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Predicting Bullying and Victimization Among Early Adolescents: Associations With Disruptive Behavior Disorders

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Bullying is a common problem faced by children and adolescents in schools. One hypothesis that needs to be examined regarding the causation of this problem is whether being a bully or a victim may stem from disparate underlying patterns of psychopathology. Results are particularly scarce regarding the association between bully-victim problems and disruptive behavior disorders. The present study sought to investigate the association between DSM-IV symptoms of Oppositional Defiant Disorder (ODD), Conduct Disorder (CD), and bully-victim problems in a sample of 202 adolescents, aged 12–15, attending two junior high schools in Cyprus, to determine whether these symptoms differentiate between bullies and victims and provide a new approach to the understanding of bully-victim problems. Students completed measures of bullying, victimization, disruptive behavior disorder symptoms, and self-esteem, along with demographic questions. On the basis of their responses, teenagers were classified as bullies, victims, or both bullies and victims. Those who were bully/victims reported greater CD symptomatology. CD and low self-esteem were predictive of bullying, whereas ODD and low self-esteem were predictive of victimization. Aggr. Behav. 30:520–533, 2004. © 2004 Wiley-Liss, Inc.

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Bullying is a common problem faced by children and adolescents in schools throughout the world [Andreou, 2000; Olweus, 1994; Tanaka, 2001]. Unfortunately, it has only recently begun to receive research attention following, in part, the work of Olweus in Norway starting in the late 1970s [Olweus, 1978]. Bullying may involve physical abuse, verbal ridicule, or shunning of students who are perceived as vulnerable, submissive, or different [Naylor et al., 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 et al., 2000]. It tends to be

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intentional and repeated and can be carried out either by an individual or a group [Karatzias et al., 2002].

Bullying and victimization are serious problems in schools due to their high rates of occurrence and their potentially devastating consequences. Estimates of prevalence rates range from 3–10% [Kaltiala-Heino et al., 2000] to as high as 27% for elementary school children [Whitney and Smith, 1993], and to 51% among teenagers [Bond et al., 2001]. Both bullying and victimization appear to be associated with poor peer relationships and school stress [Karatzias et al., 2002], whereas victimization in particular may be associated with suicide [Tanaka, 2001], school avoidance [Kochenderfer and Ladd, 1997], future depression and anxiety [Bond et al., 2001]. Bullying, on the other hand, may predict future anti-social behavior and aggression [Olweus, 1991].

One approach to examining the roots of this problem has been to study the personalities and socio-demographic characteristics of children who bully and become victimized, in order to identify pathological and other distinctive features that will help recognize the problem before it escalates. For instance, according to some research findings, more boys than girls are involved in bullying [Baldry and Farrington, 2000; see also Andreou, 2000]. Also, Kumpulailen et al. [1999] found that although children from different socio-economic situations are at equal risk of being involved in bullying at some point, disadvantaged children are more likely to remain involved in bullying in the long term.

Other results from this socio-demographic approach are also of interest: Boys tend to be involved in more direct and physical bullying, while girls tend to engage in more indirect bullying such as spreading rumors and isolating others [Olweus, 1993]. Generally, male bullies are believed to be low school achievers, come from families with high conflict, and have parents who use physical punishment and are cold and authoritarian [Baldry and Farrington, 2000]. Victims also tend to be low school achievers and are likely to have overprotective mothers and distant fathers [Bernstein and Watson, 1997].

With regards to personality characteristics, victims have been described as insecure, quiet, submissive, and introverted, while bullies are described as aggressive and dominant with little empathy [Olweus, 1994]. Self-esteem differences between bullies and victims have been the center of debate. Some researchers suggest the presence of low self-esteem in both groups [Andreou, 2000; Salmon et al., 1998], while others posit that whereas victims have low self-esteem, bullies have high self-esteem [Natvig et al., 2001; Olweus, 1994]. It seems, however, that there are three distinct categories of children involved in bully-victim problems which may be the cause of the disparate findings: the bullies only, victims only, and bully/victims, who tend to alternate between these two roles [Austin and Joseph, 1996; Bowers et al., 1994; Wolke et al., 2000]. There is also some indication that the latter category is associated with greater psychopathology (they are high on both neuroticism and psychoticism) and have poorer family relations [Mynard and Joseph, 1997].

