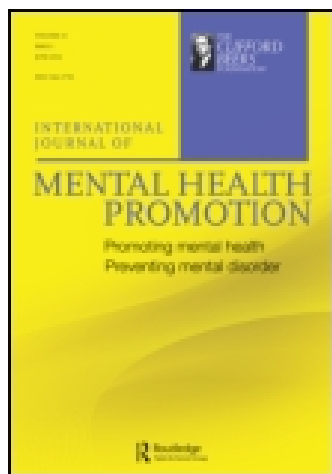


This article was downloaded by: [212.31.118.144]

On: 27 June 2014, At: 04:18

Publisher: Routledge

Informa Ltd Registered in England and Wales Registered Number: 1072954 Registered office: Mortimer House, 37-41 Mortimer Street, London W1T 3JH, UK



International Journal of Mental Health Promotion

Publication details, including instructions for authors and subscription information:

<http://www.tandfonline.com/loi/rjhm20>

Bullying phenomenon and preventive programs in Cyprus's school system

E. Sismani Papacosta^{ab}, A. Paradeisioti^{ab} & Ch. Lazarou^{ab}

^a Ministry of Health, Mental Health Services, Nicosia, Cyprus

^b Ministry of Education and Culture, Educational Psychology Service, Nicosia, Cyprus

Published online: 14 Apr 2014.

To cite this article: E. Sismani Papacosta, A. Paradeisioti & Ch. Lazarou (2014) Bullying phenomenon and preventive programs in Cyprus's school system, *International Journal of Mental Health Promotion*, 16:1, 67-80, DOI: [10.1080/14623730.2014.888894](https://doi.org/10.1080/14623730.2014.888894)

To link to this article: <http://dx.doi.org/10.1080/14623730.2014.888894>

PLEASE SCROLL DOWN FOR ARTICLE

Taylor & Francis makes every effort to ensure the accuracy of all the information (the "Content") contained in the publications on our platform. However, Taylor & Francis, our agents, and our licensors make no representations or warranties whatsoever as to the accuracy, completeness, or suitability for any purpose of the Content. Any opinions and views expressed in this publication are the opinions and views of the authors, and are not the views of or endorsed by Taylor & Francis. The accuracy of the Content should not be relied upon and should be independently verified with primary sources of information. Taylor and Francis shall not be liable for any losses, actions, claims, proceedings, demands, costs, expenses, damages, and other liabilities whatsoever or howsoever caused arising directly or indirectly in connection with, in relation to or arising out of the use of the Content.

This article may be used for research, teaching, and private study purposes. Any substantial or systematic reproduction, redistribution, reselling, loan, sub-licensing, systematic supply, or distribution in any form to anyone is expressly forbidden. Terms & Conditions of access and use can be found at <http://www.tandfonline.com/page/terms-and-conditions>

Bullying phenomenon and preventive programs in Cyprus's school system

E. Sismani Papacosta^{a,b*}, A. Paradeisioti^{a,b} and Ch. Lazarou^{a,b}

^aMinistry of Health, Mental Health Services, Nicosia, Cyprus; ^bMinistry of Education and Culture, Educational Psychology Service, Nicosia, Cyprus

(Received 3 October 2013; final version received 11 November 2013)

A number of preventive programs and interventions regarding bullying phenomenon in schools in Cyprus and an epidemiological study of this phenomenon are presented in this paper. The epidemiological study and the preventive programs presented were developed in the European context of Daphne II, and Daphne III, coordinated by Greece with Coordinating Organization, the «Association for the Psychosocial Health of Children and Adolescents». Other countries involved were; Cyprus, Lithuania, Poland and Germany. The aim of these programs was to educate primary school students about bullying and its diverse forms, to provide them the necessary guidelines to identify bullying behavior and to develop the necessary mechanisms for reporting it. Findings suggest that bullying in schools in Cyprus is a reality and can cause victims PTSD symptomatology serious problems in mental health and overall functionality.

Keywords: Bullying, post-traumatic syndrome, mental health, preventive interventions

Introduction

The effects of bullying on the learning process as well as on the children and adolescents' emotional development may be devastating and profound. Bullying is one form of violent behavior and refers to the intentional and persistent aggressive behavior towards others, such as physical hitting, verbal harassment, spreading of false rumors, social exclusion and use of the Internet or cell phones for sending nasty messages (Olweus, 1996). The relation between the victim and the victimizer is based on power issues. The Bully acts intentionally to harm his or her victims as this gives him or her great satisfaction. The victimizer takes advantage of his or hers victim's weakness and abuses him/her physically, psychologically and verbally.

