victimization*

For purposes of an earlier study with adolescents (Kokkinos & Panayiotou, 2004b) a scale was developed to measure bullying and victimization, following the Neary and Joseph (1994) self-disclosure approach. The instrument consisted of two scales: the Bullying Behavior Scale (BBS) and the Peer-Victimization Scale (PVS). Neary and Joseph's original number of items (6 for each scale) was doubled, to include additional bullying behaviors, (e.g. teasing about appearance, academic standing, family decent, financial status and gender), which emerged from informal discussions with school counsellors.

Both scales used a forced-choice format following the procedure utilized by the Self Perception Profile for Children (SPPC; Harter, 1985). Scale scores were calculated accordingly (i.e. the sum of the 12 items divided by 12). Half of the items in each scale were positively worded and half of them negatively (reverse scoring was used where appropriate). A sample bullying item is "Some children often tease other children because of their appearance, but other children do not tease other children because of their appearance." A sample victimization item is "Some children are often called horrible names, but other children are not called horrible names." After selecting which description was most self-descriptive, children then indicated whether the statement they chose was "Sort of true for me" or "Really true for me." Every effort was made to replicate the procedures used by Neary and Joseph (1994), and Austin and Joseph (1996). No bullying definition was provided to the respondents because the items make explicit reference to specific behaviors and not to the concept of bullying as such. In this sample, and based on the same classification method as analytically described in Kokkinos and

Panayiotou (2004b), the percentages of children who reported behaviors that classified them as bullies, victims, bully/victims and uninvolved were as follows: 6.5% bullies, 8.6% victims, 19.8% bully/victims and 65.1% uninvolved.

2.2.2. *Self-esteem*

Self-esteem was measured using the Greek version of the five-item Global Self-Worth Scale (GSWS) of the SPPC (Makri-Botsari, 2001), a widely used measure of self-perception for children.

2.2.3. *Parent Education*

Family education (as reported by the children) was selected as a measure of family SES, because of its ability to reflect essential class differences as it has been demonstrated in research on children's cognitive ability and social/emotional adjustment (McDermott, 1995). Therefore, a family education score was computed, based on the educational attainment of each parent, self-reported by students on a 6-point scale (1 = some elementary school, 2 = graduated elementary school, 3 = graduated junior high school, 4 = graduated high school, 5 = tertiary education, not including university, 6 = university). This was later converted to a 3-point rating, where 1 = less than 12 total years education, 2 = 12 total years education and 3 = more than 12 total years education. Family education was computed by rating families from 1 to 3 where 1 = at least one parent had less than 12 total years of education, 2 = both parents had 12 total years of education, and 3 = at least one parent had more than 12 total years of education.

2.2.4. *Academic Achievement*

Students' academic achievement was a composite variable score, based on mean self-reported grades on language and mathematics rated on a 10-point scale according to the criteria used by the Cyprus Ministry of Education and Culture (Pavlou, 1999). Academic achievement was collapsed into three categories (low achievers = both Ds, both Es or an E and a D, middle achievers = both Cs, a B and a C or a C and a D, and high achievers = both As, both Bs or an A and a B).

2.3. MEASURING INSTRUMENTS—PARENTS

2.3.1. *Discipline Practices*

This is a 19-item scale assessing the approaches used by parents to manage their children's behavior. It is based on a measure created by Demetriou, Kapardis, Panayiotou, and Kazi (2000) and has also been used in our prior research (Kokkinos & Panayiotou, 2004a). Questions are rated on a 7 point rating scale with anchors as follows: 1 = does not describe me at all, and 7 = describes me to a great extent. They include items such as "There are

positive consequences for your child when he/she follows the rules” and “You often regret the way you handled your child’s behavior.”

2.3.2. *Parenting Locus of Control*

Assessment of parenting locus of control has traditionally been carried out using global locus of control measures in most relevant studies, de-emphasizing aspects of parenting locus of control that address specifically the parent–child relationship. Campis et al. (1986) addressed this gap in the literature by constructing the Parenting Locus of Control Scale (PLOC), an instrument with five dimensions, designed to assess parental perceptions with regards to the degree to which their successes and failures in child rearing can be attributed to internal versus external causes. The scale shows good predictive and construct validity (Campis et al., 1986). The scale has been used widely in clinical studies as it has been shown, for instance, to predict undesirable behavior among children of clinic referred families (Hagekull et al., 2001; Roberts, Joe & Rowe-Halbert, 1992). The questionnaire is designed to measure the degree of control in a parenting situation that the parent attributes to internal or external factors.

