Longitudinal investigation of the relationship between bullying and psychosocial adjustment

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Longitudinal investigation of the relationship between bullying and psychosocial adjustment

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The aim of the present study was to test the direction of effects in the relationship between bullying, victimization, adjustment difficulties, and school achievement. The participants were 238 fifth and sixth-grade children (mean age 11.4 years) and their teachers in a six-month two-timepoint longitudinal study. The results of this study showed that bullying and victimization at Time 1 were related to an increase of adjustment problems and a decrease of school achievement at Time 2. Conversely, adjustment problems at Time 1 were related to an increase in bullying and victimization at Time 2. School achievement at Time 1, however, was not related to bullying and victimization at Time 2. The results of this study provide evidence towards a reciprocal relationship between bullying, victimization, and adjustment difficulties.

Keywords: Bullying; Victimization; Psychosocial adjustment.

Bullying is defined as a specific form of peer aggression, which is intentional, repetitive, and it involves an imbalance of power between the victim and the perpetrator (Olweus, 1993). A number of studies have consistently shown that bullying brings about serious risks for both bullies and victims on a number of psychosocial outcomes later in their lives (Headley, 2004; Roland, 2002; Seals & Young, 2003).

Bullying and psychosocial adjustment

There is a large body of evidence in the literature showing that bullying and victimization cause poor psychosocial adjustment and especially emotional
and behavioural problems (Arseneault et al., 2006; Craig, 1998; Nansel et al., 2001). On the other hand, there are studies which suggest the opposite direction of effect. For example, Glew, Fan, Katon, Rivara, and Kernic (2005) found that children with emotional problems are in high risk of becoming involved in many forms of bullying. In the same field, Veenstra, Lindenberg, Winter, Oldehinkel, and Verhulst (2005) showed that adjustment problems such as aggressiveness and isolation were strongly related to bullying. Further, Wolke, Woods, Bloomfield, and Karstadt (2000) reported that children involved in direct bullying (e.g., punching, pushing, kicking) had significantly increased behaviour problems, hyperactivity, conduct problems and lower prosocial behaviour. Finally, Pepler, Craig, Jiang, and Connolly (2008) claimed that bullying is associated with elevated risks in the domains of individual adjustment, as well as in the development of interpersonal relationships.

Research on victimization suggests that children and adolescents identified as victims tend to exhibit poor psychosocial functioning. Schwartz (2000) found that children who were victims appeared to be less prosocial compared to children not involved in bullying incidents. Goldbaum, Craig, Pepler, and Connolly (2003) argued that victimized children report high levels of internalizing problems such as anxiety and somatization, as well as problematic relationships. The same authors also suggested that children involved in bullying or victimization report the highest levels of problem behaviours.

A number of studies show that both bullying and victimization are linked with an extensive array of psychosocial adjustment problems such as depression and psychosomatic problems (Kaltiala-Heino, Rimpelae, Rantanen, & Rimpelae, 2000; Kumpulainen & Räisänen, 2000; Nansel, Craig, Overpeck, Saluja, & Ruan, 2004). On the same theme, Sourander, Helstela, Helenius, and Piha (2000) found that bullying is associated with later externalizing problems such as aggressive and antisocial behaviour, while victimization is strongly associated with later internalizing problems such as anxiety and depression. The same authors, however, argue that an opposite effect is also possible. That is, children who had depressive symptoms at the age of eight were associated with bullying and victimization experiences later, at the age of sixteen. Juvonen, Graham, and Schuster (2003) expressed a position that was completely different than what is generally accepted by most authors. They argued that bullies present fewer adjustment problems than other children and that they tend to be psychologically stronger than other children who are not involved in bullying incidents. Also, the same authors claimed that bullies tend to be popular, especially within cliques of other aggressive youngsters.

Children with poor peer relationships may exhibit early warning signs that indicate risk for future involvement in bullying and victimization.
(Jablonska & Lindberg, 2007). In other words, early individual and social relationship problems may signal an increased possibility for experiencing chronic bullying and victimization later in life (Craig & Pepler, 2003). Further, children with internalizing problems such as depression and anxiety are more likely to become victims (Goldbaum et al., 2003). Thompson, Whitney, and Smith (1994) reported that 67% of students with disabilities are bullied. They argued that students with disabilities and behaviour disorders are at higher risk of victimization than other children.