Today, bullying is considered as a mental health issue with severe social and psychological consequences. The role of school in the generation of the phenomenon of bullying is complex and schools have the potential to act as control agents. It is possible that schools can, by the experiences they offer to students, either reduce or enhance the risks associated with the child's personal characteristic and background. It is likely that some schools are more effective at controlling delinquent behavior and crime (Gottfredson & Gottfredson, 1985). However, even the less competent school in relation to violence offers some levels of control and supervision within the school environment. Studies suggest that dropping out does not reduce violence (Gottfredson & Gottfredson, 1992). Rather, it might increase violent behavior due to the lack of supervision and the amount of unproductive time for unemployed persons after leaving schools. Numerous studies have shown that truancy constitutes a substantial risk factor for bullying (Farrington, 1995; Graham & Bowling, 1995).

*Corresponding author. Email: ernie.sismani@gmail.com

According to international data, one out of seven school children has been exposed to some form of bullying behavior (Olweus, 1991, 1993, 1996). The percentage of students-victims in Cyprus reaches approximately 10%, Report – Daphne II Programme (Stavrinides, Paradesiotou, Tziongouros, & Lazarou, 2010). Children and adolescents who face various psychosocial difficulties are more vulnerable in getting involved in bullying phenomena. Depression has systematically been related to bullying in children and adolescents (Craig, 1998; Kaltiala-Heino, Rimpela, Marttunen, Rimpela, & Rantanen, 2000; Kumpulainen, Rasanen, & Puura, 2001), with the victims reporting more depression symptoms (Kaltiala-Heino et al., 2000; Kumpulainen et al., 2001). Children and adolescents who experience bullying also report more stress-related symptomatology (Craig, 1998; Graham & Juvonen, 1998; Grills & Ollendick, 2002; Olweus, 1995; Salmon, James, Cassidy, & Javaloyes, 2000). Stress disorder is related to both student-victims and student victimizers (Bernstein & Watson, 1997; Craig, 1998; Swearer, Song, Cary, Eagle, & Mickelson, 2001). The role of depression and stress and their relation to bullying is still under investigation and it is still not clear whether they caused, pre-exist or developed after the bullying experience. There is a significant lack of research in Cyprus conducted in the school system and thus a consequent lack of adequate research-based intervention programs (preventive or therapeutic in nature) within the schools.

Little research has been conducted in Cyprus that identifies the motivating and contextual variables that influence bullying behavior. Some recent studies in Cyprus regarding Bullying (Georgiou, 2008a, 2008b, 2008c; Georgiou & Stavrinides, 2008; Kokkinos & Panayiotou, 2004; Kyriakides, Kalogirou, & Lindsay, 2006) also support the role of context (school and family) in the development of bullying behavior.

In *Cyprus*, from a sample of 12- to 15-year-old Greek Cypriots from two junior high schools, 8.4% reported being bullies only, 15.25% being bully/victims and 21.5% being victims only (Kokkinos & Panayiotou, 2004); bully-victims appear more temperamental than the rest of the bullying groups and according to their mothers, have difficulty controlling their anger (Georgiou & Stavrinides, 2008). The bully-victims group has been characterized as the most disturbed one (Brunstein, Marrocco, Kleinman, Schonfeld, & Gould, 2007), showing the greatest psychopathology (Kokkinos & Panayiotou, 2004). For example, Kokkinos and Panayiotou (2004) found associations between bullying and disruptive behavior symptoms. Specifically, the researchers found that Oppositional Defiant Disorder (ODD) was a predictor of victimization while bullying was highly predicted by presence of Conduct Disorder (CD) but not ODD. These researchers suggested that as CD psychopathology is a precursor of adult antisocial behavior, it may be that bullying behavior, which has been characterized by the lack of empathy towards victims and a strong need to dominate others (Olweus, 1991), 'is the same trait that is prodromal to later, serious psychopathology and antisocial acts' (p. 529). Fanti, Frick, and Georgiou (2009) found evidence suggesting that Greek Cypriot adolescents characterized by higher levels of callous unemotional traits (i.e., lack of empathy, shallow and constricted emotions) were more likely to exhibit combined proactive and reactive aggression, pure bullying behavior and combined bullying and victimization.

Pancyprrian epidemiological study for bullying phenomenon in schools

The study of the phenomenon of bullying in schools is not well established in Cyprus. There were some research studies in the past, but there was a lack of a Pancyprrian epidemiological study to define the problem. It was also essential to inform and sensitize the school system, parents, pupils and public opinion on the phenomenon.

Research goals

The goals of the epidemiological study were to:

- (a) Investigate how students perceive, understand and survive through bullying.
- (b) Record the frequency of this phenomenon in the Cyprus school environment.
- (c) Investigate the attitude of students in relation to the phenomenon of bullying and the relationship between attitude, sex and cultural orientation.
- (d) Investigate and identify student needs necessary to overcome this phenomenon successfully.