The PLOC is a 47 item questionnaire that is responded to on a 5-point Likert type scale ranging from 1 = strongly disagree to 5 = strongly agree. It is divided into five subscales: (1) parental efficacy (10 items; high scores indicate a low sense of parental efficacy), (2) parental responsibility (10 items; high scores indicate that parents do not feel responsible for children’s behavior), (3) child’s control of parent’s life (7 items; high scores indicate that parents believe their child controls their life), (4) parental belief in fate/chance (10 items; high scores indicate that parents believe that the child’s behavior is a result of fate or chance) and (5) parental control of child’s behavior (10 items; high scores indicate parents who do not feel as if they are in control of their child’s behavior). Hence, high scores on each scale indicate an external locus of control and low scores indicate an internal locus of control.

2.4. PROCEDURE

Children began by completing a Student Characteristics sheet that included the questions regarding their achievement and parent education and other demographic information. Participants were then provided with an explanation of how to complete the questionnaires and given practice items to illustrate the forced choice format. They were told that this was not a test, that there were no right or wrong answers and that all their answers were anonymous. Teachers remained available to answer questions throughout the administration. The parents’ questionnaire included instructions that it should be completed by only one parent and be returned to the school in a sealed envelope.

Table I. Descriptive statistics for children and parents' measures

	<i>M</i>	<i>SD</i>
Bullying Behavior Scale	3.21	.61
Peer Victimization Scale	3.19	.57
Self-esteem	1.88	.66
<i>PLOC scales</i>		
Parental efficacy	2.07	.63
Parental responsibility	2.24	.76
Child control of parent's life	2.15	.55
Parental belief in fate/chance	2.78	.88
Parental control of child's behavior	2.38	.72
<i>Parental discipline</i>		
Setting clear rules	6.06	1.09
Punishing	2.78	1.60
Inconsistent practices	3.60	1.43

3. Results

3.1. SCALE PSYCHOMETRIC PROPERTIES

Internal reliability for the bullying and victimization measures and self-esteem was estimated using Cronbach's alpha and was found to be satisfactory for all scales: BBS $\alpha = .86$, PVS $\alpha = .80$ and GSWS $\alpha = .72$. The bullying and victimization scale alphas replicated our previous findings and provided validation evidence for use of this scale with elementary school students. Means and standard deviations for each of these scales are shown in Table I.

3.2. GENDER DIFFERENCES IN BULLYING/VICTIMIZATION AND SELF-ESTEEM

Analyses of Variance (ANOVAs) were computed using gender as the between subjects' variable and self-esteem, bullying and victimization as the dependent variables to examine possible gender and age differences. No significant gender differences were found on the BBS (boys, $M = 3.19$ and girls, $M = 3.26$), or on the PVS ($M = 3.19$ and $M = 3.19$). These results replicate the findings of Mynard and Joseph (1997) and Austin and Joseph (1996). However, there were significant gender differences on the GSWS with girls reporting higher self-esteem than boys, $F(1, 168) = 8.97$, $p < .003$, (boys, $M = 1.73$ and girls, $M = 2.02$, respectively).

3.3. CORRELATIONS BETWEEN BBS, PVS, SELF-ESTEEM, AND ACADEMIC ACHIEVEMENT

Pearson correlations were computed between the GSWS, BBS, PVS and academic achievement. Bullying was highly positively correlated with victimization, $r = .76$, $p < .001$. Both bullying and victimization were negatively and significantly correlated with self-esteem, $r = -.31$ and $-.37$, respectively, showing that both types of experience were related to low self-esteem. Bullying was positively related to academic achievement in language, $r = .17$, $p < .05$. There was no significant correlation between bullying and victimization experiences and mathematics achievement.

3.4. PARENTING LOCUS OF CONTROL

The subscales of the PLOC showed adequate internal consistency with the exception of one: for parenting efficacy $\alpha = .65$, parental responsibility, $\alpha = .76$, child's control of parents' life, $\alpha = .29$, parental belief in fate chance, $\alpha = .81$, and parental control of child's behavior, $\alpha = .74$. The overall α was $.78$, which is comparable to that obtained in other studies (Campis et al., 1986; Kokkinos & Panayiotou, 2004a). Because of the low internal reliability of the child's control of parent's life scale, this was not used in further analyses. Mean and standard deviations for each subscale are presented in Table I.