Another approach to examining the underlying causes of bullying and victimization may be to delve into the patterns of psychopathology that may characterize these types of behaviors, especially with regards to pre-existing DSM-IV symptomatology. So far, the limited research has provided some interesting initial findings: Bullies share common features with children who have disruptive behavior disorders diagnoses, in that both groups are characterized by aggression and lack of empathy. Kumpulainen and colleagues [2001] found that among bully-victims, oppositional/conduct disorder was twice more common than among bullies, and three times more common than among victims. Furthermore, almost one-fifth of bully-victims had depression, which was also rather common among bullies and

victims. It is therefore possible, that the same children, who exhibit bullying behavior at school, are those who manifest disruptive behavior in the classroom and at home. If this proves to be the case, bullying behaviors may be a sign of underlying psychopathology that may assist in the identification of children in need of psychological interventions.

The limited research findings in the area of bullying and psychopathology tend to focus more on victims than bullies. For instance, adults who are bullied in the workplace have been found to have distinctive MMPI–2 profiles, which indicate higher neuroticism and psychosomatic symptoms [Matthiesen and Einarsen, 2001]. The scant research that exists regarding bullies at school concurs with the idea that bullying is associated with disruptive psychopathology. For instance, Wolke et al. [2000], found that bullies had higher rates of hyperactivity and conduct disorder and lower pro-social behaviors, while Austin and Joseph [1996] found more conduct problems among bully/victims than among all other groups (bullies only, victims only). Baldry and Farrington [2000] found greater frequency of bullying among children with high rather than low levels of delinquency, especially with regards to boys. In a review, Salmon et al. [2000] found that bullies and bully/victims most often present to outpatient clinics with CD and sometimes with Attention Deficit Hyperactivity Disorder.

Disruptive behavior disordered children have certain common characteristics. They come from families where rearing practices are characterized by lack of involvement, inconsistency, and use of aggression as a discipline method [Kronenberger and Meyer, 1996]. CD children have been found to experience school failure and deficiencies in processing social situations. For instance, they tend to perceive neutral situations as aggressive and respond with poor problem solving skills [Dumas, 1992]. Similar parenting styles, family characteristics, and cognitive deficiencies are also found in the literature regarding bullies, reflecting once more the possible overlap between these populations [Andreou, 2000; Karatzias et al., 2002]. Both bullying and disruptive behavior appear more frequently in families of low socio-economic status [Shepherd and Farrington, 1995; Yoshikawa, 1994]. For example, socio-economic deprivation at age eight has been shown to be one of the best predictors of later delinquency [Farrington and West, 1990; Robins, 1966]. Empirically confirming the association between bullying and disruptive behavior disorders would assist teachers and parents in perceiving bullies not as uncontrollable troublemakers, but as children with possible underlying psychopathology who require attention and assistance.

The present study sought to investigate the association between DSM-IV symptoms of ODD and CD and bully-victim problems among early adolescents in Cyprus. Examining the role of these disorders in bully-victim problems is important because both disorders are predictive of later antisocial behavior. Specifically, ODD often precedes developmentally and is milder than CD, which in turn, is often a precursor of Antisocial Personality Disorder in adults [Kronenberger and Meyer, 1996]. Establishing that disruptive behavior symptomatology is associated with bullying and victimisation may signify that the latter can be used as indices of this type of psychopathology. The confirmation of this hypothesis can provide the impetus for the development of appropriate intervention programmes that will hinder the escalation of antisocial behaviour.