Methodology

Participants. The participants of the study were 1645 students randomly selected from schools in rural, urban and suburban areas of Cyprus. The sample consisted of 482 elementary school students and 1163 high school students and it represents 4.2% of the total student population of these grades. Of those, 51.8% were females and 49.2% were males. All students were given a standardized questionnaire that targeted the goals of this research study. They were students from the 6th grade of primary schools and 1st, 2nd and 3rd grades of secondary schools. The sample was stratified according to socioeconomic characteristics of the families of the students to reflect the general socioeconomic status of Cypriot families (Table 1).

Field work

Instruments. The questionnaires were distributed to the students selected and the corresponding school classrooms. The questionnaires were handed out by the researcher. Initially, the researchers contacted the school headmasters of the schools chosen for the study to inform them of the goals, purpose and nature of this study. The questionnaires were distributed in the classrooms anonymously by School Psychologists after permission was granted to them by the Ministry of Education and Culture, and the school headmasters. In addition to the aforementioned procedures, the successful completion of the study required to further have a team of 'contact persons.' This team comprised mostly of School Psychologists who were given specific instructions, and their role was to keep in touch with the participating schools.

For the needs of this phenomenological study, the questionnaire used was the 'The Greek Modification of Olweus Bully Victim Questionnaire Olweus (1995) – BVQ (for elementary and high school students) based on Greek version.' The questionnaires for elementary and high school students were similar but differ in several questions. These differences were presented in the debriefings that followed the study. Overall and whenever possible, a common ground was found between the student sample and question differences. Wherever this was not possible, separate statistical analyses were made to

Table 1. The participating students by age and gender.

	Elementary students	High school students	Total
Males	226	567	793
Females	256	596	852
Total	482	1163	1645

resolve the difference. Detailed psychometric properties of the BVQ are shown in Table 2. The subscale of Bullying shows a mean of 10.06 and a standard deviation 4.70, and the Victimization subscale shows a mean of 10.74 and a standard deviation of 4.62 (Table 2).

Findings

Exploratory Factor Analysis with Varimax Rotation was performed on the Revised Bullying and Victimization Questionnaire to examine the factor structure and the construct validity in the Greek-Cypriot sample. The results revealed statistically adequate indices (two factors were extracted reflecting bullying and victimization). To identify the epidemiological prevalence of bullying and victimization, we computed on both of the subscales the scores of the students that were one standard deviation above the mean (moderate bullies, moderate victims) and two standard deviations above the mean (severe bullies, severe victims). Results indicated that 90.6% of the participants were categorized as non-involved, whereas 3.9% of the students were categorized as moderate bullies and 5.5% as severely bullies. On the victimization scale, 4.7% of the students were categorized as moderately victims and 6.6% as severely victims. In total, moderate and severe bullies account for 9.4% of the participants, and 11.3% of students account for moderate and severe victimization. Overall, results indicated that 83% of students remained non-involved, 5.4% are uniquely bullies, 7.4% are uniquely victims and 4.2% are bully–victims. In total, 17% of Greek-Cypriot students are involved in bullying and victimization.

Multivariate analysis of variance (MANOVA), indicated that boys scored significantly higher on the bullying subscale ($F(1,1438) = 51.74, p < 0.1 = .035$) but there were no

Table 2. Psychometric properties of the bullying and victimization subscales.

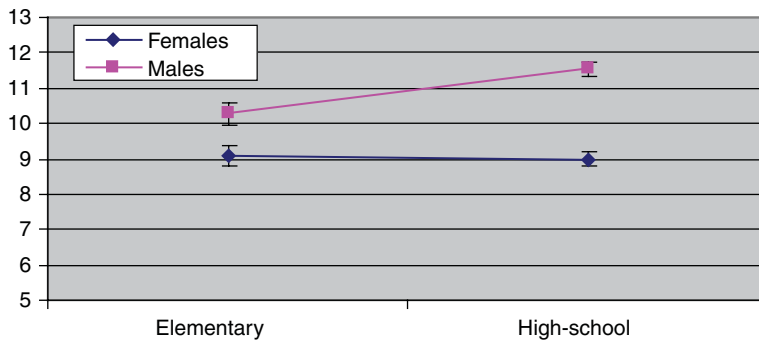
Factor (Cronbach alpha in parenthesis)	Factor eigen value	Percentage (%) of explained variance	Factor components (loading in parenthesis)
Factor 1. Bullying (.89)	4.7	29.43	Bull 1: I said bad things, teased other kids (.62) Bull 2: I excluded/ignored other children (.70) Bull 3: I hit, kicked, pushed another kid (.76) Bull 4: I lied or said bad things for another kid (.77) Bull 5: I stole money, destroyed things that belonged to another kid (.77) Bull 6: I threatened or forced other kids (.83) Bull 7: I made fun of another kid (.78) Bull 8: I frightened another kid (.73)
Factor 2. Victimization (.82)	3.6	22.51	Vict 1: I was called mean names, was made fun of, or teased in a harmful way (.68) Vict 2: I was excluded/ignored by other children (.73) Vict 3: I was hit, kicked, pushed (.66) Vict 4: I was told lies or told bad things by other kid (.74) Vict 5: Other kids stole my money or destroyed things I had (.64) Vict 6: I was threatened or forced by other children (.66) Vict 7: other kids made fun of me (.55) Vict 8: other kids made me feel scared (.49)