Children who are involved in any form of bullying have more behavioural problems than children who are not involved. Wolke et al. (2000) showed that children who are involved in direct bullying showed high levels of communication problems and hyperactivity and low levels of prosocial behaviour.

In relation to the long-term effects of victimization, there are studies showing that children who were victimized are more likely to be depressed later in their lives (Bond, Carlin, Thomas, Rubin & Patton, 2001; Olweus, 1993). Hawker and Boulton (2000) and Bond et al. (2001) showed that victimization during childhood is as important predictor of anxiety and depression later in adulthood. Furthermore, Arseneault et al. (2006) found that direct or indirect victimization (e.g., being the victim of social exclusion and rumours) is related to internalizing problems. It is also related to low school satisfaction, low achievement and poor social relations. Direct victimization, however, was found to be linked with more adjustment problems and more emotional problems than indirect victimization.

In general, one could argue that the bullying and victimization construct appears to be associated with poor psychosocial adjustment, such as school-related stress (Karatzias, Power, & Swanson, 2002; Kochenderfer & Ladd, 1997), loneliness (Crick & Grotpeter, 1995) and in extreme cases, may be even conducive to an increased risk for future depression and self-destructive acts (Bond et al., 2001). The group of children who experience both sides of the phenomenon (i.e., bullying and victimization) seem to have the most serious adjustment difficulties, since they exhibit both internalizing (Schwartz, 2000) and externalizing problems (Haynie et al., 2001).

Bullying and school achievement

Earlier studies suggest that involvement in bullying behaviours affects children’s school achievement. Glew et al. (2005) found that low achievement was linked with children who were either bullies or victims. Olweus (1978) had previously argued that bullying and victimization were a result of low achievement in school and therefore claimed that school failure could be a cause rather than an effect of bullying.
Georgiou, Stavrinides, and Kyriakou (2007) found that while bullying is associated with low grades, the same is not true for victimization. These authors, in line with others (Nansel et al., 2001), argued that a reason why bullies choose specific children as their victims may be their good grades. Woods and Wolke (2004), however, showed that even indirect victimization may have negative outcomes in a child’s school achievement, and those outcomes may be more negative than in children experiencing direct victimization.

A growing number of researchers have consistently found that involvement in bullying is very likely to have harmful academic effects (Espelage & Holt, 2001; Glew et al., 2005; Kaltiala-Heino et al., 2000; Nansel et al., 2001; Rigby, 2003). Holt, Finkelhor, and Kantor (2006) found that fifth grade children that were repeatedly victimized experienced more psychological distress and had lower grades. Further, Schwartz, Gorman, Nakamoto, and Toblin (2005) showed that frequent victimization is associated with poor academic functioning. On the other hand, however, Ladd, Kochenderfer, and Coleman (1997) argued that self-reported peer victimization is not strongly related to academic difficulties, especially when the influence of other dimensions of social difficulties with peers are taken into account.

Kochenderfer and Ladd (1996) examined whether peer victimization was a cause or a consequence of children’s adjustment problems. They found that the duration of children’s victimization experiences was related to later school adjustment problems. In 1997, the same researchers concluded that victimization is a precursor of children’s loneliness and school avoidance and that the magnitude of victimization causes school adjustment problems and thus adjustment problems may lead to victimization experiences.

The present study
The purpose of the present study was to investigate the relationship between bullying and victimization on one hand and psychosocial adjustment and school achievement on the other. Specifically, the aim of the study was to examine whether bullying and victimization were related to future psychosocial adjustment problems and school achievement, or whether psychosocial adjustment problems and school achievement were related to children’s future involvement in bullying. Even though some studies aim at identifying distinct roles such as bullies, victims, and bully/victims, in the present study we aimed to investigate the relationship between bullying and children’s psychosocial adjustment in the general population of students and not just the students that were distinctly involved in bullying incidents.