3.5. DISCIPLINE PRACTICES

The questionnaire assessing discipline practices used by parents to control their children's behavior consisted of 19 items. These were factor analysed using principal components analysis with varimax rotation. They resulted in 6 factors explaining 67.46% of the variance. However, only the first three factors were deemed meaningful and were used in further analyses. The first factor consisted of four items that reflected discipline approaches that involved setting and enforcing rules, and was named "rule setting." The second consisted of 4 items that reflected the use of punishment for controlling behavior and was named "punishing", and the third factor, with 4 items, reflected discipline methods that involved uncertainty as to how one should react and inconsistency on the part of the parent, and was named "inconsistent practices". Seven items were distributed across three additional factors, which were excluded from further consideration because they contained dissimilar items that did not seem to describe face valid aspects of discipline practices. Cronbach's alphas for the three factors were $.85$, $.77$, and $.70$, respectively.

3.6. CORRELATIONS BETWEEN THE PLOC, DISCIPLINE PRACTICES, BULLYING AND VICTIMIZATION

Bivariate correlations were computed to examine the associations between dimensions of parenting locus of control, discipline practices and bullying and victimization (Table II). Rule setting was negatively and significantly associated with parental efficacy, parental responsibility and parental control of child's behavior. The negative direction of the association indicates that rule setting is positively related to an internal locus of control in these dimensions. To the contrary, punishing was positively and significantly related to parental efficacy and control of child's behavior. The positive sign in these cases refers to a positive association between punishing and an external locus of control on these dimensions. Inconsistent practices were also significantly and positively related to parental efficacy, belief in fate/chance and parental control of child's behavior, indicating again an association with an external locus of control.

In terms of the associations between parental characteristics and child behavior, inconsistent practices were negatively correlated with bullying, namely the more inconsistency the less bullying. Victimization on the other hand was associated with increased parental efficacy, a finding that appears rather paradoxical.

3.7. PREDICTING CHILD BEHAVIOR FROM PARENTAL CHARACTERISTICS

Multiple regression analyses were employed to predict children's bullying and victimization from parental discipline practices. The model was not significant.

3.8. PREDICTING PARENTING PRACTICES FROM PARENTAL LOCUS OF CONTROL AND CHILDREN'S BEHAVIOR

In order to examine the predictive utility of children's bully/victim involvement, parental beliefs and their interaction with children's behavior on parental practices, a series of hierarchical multiple regressions were run with each parenting practice as the criterion variable in the separate analyses. Bullying and victimization total scores as well as their product term based on centered values were entered at step one, parental locus of control dimensions at step two, and finally, at step three, the interaction terms based on centered values between bullying and victimization and parental locus of control dimensions as the predictors. With regards to parental locus of control the higher the value the more external the locus of control for each dimension. The summary of the analysis for each parenting practice is presented in Table III.

Table II. Correlations between bullying, victimization, dimensions of parenting locus of control and discipline practices

	Bullying	Victimization	Rule setting	Inconsistency	Punishment	Efficacy	Responsibility	Fate/chance
Victimization	.76**							
Rule setting	-.06	.06						
Inconsistency	-.19*	-.12	-.01					
Punishment	-.01	-.01	.01	.51**				
Efficacy	-.12	-.17*	-.24**	.33**	.16*			
Responsibility	-.05	-.11	-.24**	-.13	-.11	.06		
Fate/chance	-.07	-.10	.03	.22**	.14	.40**	-.15	
Parental control	-.15	-.13	-.20*	.45**	.26**	.44**	-.02	.28**

Note: ** $p < .01$ * $p < .05$.

Table III. Hierarchical multiple regression for bully/victim involvement, locus of control dimensions and their interaction predicting parenting practices

	Rules			Inconsistent practices			Punishing		
	B	SE	Beta	B	SE	Beta	B	SE	Beta
Step 1									
Bullying	-.35	.23	-.21	-.73	.32	-.30*	-.07	.34	-.03
Victimization	.48	.26	.25	.09	.36	.03	-.15	.37	-.06
Bullying × victimization	.37	.23	.14	-.81	.31	-.22*	-.50	.33	-.13
		(R ² = .04)			(R ² = .08**)			(R ² = .02)	
Step 2									
Bullying	-.34	.22	-.20	-.57	.29	-.24*	.05	.33	.02
Victimization	.35	.25	.18	.14	.32	.05	-.16	.37	-.06
Bullying × victimization	.36	.22	.13	-.72	.28	-.19*	-.46	.32	-.12
Parental efficacy	-.37	.20	-.21*	.42	.21	.17*	.08	.23	.03
Parental responsibility	-.28	.11	-.20*	-.22	.14	-.11	-.20	.16	-.10
Parental belief in fate/chance	.17	.10	.15	.03	.13	.02	.07	.15	.04
Parental control of child's behavior	-.23	.13	-.16	.71	.16	.35***	.48	.19	.23*
		(R ² = .21**)			(R ² = .34***)			(R ² = .16*)	
Step 3									
Bullying	-.37	.24	-.22	-.45	.31	-.19	.12	.35	.05
Victimization	.38	.26	.20	.02	.33	.01	-.23	.38	-.08
Bullying × victimization	.30	.23	.11	-.70	.30	-.19*	-.42	.34	-.11
Parental efficacy	-.40	.17	-.23*	.38	.22	.16	.03	.24	.01
Parental responsibility	-.31	.12	-.22*	-.28	.15	-.14	-.27	.17	-.14
Parental belief in fate/chance	.19	.10	.16	.03	.13	.02	.12	.15	.07
Parental control of child's behavior	-.23	.129	-.16	.74	.17	.36***	.49	.19	.24*