The specific age group was selected because there is indication that bullying is most frequent during the three first years of secondary school [Karatzias et al., 2002]. More specifically, the study aims to establish the extent of disruptive behavior symptomatology among children involved in bullying problems, differentiating between those who are involved as bullies only, victims only, and bully/victims. It was predicted that bully/victims and bullies only would report more disruptive behavior symptomatology, compared to

victims only and uninvolved children. Victims were expected to report comparatively fewer CD and ODD symptoms. Self-esteem was also examined because it was hypothesized that the mixed findings regarding its association with bullying and victimization may be due to underlying differences in disruptive behavior psychopathology patterns among the four bully/victim groups. Specifically, it was predicted that what differentiates bullies from bully/victims is that the former have higher self-esteem, even though they are similar in disruptive behavior psychopathology. Finally, the study also examines the predictive utility of a number of demographic variables such as academic achievement, family education, and grade level to further specify the circumstances leading to bullying problems.

METHOD

Sample

Respondents were two hundred and two schoolchildren (102 males, 98 females, two respondents had missing sex data) aged between 11 and 15 years (mean age = 13,1 years) attending two junior secondary schools (one urban and one suburban) in Nicosia, Cyprus. Respondents were distributed in school grades as follows: 40.1% were in grade 7, 33.2% in grade 8, and 26.7% in grade 9. Participants' Socio Economic Status (SES), was assessed on the basis of family education 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]. A family education score was computed, based on the educational attainment of each parent, self-reported by students on a six-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 three-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 1–3 where 1 = at least one parent had less than 12 total years of education, 2 = both parents had a 12 total years of education and 3 = at least one parent had more than 12 total years of education. On the basis of this formulation, the sample was distributed as follows: 27.8% came from low educated families, 41.7% from medium educated families, and 30.6% from high educated families (22 respondents had missing family education data).

Measuring Instruments

Self-report measures were employed to assess the degree of bully-victim problems at school, on the grounds that respondents were likely to be the best judges of the frequency with which they had been bullied, or bullied others, especially in the cases when bullying was carried out indirectly and covertly. The 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).

ODD and CD symptomatology were also examined through self-report, a method that is often used in research with children, adolescents, and adults [Powell et al., 1997]. Sutton et al. [2000], for instance, used self-report of ODD and CD with children aged between 8 and 11 years to examine the correlates of disruptive behaviors disorders. This methodology has received some criticism because of the often low correspondence between children's and

adolescents' self-report of delinquent and anti-social acts with the reports of parents and teachers [Craig et al., 2002; Gervais et al., 1998]. On the other hand it continues to be heavily relied upon by researchers [Storvoll and Wichstrom, 2002; Franca and Schneider, 1997; Mak and Kinsella, 1996] and it has sometimes been found to be a more accurate indication of disruptive behavior symptomatology than parent or teacher reports, even with children as young as 7 years old [Burke et al., 2002]. Research has also suggested that emotional problems appear to be less reliably reported by external sources than by the children themselves [Austin and Joseph, 1996; Salmon et al., 1998].

Bullying and Victimization

The Bullying and Victimisation Questionnaire (BVQ) was constructed for purposes of this study. It consists of 24 items (12 measuring bullying and 12 victimization). No other standardized measure of bullying and victimization is in existence in the Greek language. The BVQ was created, in part, to address this problem and to progressively develop a culturally appropriate instrument in this context. Questions cover a wide range of behaviors, including direct negative physical actions, negative verbal actions commonly associated with bullying [Olweus, 1993], and subtle forms of bullying (see Appendix A). The BVQ incorporated all the 12 items from the Austin and Joseph [1996] scales, and enriched them with the addition of another 12 items drawn from the Olweus [1991] Bullying Questionnaire, and from bullying behaviors described either in the literature or by high school counsellors.