The data for this study were collected in two phases, termed Time 1 (T1) and Time 2 (T2), with a six-month interval period. The hypotheses of this study were: (a) bullying and victimization at Time 1 will be related to
a significant decrease in psychosocial adjustment and school achievement at Time 2; and (b) high school achievement and good psychosocial adjustment at Time 1 will be related to a significant decrease in children’s involvement in bullying and victimization at Time 2. It was therefore hypothesized that we would observe a reciprocal relation between bullying (and victimization), psychosocial adjustment, and achievement.

METHOD

Participants
The initial sample at Time 1 of this study was 252 children of fifth and sixth grade and their teachers. At Time 2, however, 14 children did not complete the questionnaire and they were therefore excluded from the final sample.

The participants of the two phases of this study were 238 children (mean age = 11.4 years) and their teachers. All children attended fifth and sixth grade of elementary schools in Cyprus. Both genders were represented in the sample with 139 (58%) females and 99 males (42%). The participants’ classrooms were randomly selected from five elementary schools in urban and rural areas of Cyprus. All children in each classroom that was selected were included in the sample. The participants came from a convenience sample and do not necessarily reflect the demographic characteristics of the student population of Cyprus.

Measures

The Strengths and Difficulties Questionnaire (SDQ). The SDQ was used as a measure of children’s psychosocial adjustment (Goodman, 1997). This measure was translated and adapted into the Greek language from Mpimpou-Nakou, Stogiannidou, and Kisseoglou (2001). There are 25 items measuring adjustment in five basic areas: (1) attention and hyperactivity; (2) emotional problems; (3) prosocial skills; (4) behaviour problems; and (5) peer relationships. Even though the original instrument is scored on a 3-point scale, our adaptation is constructed on a 5-point Likert-type scale.

Revised Bullying and Victimization Questionnaire (BVQ). The BVQ consists of 28 items based on the original questionnaire initially constructed by Olweus (1993) and it has been recently used in a number of studies in Cyprus after its adaptation into the Greek language (Georgiou, 2008a, 2008b; Georgiou & Stavrinides, 2008; Kyriakides, Kaloyirou, & Lindsay, 2006). Items from the bullying subscale include statements such as: “Other children complain that I hit them”; “I want other children to do as I say”;
and “Other children are afraid of me”. Items from the victimization subscale include statements such as: “I was threatened or forced by other children”; “Other children have said lies or bad things about me”; and “I was excluded/ignored by other children”. Children responded to each item on a 5-point Likert-type scale.

**School achievement.** The teachers completed an instrument that measures each child’s school achievement on a 5-point, Likert-type scale ranging from school failure to excellence. The instrument was anonymous and each child was assigned a number based on the order of the name catalogue of each classroom. The teachers were asked to rate their students based on their corresponding classroom number. The teachers were asked to indicate the general school achievement of each child in their classroom taking into consideration their overall achievement in all academic topics.

**Analyses**

Exploratory factor analysis (EFA) with direct oblimin rotation was computed in order to examine the factor structure of the Bullying and Victimization Questionnaire. This analysis yielded a solution with 51% of variance explained at Time 1 and 53% at Time 2. On both occasions, the items loaded as predicted onto two factors representing bullying and victimization (all factor loadings > .63). Cronbach \( \alpha \) reliabilities for bullying and victimization factors for Time 1 were .75 and .72, respectively, and .82 and .79 for Time 2. Similarly, factor analysis on the Strengths and Difficulties Questionnaire yielded a solution with 48% of variance explained at Time 1 and 51% at Time 2. However, contrary to the five-factor solution proposed by Goodman (1997) and by Mpimpou et al. (2001), in our study, at both times, the items loaded onto two factors representing emotional problems and prosocial skills (all factor loadings > .62). Cronbach \( \alpha \) reliabilities for emotional problems were .74 for Time 1 and .78 for Time 2 and the respective alphas for prosocial skills were .71 for Time 1 and .76 for Time 2.