Table III. Continued

	Rules			Inconsistent practices			Punishing		
	B	SE	Beta	B	SE	Beta	B	SE	Beta
Bullying × parental efficacy	.18	.48	.06	-.19	.59	-.05	-.52	.67	-.13
Bullying × parental responsibility	.38	.32	.18	-.21	.41	-.07	.50	.46	.16
Bullying × parental belief in fate/chance	-.25	.36	-.13	-.29	.46	-.11	.17	.53	.06
Bullying × Parental control of child's behavior	-.21	.43	-.08	-.01	.56	-.00	.23	.63	.06
Victimization × parental efficacy	-.73	.44	-.22	.52	.58	.11	.11	.65	.02
Victimization × parental responsibility	-.29	.50	-.12	.68	.65	.19	.06	.73	.02
Victimization × parental belief in fate/chance	.42	.36	.19	.13	.47	.04	.13	.53	.04
Victimization × parental control of child's behavior	.07	.40	.03	-.37	.52	-.10	-.76	.59	-.21

Note. *** $p < .001$ ** $p < .01$ * $p < .05$.

With regards to rules setting, bully/victim involvement variables were entered in the model first and they accounted for 4% of the total variance, but none was statistically significant. In the second step, parental locus of control was added in the model (though only parental efficacy and parental responsibility were significant, $\beta = -.21$, $p < .05$; $\beta = -.20$, $p < .05$), significantly increasing the variability of rules ($\Delta R^2 = .13$, $p < .001$). Finally, in the last step of the model, the interaction terms between bully/victim involvement and locus of control dimensions were added, increasing variance in rules setting ($\Delta R^2 = .04$, $p < .01$), though none of the interactions were statistically significant. The full model accounted for 21% of the total variance for rule setting.

With regards to inconsistent practices, bully/victim involvement variables were entered in the model first and they accounted for 8% of the total variance (though bullying involvement and its interaction term with victimization were significant, $\beta = -.30$, $p < .05$; $\beta = -.22$, $p < .05$). In the second step, parental locus of control was added in the model (though only parental efficacy and parental control of child's behavior were significant, $\beta = .17$, $p < .05$; $\beta = .35$, $p < .001$), significantly increasing the variability of inconsistent practices ($\Delta R^2 = .22$, $p < .001$). Finally, in the last step of the model, the interaction terms between bully/victim involvement and locus of control dimensions were added, increasing variance in inconsistent practices ($\Delta R^2 = .04$, $p < .001$), though none of the interactions were statistically significant. The full model accounted for 34% of the total variance for inconsistent practices.

Finally, with regards to punishing, bully/victim involvement variables, entered in the model first, accounted for 2% of the total variance, but none was statistically significant. In the second step, parental locus of control was added in the model (though only parental control of child's behavior was significant, $\beta = .23$, $p < .05$), significantly increasing the variability of punishing ($\Delta R^2 = .08$, $p < .05$). Finally, in the last step, the interaction terms between bully/victim involvement and locus of control dimensions were added, increasing variance in punishing ($\Delta R^2 = .06$, $p < .05$), though none of the interactions were statistically significant. The full model accounted for 16% of the total variance for inconsistent practices.

4. Discussion

The present study examined the association between parental discipline practices and bullying and victimization experiences in elementary school students, and investigated the possible interaction between parenting locus of control and child behavior in predicting parenting practices.

Firstly, results pointed to a fairly high association between bullying and victimization experiences as reported by children, indicating that a number of them engage in both types of roles (almost 20% were bully/victims

in the present sample), at least in the way they were measured with our instrument. Though the proportion of bully/victims in the present sample is somewhat higher than what was found in some studies (e.g. Pellegrini, Bartini, & Brooks, 1999; Toblin et al., 2005), other work supports that the numbers may actually be substantial (Boulton & Underwood, 1992). Wolke et al. (2000) posit that this group, often considered as victims in previous research, is sizeable, as large as, or larger than the group of pure bullies. The children in the present study who scored high on both bullying and victimization may also correspond to the aggressive victim group described in research by Schwartz et al. (2001) and Pellegrini (1998). These children may become victims of bullying but they may also use reactive aggression when provoked.