Every effort was made to replicate the procedures used by Neary and Joseph, [1994], and Austin and Joseph, [1996] for purposes of replication. Firstly, the format of the questionnaire was kept the same. Each twelve-item sub-scale (for bullying and victimization, respectively) used a forced-choice format following the procedure utilized by the Self Perception Profile for Children [SPPC: Harter, 1985]. An example of a bullying item is: 'Some children often call other children bad and nasty names' *but* 'other children do not call other children bad and nasty names.' Similarly, a victimization item is: 'Some children have been hit or kicked by other children' *but* 'other children have not been hit or kicked by other children.' Children are first asked to choose from these forced choice items which description is most like them, and then to rate this choice as to whether it is 'sort of true for me' or 'really true for me' [see Harter, 1985]. Next, the self-esteem items were immersed within the BVQ, as in the original instrument and lastly, no bullying definition was provided to the respondents because BVQ items make explicit reference to specific behaviors and not to the concept of bullying as such. Scale scores were calculated accordingly (i.e., the sum of the twelve 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).

Self-Esteem

Self-esteem was measured using the Greek version of the ten-item Global Self-Worth Scale (GSWS), a subscale of the SPPC [Harter, 1985; Marki-Botsari, 2001], which is a widely used measure of self-perception for children. These items are a subset of those used by Austin and Joseph [1996]. An example of a self-esteem item is: 'Some children believe that they can do important things in their lives' *but* 'other children do not believe that they can do important things in their lives'. A similar response procedure is followed as for the BVQ. GSWS and BVQ items were presented in a mixed order to somewhat reduce the saliency of the items concerning bully-victim problems, following the procedure of Austin and Joseph [1996].

Disruptive Behavior Symptomatology

Disruptive behavior symptomatology (CD and ODD) was assessed using a self-report behavior checklist, developed by Sutton et al. [2000]. This scale comprises the diagnostic criteria of CD and ODD according to the DSM-IV [American Psychiatric Association, 1994]. The only amendments made to this instrument were as follows: First, items which made reference to more than one behavior were broken down to reflect single behaviors. The resulting scales were comprised of 11 and 17 items for ODD and CD, respectively (see Appendix B). Second, instead of the True or False response format, respondents were asked to indicate the degree to which they had been engaged in the behaviors listed, by responding using a five-point Likert scale, ranging from 1 = 'not at all' to 5 = 'very much.' A total score for each scale was obtained by summing respondents' ratings, giving a possible range of 11–55 for the ODD and 17–85 for the CD scales respectively.

Academic Achievement

Students' academic achievement was a composite variable score, based on mean self-reported grades on language and mathematics rated on a five-point scale according to the criteria used by the Cyprus Ministry of Education and Culture [Pavlou, 1999] where A = excellent, B = very good, C = good, D = fair, and E = fail. 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).

Scale Psychometric Properties

Internal reliability was estimated using Cronbach's alpha and was found to be satisfactory for all scales: Bullying $\alpha = 0.82$, Victimization $\alpha = 0.74$, ODD $\alpha = 0.82$, CD $\alpha = 0.95$, and GSWS $\alpha = 0.82$. In her validation study, with a sample of 374 Greek students Makri-Botsari [2001] found a comparable $\alpha = 0.81$ internal reliability for the GSWS. Means and standard deviations for the whole sample on each of these scales are shown in Table I.

Procedure

Respondents were initially asked to complete a Student Characteristics sheet that included the questions regarding their achievement, parent education, and other demographic information. They were then provided with an explanation of how to complete the 34–item questionnaire (BVQ and GSWS) and given practice items to illustrate the forced choice format. Finally, they completed the disruptive behavior scale. Participants were told that this

TABLE I. Descriptive Statistics for GSWS, Bullying, Victimization, ODD, and CD

	GSWS	Bullying	Victimization	ODD	CD
M	3.00	1.68	1.76	2.03	1.33
SD	.74	.51	.54	.66	.59
Range	1–4	1–4	1–4	1–5	1–5

Note. GSWS = General Self-Worth Scale; ODD = Oppositional Defiant Disorder; CD = Conduct Disorder.

was not a test, that there were no right or wrong answers and that all their answers were anonymous. The questionnaire was group administered during a class period by a trained school counselor.