**Procedure**

The instruments were administered to the sample at two phases, Time 1 and Time 2, with a six-month interval between the two data collection phases. The two phases were conducted during October and May of the same academic year (2009–2010). The children were informed about the purpose of the study and were asked to complete the instruments on a voluntary basis. The children completed the instruments in their classrooms during one class period (45 minutes) that was provided for our data collection. None of
the children refused to participate in the study and therefore whole classes were assessed. Issues of anonymity and data protection were explicitly explained by the researchers and the order of appearance of the instruments was randomized in order to avoid possible bias.

RESULTS

Since the Bullying and Victimization Questionnaire and the Strengths and Difficulties Questionnaire factors showed strong internal consistencies, we computed a composite variable for each construct, which represents the total score for each case on the items that compose each factor. Table 1 shows the means and standard deviations for each scale along with the mean and standard deviation for school achievement at Time 1 and Time 2.

Before examining the predictive significance of the bullying, victimization, adjustment (emotional problems and prosocial skills), and school achievement subscales, we computed bivariate correlations (see Table 2) between all scores at Time 1 and Time 2 in order to identify associations among the constructs of this study.

The next step in the data analysis was to compute a hierarchical regression analysis in order to examine: (a) whether bullying and victimization at Time 1 were related to a decrease in adjustment (more emotional problems and less prosocial skills) and school achievement at Time 2, controlling for the variance explained by bullying and victimization at Time 1; and (b) whether adjustment and school achievement at Time 1 were related to a decrease in bullying and victimization at Time 2, controlling for the variance explained by adjustment and school achievement at Time 1. As Table 3 shows, bullying at Time 1 was related to an increase in emotional problems, a decrease in prosocial skills, and a decrease in school achievement at Time 2. Victimization was also related to an increase in emotional problems and a decrease in school achievement at

<table>
<thead>
<tr>
<th>Construct</th>
<th>Time 1 Mean (SD)</th>
<th>Time 2 Mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bullying</td>
<td>7.10 (3.30)</td>
<td>6.80 (3.05)</td>
</tr>
<tr>
<td>Victimization</td>
<td>7.95 (3.55)</td>
<td>7.60 (3.00)</td>
</tr>
<tr>
<td>Emotional problems</td>
<td>9.80 (4.05)</td>
<td>9.20 (4.10)</td>
</tr>
<tr>
<td>Prosocial skills</td>
<td>15.15 (3.85)</td>
<td>19.40 (4.10)</td>
</tr>
<tr>
<td>School achievement</td>
<td>3.47 (1.15)</td>
<td>3.49 (1.16)</td>
</tr>
</tbody>
</table>
TABLE 2

Correlation coefficients between bullying, victimization, adjustment and school achievement at Time 1 and Time 2

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Bullying T1</td>
<td>–</td>
<td>.37**</td>
<td>.40**</td>
<td>–.31**</td>
<td>–.28**</td>
<td>.67**</td>
<td>.24**</td>
<td>.33**</td>
<td>–.25**</td>
<td>–.32**</td>
</tr>
<tr>
<td>2. Victimization T1</td>
<td>–</td>
<td>.52**</td>
<td>–.06</td>
<td>–.18**</td>
<td>.21**</td>
<td>.60**</td>
<td>.32**</td>
<td>.03</td>
<td>–.14*</td>
<td></td>
</tr>
<tr>
<td>3. Emotional problems T1</td>
<td>–</td>
<td>–</td>
<td>–.08</td>
<td>–.27**</td>
<td>.29**</td>
<td>.42**</td>
<td>.59**</td>
<td>–.03</td>
<td>–.24**</td>
<td></td>
</tr>
<tr>
<td>4. Prosocial skills T1</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>.24**</td>
<td>–.17**</td>
<td>.07</td>
<td>–.03</td>
<td>.49**</td>
<td>.22*</td>
<td></td>
</tr>
<tr>
<td>5. School achievement T1</td>
<td>–</td>
<td>–</td>
<td>–.15*</td>
<td>–.13*</td>
<td>–.22**</td>
<td>.22**</td>
<td>.84**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Bullying T2</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>.27**</td>
<td>.42**</td>
<td>–.36**</td>
<td>–.25**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Victimization T2</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>.41**</td>
<td>.09</td>
<td>–.14</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Emotional problems T2</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–.07</td>
<td>–.21**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Prosocial skills T2</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>.24**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. School achievement T2</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: *p < .05; **p < .01.
Time 2, but there was no significant relationship with prosocial skills at Time 2.