To the degree that the obtained high correlation indicates a somewhat larger group (compared to other studies) being involved in both bullying and victimization, the size of the group may be attributed to methodological differences. The fact that the bully/victim behavior was self-reported, that there were no filter items, and that the scale had a forced-choice format, may have increased the likelihood of reporting some involvement in bullying or victimization. It may also be that children, who endorsed both behaviors, have misunderstood the concept of bullying, reporting even the innocuous experiences of playful teasing or rough physical play where one both attacks and is attacked in a harmless context. The reliability of the present findings is supported by the fact that previous research using the same methodology with the same population, has resulted in similar correlations (Kokkinos & Panayiotou, 2004b).

Regression analyses attempting to test the first hypothesis, that parental discipline practices predict children's involvement in bullying and victimization was not sustained. These results did not concur with prior evidence (e.g. Chilcoat, Breslau, & Anthoni, 1996) that parental discipline practices, such as harsh discipline, are predictive of children's antisocial behaviors. However, prior research dealt mostly with conduct-disordered children (O'Leary et al., 1999) with severe antisocial behaviors (Patterson et al., 1989) that may be more extreme compared to the behaviors of children in our sample. Accordingly, the parents in our study may have been less extreme in their discipline. At the same time the dimension of parental uninvolvedness that emerged as a significant predictor in other studies (Patterson et al., 1989) was not investigated in the present study. We should also note that discipline practices were self-reported by parents, possibly restricting the range of socially undesirable practices reported.

The second hypothesis, that children's behavior helps shape parental discipline practices through parental locus of control was partially supported. Specifically, hierarchical regressions indicated that bullying and the bullying/victimization interaction explained a small but statistically significant amount of variance in inconsistent practices to the direction of showing that

more bullying and bullying and victimization involvement predicted more *consistent* practices. This finding is also supported by the obtained correlations suggesting that the parents of children who endorsed aggression as either bullies or bully/victims are somehow consistent in their parenting. One tentative explanation of the paradoxical association between consistent parenting and aggression may be that the parents may have been aware of their children's misbehavior at school and provided socially appropriate responses so as not to blame themselves for their children's problems. Another possibility rests within the way parents of aggressive children may perceive their own parenting, in that they may have overestimated the degree of their consistency. Additional observational data would be the best way to unravel how they discipline their children in practice.

A more substantial amount of variance in parenting was explained by parental locus of control, pointing to the significance of examining this construct in relation to parenting and children's aggression. There were significant main effects of certain locus of control dimensions on parenting practices, such that the more external the parental locus of control the fewer the rules, and the more inconsistent the practices they used. Specifically, parents who did not feel efficacious and did not feel responsible for their children's behavior tended to use fewer rules. Simultaneously, less efficacious parents and those who felt that they had little control of their children's behavior were more inconsistent in their practices. Increased use of punishing was also predicted by feeling out of control over a child's behavior. These results are in agreement with previous findings indicating that parents with an external locus of control tend to use more authoritarian discipline approaches (Bugenthal, Blue, & Cruzcosa, 1989), whereas having an internal parental locus of control can predict the use of effective limit setting practices (Kokkinos & Panayiotou, 2004a).

Our initial prediction that children's behavior helps shape parental discipline practices through parental locus of control was not supported since none of the interaction terms were statistically significant. We hypothesized that dealing with an aggressive child may evoke feelings of helplessness negatively affecting parental efforts to discipline their children. However, the effects of locus of control on parental discipline emerged as direct in the present study and did not interact with children's behavior.

One of the strengths of the study rests within its methodology, regarding the use of self-reported parental behavior rather than indirect assessment of parents through their children. It also points to the significance of parenting locus of control in understanding discipline practices. A limitation of the study has to do with the obtained high correlation between bullying and victimization which is however consistent with some prior research (e.g. Kokkinos & Panayiotou, 2004b). An examination of the ways children interpret the behaviors described in bullying questionnaires may prove useful in explaining this finding.

In sum, although this study did not replicate findings that parenting predicts involvement in bullying, it pointed to the usefulness of the construct of parenting locus of control when attempting to understand parenting discipline practices. Thus, in the context of studying the mechanisms behind bullying, the present study provided evidence on how the construct of locus of control may be implicated in the bidirectional association between children's and parents' behavior, which as others have found may ultimately lead to the exacerbation of bullying problems.

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