RESULTS

Gender Differences in Bullying/Victimization, Self-Esteem, ODD, and CD

Analyses of Variance (ANOVAs) were computed using gender as a between subjects variable and self-esteem, bullying, victimization, and disruptive behavior scale scores as the dependent variables to examine possible gender differences on the latter. No significant gender differences were found on bullying (boys, $M = 1.72$ and girls, $M = 1.64$), or on victimization ($M = 1.75$ and $M = 1.76$). Boys however, scored significantly higher than girls on the disruptive behavior symptomatology scales, ($M = 2.11$ and $M = 1.92$, F (1, 198) = 4.90, $p < .05$) on the ODD scale, and ($M = 1.50$ and $M = 1.15$, F(1, 198) = 18.95, $p < .001$) on the CD scale.

Correlations Between Bullying, Victimization, ODD, CD, Self-Esteem, and Academic Achievement

Pearson correlations were computed between bullying, victimization, GSWS, ODD, and CD scores and academic achievement. The results are shown in Table II.

Bullying was highly positively correlated with victimization ($r = .70$, $p < .05$), a finding suggesting that at least a significant portion of the bully and victim population is composed of adolescents who swap from one behavior to the other. As the table indicates, bullying scores were positively correlated with both ODD and CD, whereas victimization scores were positively correlated only with ODD. Academic achievement was positively correlated with self-esteem, which in turn was significantly negatively correlated with bullying, ODD, and CD, but no significant association was found between GSWS and victimization.

Bully-Victim Grouping

Given the high correlation obtained between bullying and victimization, and following the results of prior studies [Kumpulainen and Räsänen, 2000; Wolke et al., 2000] four categories of children were constructed as follows: An inspection of mean item scores of the bullying

TABLE II. Correlations Between GSWS, Bullying, Victimization, ODD, CD, and Academic Achievement

	GSWS	Bullying	Victimization	ODD	CD
Bullying	−.18*				
Victimization	−.12	.70*			
ODD	−.19*	.26*	.23*		
CD	−.30*	.29*	−.09	−.08	.47*
AA	.23*	−.09	−.01	.00	−.11

*$p < .05$ (two-tailed tests)

Note. GSWS = General Self-Worth Scale; ODD = Oppositional Defiant Disorder; CD = Conduct Disorder; AA = Academic Achievement.

subscale indicated that they ranged from 1.41 to 2.15 for the bullying items and from 1.64 to 2.14 for the victimization items (on a range of 1–4). To classify children displaying either bullying or victimization, we chose a cut-off score corresponding to the 75th percentile of each of bullying and victimisation scale score distributions. Children were then classified into four groups: The first group consisted of adolescents who bullied others but were not bullied themselves - bully only group – (16/191 — 8.4%), the second of adolescents who bullied others and also were bullied themselves - bully/victim group – (29/191 – 15.25%), the third group of adolescents who were bullied but did not themselves bully others - the victim only group – (41/191 — 21.5%), and finally adolescents who neither bullied nor were bullied - the uninvolved group – (105/191 — 55%. Eleven participants had missing data.

Comparisons Among Bullying Groups on ODD, CD, and Self-Esteem

ANOVAs were carried out to examine differences in ODD, CD, and GSWS among bullies, victims, bully/victims, and uninvolved adolescents. Mean scores are presented in Table III. For all comparisons, post-hoc tests used the Tukey HSD procedure with p set at <0.05.