A relatively different picture was revealed when we examine whether adjustment (emotional problems and prosocial skills) and school achievement at Time 1 was significantly related to a decrease in bullying and victimization at Time 2. The results are presented in Tables 3 and 4.

**TABLE 3**
Hierarchical regression analysis predicting adjustment and school achievement at Time 2 from Time 1 measures

<table>
<thead>
<tr>
<th>Dependent measures</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Emotional Problems</td>
<td>Prosocial skills</td>
<td>School Achievement</td>
<td></td>
</tr>
<tr>
<td>β</td>
<td>R²</td>
<td>β</td>
<td>R²</td>
<td>β</td>
</tr>
<tr>
<td>Step 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotional problems</td>
<td>0.58**</td>
<td>0.04</td>
<td></td>
<td>−0.03</td>
</tr>
<tr>
<td>Prosocial skills</td>
<td>0.04</td>
<td>0.50**</td>
<td>0.03</td>
<td></td>
</tr>
<tr>
<td>Achievement</td>
<td>−0.05</td>
<td>0.36</td>
<td>0.08</td>
<td>0.26</td>
</tr>
<tr>
<td>β</td>
<td>ΔR²</td>
<td>β</td>
<td>ΔR²</td>
<td>β</td>
</tr>
<tr>
<td>Step 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bullying</td>
<td>0.41**</td>
<td>−0.31**</td>
<td>−0.55**</td>
<td></td>
</tr>
<tr>
<td>Victimization</td>
<td>0.37**</td>
<td>0.21</td>
<td>0.04</td>
<td>0.06</td>
</tr>
</tbody>
</table>

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

**TABLE 4**
Hierarchical regression analysis predicting bullying and victimization at Time 2 from Time 1 measures

<table>
<thead>
<tr>
<th>Dependent measures</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Bullying</td>
<td>Victimiation</td>
</tr>
<tr>
<td>β</td>
<td>R²</td>
<td>β</td>
</tr>
<tr>
<td>Step 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bullying</td>
<td>0.62**</td>
<td></td>
</tr>
<tr>
<td>Victimization</td>
<td>−0.04</td>
<td>.45</td>
</tr>
<tr>
<td>β</td>
<td>ΔR²</td>
<td>β</td>
</tr>
<tr>
<td>Step 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotional problems</td>
<td>0.20**</td>
<td></td>
</tr>
<tr>
<td>Prosocial skills</td>
<td>−0.11*</td>
<td></td>
</tr>
<tr>
<td>Achievement</td>
<td>−0.02</td>
<td>.11</td>
</tr>
</tbody>
</table>

Note: *p < .05; **p < .01.
victimization at Time 2. Our results show that emotional problems at Time 1 were related to an increase in both bullying and victimization at Time 2. Prosocial skills, however, were negatively related to bullying but not to victimization at Time 2. Finally, school achievement at Time 1 was not significantly related to a change in either bullying or in victimization at Time 2 (Table 4).

DISCUSSION

The results of this study suggest that prior involvement in bullying and victimization increases the likelihood for adjustment difficulties and low academic achievement. On the other hand, prior adjustment difficulties, and especially emotional problems, increase the likelihood of involvement in bullying and victimization. While achievement was predicted by bullying and victimization, the opposite did not seem to be true. Thus, our data show that academic achievement is a consequence rather than a cause of bullying and victimization.

The present study provides evidence towards a reciprocal interpretation of the relationship between bullying and psychosocial adjustment. Specifically, bullying is related to future adjustment problems, and, conversely, difficulties with psychosocial adjustment are related to children’s involvement in bullying-related activities. Victimization and adjustment also seem to be related in a reciprocal manner. Our data show that prior adjustment problems are related to future victimization while prior involvement in victimization is related to future low achievement and emotional problems.