There were significant differences among the four groups on ODD, F (3, 187) = 6.71, $p<0.001$, CD, F (3, 187) = 7.43, $p<0.001$, and GSWS, F (3, 186) = 9.60, $p<0.001$. Post-hoc comparisons indicated that for the CD scale the bully/victim group scored significantly higher from the victim and the uninvolved groups, whereas victims scored significantly higher than the uninvolved. In the case of ODD, the bully and the bully/victim groups scored significantly higher than the uninvolved group, with the bully/victims scoring the highest (see Table III). For self-esteem, the bully/victim group had the lowest mean score, whereas the self-esteem of bullies was comparable to that of uninvolved children. To test our initial prediction that both bully/victims and bullies only but not victims or uninvolved adolescents would be high on ODD and CD, a further analysis was conducted for which all those engaged in bullying (bully/victim and bully only groups) were compared to all those not involved in bullying (victim only and uninvolved groups) on ODD and CD. The ANOVA indicated that those involved in bullying were significantly higher on both measures of disruptive behavior symptomatology compared to those not involved, F (1, 189) = 19.68, $p<0.001$ for ODD and F (1, 189) = 19.87, $p<0.001$ for CD.

Prediction of Bullying and Victimization

Multiple regression analyses (method Enter) were carried out in order to investigate to what extent CD, ODD, self-esteem, and student characteristics - gender, grade level, family

TABLE III. Mean Scores on the GSWS, ODD, and CD Scales for Each of the Four Bullying Groups

		Bully/victim	Bully only	Victim only	Not involved
ODD	M	2.35	2.34	2.07	1.85
	SD	.80	.56	.74	.53
CD	M	1.52	1.44	1.20	1.20
	SD	.78	.36	.23	.28
GSWS	M	2.68	3.12	2.81	3.23
	SD	.43	.71	.57	.66

Note. GSWS = General Self-Worth Scale; ODD = Oppositional Defiant Disorder; CD = Conduct Disorder.

TABLE IV. Results of Multiple Regression Analyses for Predicting Bullying and Victimization

	Bullying			Victimization		
	B	SE B	Beta	B	SE B	Beta
CD	4.84	1.19	.36*	−2.95	.93	−.28*
ODD	.33	.85	.03	3.10	.83	.32*
GSWS	−.23	.07	−.24*	−.19	.07	−.22*
Grade	1.77	.56	.23*	.20	.60	.03
Gender	.57	.93	.05	.16	.99	.01
Achievement	.33	.44	.06	4.24	.47	.01
Family Education	−.48	.84	−.04	−.64	.90	−.06
	$R^2 = 0.247$. $F(7,158) = 7.41$. $p < .001$			$R^2 = 0.136$ $F(7, 160) = 3.61$. $p < .001$		

*$p < .05$

Note. Both significant and non-significant predictors are presented. R^2 statistic refers to the total amount of variance explained by all variables entered in the equation.

GSWS = General Self-Worth Scale; ODD = Oppositional Defiant Disorder; CD = Conduct Disorder.

education, and academic achievement would explain bullying and victimization for the total sample. Results, presented in Table IV, indicated that bullying was significantly predicted by CD, self-esteem, and grade level. More specifically, students who were more likely to bully others combined high levels of self-reported CD symptomatology, low levels of self-esteem, and were in upper grade levels. These three variables collectively explained 24.1% of the variance. In the case of victimization, results showed that the best predictors were ODD, CD, and self-esteem, which explained 13.2% of the variance. Thus, students who were more likely to be victimized, reported high ODD, low CD symptomatology, and low self-esteem.

To clarify the unpredicted finding that ODD explains victimization, a chi-square analysis was conducted to elucidate the distribution of ODD in the four bullying groups (respondents were divided into high and low ODD symptomatology, using a median split). Results showed that high ODD students were significantly unevenly distributed across bully-victim problem groups, χ^2 (3, 191) = 17.95, $p < 0.001$, so that 75% of them were in the bully only group, 52% in the victim only group, 66% in the bully/victim group, and 34% in the uninvolved group. Hence, ODD is mostly prevalent among children who bully, but is also a frequent occurrence among victims.