The findings of this study support our hypotheses and are also in line with earlier studies. Specifically, our results showed that bullying leads to psychosocial adjustment problems, as earlier studies have reported (Glew et al., 2005; Kaltiala-Heino et al., 2000; Kumpulainen & Räsänen, 2000; Nansel et al., 2001). These adjustment problems include emotional ones, deficiencies related to social skills (Wolke et al., 2000) and low school achievement. Further, psychosocial adjustment problems lead to involvement in bullying. Our findings clearly show that children’s emotional problems are related to future involvement in bullying, a finding that is consistent with Glew et al. (2005).

The results of this study show that victimization is also related to an increase in emotional problems. This finding is in line with earlier studies (Austin & Joseph, 1996; Craig & Pepler, 2003; Olweus, 1978) and with other reports claiming that children who have been victimized develop psychological difficulties later in their lives (Headley, 2004; Roland, 2002; Seals & Young, 2003). Furthermore, the present study, consistent with earlier ones (Olweus, 1978), showed that victimization leads to low achievement. Also, in
line with Sourander et al. (2000), the findings of our study showed that emotional problems lead to future victimization. Thus, bullying and victimization should be viewed as part of a dynamic interplay with other aspects of a child’s socialization processes rather than as only a cause or only an effect of poor adjustment.

Achievement, on the other hand, seems to be an effect rather than a cause in its relationship with bullying and victimization. Our data clearly show that while achievement is significantly decreased when children are previously involved in either bullying or victimization, the opposite is not true. This finding, contrary to Glew et al. (2005) shows that high achievement on its own cannot act as a protective barrier in future involvement in bullying and victimization. Children who suffer from such experiences, however, are more likely to show a decrease in their performance at school.

In conclusion, we argue that prior adjustment difficulties place a child at risk of involvement in bullying and victimization incidents and these experiences in turn set the stage for further adjustment problems in the future.

**Limitations and contribution of the present study**

The main limitation of the present study has to do with the instruments used for quantifying the constructs examined. Like many of the studies in the relevant literature, the present one utilized self-reports to measure bullying, and adjustment. While this is the predominant methodology, it is debateable whether such measures grasp the true essence of constructs related to aggressive behaviour and adjustment. Furthermore, the data were collected only from children participants, while parents, peers, and teachers could also provide relevant information, thus increasing the validity of the design. Also, school achievement was measured only on a Likert-type scale based on teachers’ subjective evaluation. While teachers are a valuable source of information regarding students’ achievement, this input could be reinforced by the results of standardized achievement tests.

Nonetheless, the present study contributes to the literature by providing new insight about the relationship between bullying, victimization, and psychosocial adjustment. The utilization of a two-timepoint longitudinal design allows us to draw conclusions on the reciprocal nature of the relationship between bullying and adjustment. While many researchers, educators, and policy makers tend to view bullying and adjustment either as a cause or an effect, we argue that given the right circumstances they can be both. On the basis of this finding, we suggest that more in-depth investigation of the relationship between bullying and adjustment is needed, focusing on more dynamic explanation rather than explaining bullying and adjustment in terms of one-way effects. Finally, our study claims that
school achievement is not part of the dynamic interplay between bullying and adjustment. This is important because it shows that being a weak student does not imply future involvement in bullying and victimization while being previously involved in bullying and victimization are clearly related to achievement problems in the future.

In conclusion, our study provides further evidence that shows the link between bullying and psychosocial adjustment. Both bullying and victimization are associated with negative consequences in a number of significant adjustment facets such as behavioural and emotional difficulties along with a negative change in school achievement. Prior good adjustment, however, may operate as a protective mechanism for avoiding future involvement in bullying and victimization. Perhaps this is an important area of prevention that educators, parents, and psychologists can work on; programs that will aim to increase children’s coping capacity and resilience through the development and nurturing of adjustment skills such as emotional awareness, empathy, behavioural inhibition and impulsivity control. Future research on the other hand, may try to utilize a multi-methodological approach and measures that extent beyond the limitations of self-reported instruments in order to better understand the causal links between bullying and adjustment in children.

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