DISCUSSION

The present study examined the association between DSM-IV disruptive behavior symptomatology and bully-victim problems, with the aim of investigating whether bullying could be a sign of underlying psychopathology. Results are largely in line with prior findings indicating that there is an association between bullying and disruptive behavior symptoms [Kumpulainen and Räsänen, 2000].

In accord with prior research, it is those with bully/victim profiles who show the greatest psychopathology [e.g., Wolke et al., 2000]. Bully/victims reported more symptomatology than their uninvolved peers. Interestingly however, *all* those engaged in bullying reported

more CD and ODD than those not engaged (victims and uninvolved), indicating that disruptive behavior symptomatology is characteristic of the bullying behavior per se. Furthermore, it appears that CD, the more serious variant of disruptive behavior, best distinguishes adolescents who bully: Inspection of the correlations between bullying, victimization, CD, and ODD indicates that whereas both bullying and victimization are correlated significantly with ODD, only bullying is associated with CD. This is further supported by the regression analyses, which show that whereas ODD is a predictor of victimization, bullying is highly predicted by presence of CD but not ODD. Conduct disorder is a particularly serious type of psychopathology, since it is usually the precursor of adult anti-social behavior. The lack of empathy and concern for others' feelings that leads some teens to consistently abuse their peers may be the same trait that is prodromal to later, serious psychopathology and antisocial acts.

As indicated in the literature, ODD may represent a developmentally earlier and less severe stage of the ODD/CD continuum. In parallel, victims tend to be younger and bullies tend to be older [Karatzias et al., 2002]. The finding that ODD is predictive of victimization (but not of bullying) may indicate that milder symptoms of disruptive psychopathology (i.e., ODD) may play a role in the development of bullying at an early stage, while more severe symptoms (i.e., CD) may appear as the problem escalates. It can be speculated that, developmentally, these children begin as victims and later learn by observing their victimizers to bully others [Andreou, 2000]. If their ODD is not noticed at a young age when they are victims only, some may evolve into bully/victims and gradually even become full-blown bullies and CD adolescents. To confirm this speculation, longitudinal research is needed that tracks the development of ODD victims from early childhood into adulthood.

Our findings support the notion that CD and ODD adolescents can be identified partly by their school behavior, specifically by their tendency to bully others (either as bully/victims or bullies only) but that they would be less likely to be victims or uninvolved. They would be more likely to be boys, since we have replicated the often-found greater frequency of both CD and ODD among boys than girls [Kronenberger and Meyer, 1996]. Such identification could act as a screening for later referral that would lead to a proper diagnosis and intervention.

Replication of prior findings [Andreou, 2000] showed that both bullying and victimization experiences are associated with lower self-esteem, indicating that this is a shared feature of most of the teens engaged in such behaviors; it does not distinguish between bullies and victims. In addition, Andreou's finding that the bully/victim group is the lowest on self-esteem was replicated, pointing once more to the greater risk for behavioral disturbance that these adolescents face. This finding supports the initial prediction, that although both victims and bullies may exhibit some characteristics of disruptive behaviors (mostly CD for bullies and mostly ODD for victims) they are distinguished by the fact that victims and bully-victims have low self-esteem, whereas bullies only have high self-esteem that is comparable to that of uninvolved children.

This study has a few limitations that need to be addressed. Firstly, the sample size was small. More definitive conclusions could be drawn from a larger scale study. Larger sample sizes would have allowed, for instance, for regression analyses to be conducted, predicting bullying and victimization for each of the four bully-victim problem groups. In addition, the sample was admittedly opportunistic, although it is considered representative of urban and suburban Cypriot students. Future studies should attempt to replicate the results using more randomly selected samples. In defense of the present study however, one must note that it is

the first such project conducted in Cyprus and it was helpful in testing and adapting the measures so that they can later be utilized in future studies. It has also provided some indications regarding the extent of bullying problems in Cyprus and some initial and substantial findings regarding the association between bullying and disruptive behavior.

One may also argue that the self-report method used is problematic. It may assist in obtaining a greater range of bully-victim experiences that would not be observable by the teacher or parent, but it lacks the convergent validity that such parent and teacher reports would provide. More problematic may be the reliance on self-report for the ODD and CD symptoms. It could be that bullies and bully/victims consider it socially appropriate to appear 'tough' and 'macho' and hence, may have endorsed more ODD and CD behaviors than a teacher or parent might be able to confirm. Future studies would need to validate the use of this self-report method by obtaining behavior ratings from the parents, teachers, and/or peers in order to examine the accuracy of students' self-report of these behaviors. It would be useful to replicate the study with a clinical sample of children diagnosed with disruptive behavior disorders.

In sum, this study examined the association between bullying problems and disruptive behavior as this is classified in the DSM-IV categories of Oppositional Defiant Disorder and Conduct Disorder. Results indicate that there is a predictive association between CD and bullying, so that children who show CD symptoms are more likely to exhibit bullying behaviors at school both in the roles of bully only and bully/victim. The present results point to the direction that future research should examine psychological disturbance as a possible cause of bullying, develop screening instruments for the early identification of such psychopathology, and plan interventions that will target children at risk for getting involved in bully-victim problems. A finding that should be further addressed by researchers is the association between ODD and victimization. Further examination of this group may elucidate how one develops into a bully and learns to abuse others. Self-esteem predicts involvement in both bullying and victimization, but low self-esteem is mostly characteristic of children who are victimized. Observation within the school of bully-victim problems can identify adolescents in need of intervention, and similar studies on younger children can highlight the early signs of disruptive behavior psychopathology and bullying-victimization involvement so that preventive efforts may be aided.

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APPENDIX A

The Twelve Behaviors Described in the BVQ Items

1. Bullying or having been bullied by other children
2. Calling or having been called bad and nasty names
3. Hitting or kicking or having been hit or kicked by other children
4. Stealing or having belongings stolen
5. Mocking or having been mocked because of one's descent
6. Leaving or having been left out of games and other activities by other children
7. Mocking or having been mocked because of one's family
8. Mocking or having been mocked because of one's appearance
9. Mocking or having been mocked because of one's gender
10. Mocking or having been mocked because of one's financial standing
11. Mocking or having been mocked because of one's high school achievement
12. Mocking or having been mocked because of one's low school achievement

APPENDIX B

Distuptive Behavior Symptomatology Items

1. I often loose my temper
2. I often argue with adults
3. I often disobey adult requests or rules
4. I often refuse to comply with adult requests or rules
5. I often deliberately do things that annoy people, e.g., take other children's belongings
6. I often blame others for my own mistakes and bad behavior
7. I am often easily annoyed by others
8. I am often touchy
9. I am often angry
10. I am often vindictive
11. I am often spiteful
12. I often bully. threaten or frighten others
13. I often hit and push other children
14. I have used an object that can harm physically others (e.g., brick. broken glass. knife. revolver)
15. I have been physically cruel to people
16. I have been physically cruel to animals
17. I have stolen with confrontation of a victim (e.g., mugging. purse – snatching)
18. I have deliberately started fires
19. I have destroyed others' property on purpose (other than by starting a fire)
20. I have broken into someone's else's house, building, or car
21. I often lie to gain others' sympathy

22. I often lie to avoid obligations
23. I have stolen without confrontation of a victim on more than one occasion
24. I have often stayed out at night despite my parents' restrictions before the age of 13
25. I have often been truant from school before the age of 13
26. I have run away from home at least twice while I was staying with my parents or guardians
27. I have run away from home at least once without returning for a long while
28. I often lie to get things I want (money. presents)