significant differences on the victimization subscale ($F(1,1438) = .89, p < .34$). While girls show no age differences, high school boys are significantly more involved in bullying ($F(1,1438) = 4.34, p < .05$) (see [Graph 1](#)). On the victimization subscale, elementary schoolgirls are more victimized than elementary schoolboys, whereas high-school boys become more victimized than high school girls ($F(1,1438) = 4.15, p < .05$) (see [Graph 2](#)).

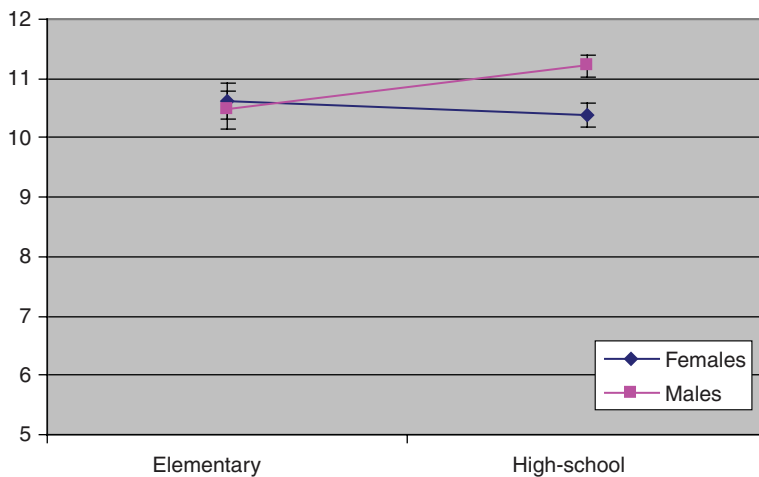
Similar results were revealed when comparing age differences. High school students scored significantly higher than primary school students on the bullying subscale ($F(1,1438) = 4.91, p < .05$), but there were no significant differences on the victimization subscale ($F(1,1438) = .69, p = .40$).

Review of major preventive programs and interventions developed in the school system

The programs in the European context of Daphne III were coordinated by Greece with Coordinating Organization, the «Association for the Psychosocial Health of Children and Adolescents (APHCA)». Other countries (partners) involved were Cyprus Ministry of Health, Mental Health Services, Department of Child and Adolescent Psychiatry, and Ministry of Education and Culture, Educational Psychology Service, Lithuania – Vsi



Graph 1. Age by gender interaction on the intensity of bullying.



Graph 2. Age by gender interaction on the intensity of victimization.

Vaiku Linija – Child Line and Poland – Nicolaus Copernicus University. The aim of the programs was to educate primary school students (pre-adolescents grades 5th and 6th of primary schools) about bullying and its diverse forms. These programs aimed further to provide the necessary guidelines for students to identify bullying behavior and develop the necessary mechanisms for reporting it to significant others. Finally, it provided suggestions and recommendations for prevention and intervention of bullying in the schools, using a very structured manual that included 11 workshops. Psychology and mental health professionals provided systematic training and supervision to teachers in implementing the program with their students at the school setting.

Findings of the projects (pre and post evaluation) suggested that the number of bullying victims decreased significantly, after the introduction of the structured manual and through the series of experiential workshops. Simultaneously, the phenomenon of bullying has become more recognizable and more understood by both teachers and their students. In addition, research confirms that the phenomenon of bullying, characterized by aggressive behavior, can cause victims Post Traumatic Stress Disorder (PTSD) symptomatology, serious problems in mental health and overall functionality.

Procedures for selecting the sample

- (a) Selection of schools from all major cities in Cyprus, namely Nicosia, Limassol, Larnaca, Paphos and Famagusta (Famagusta city itself is in the occupied part of Famagusta District – only the free areas of Cyprus Republic are included in the research).
- (b) According to the school psychologists, schools selected had a difficulty with school violence and bullying and there were many referrals from each school selected to the educational psychology services for such issues.
- (c) Staffs of the selected schools were positive and willing to have the program applied in their schools.

Instruments

1. The Olweus Bully and Victim Questionnaire (Olweus, 1996): for teachers and primary school children.
2. The Goodman's Strengths and Difficulties Questionnaire (Goodman, 2001): for teachers and students.
3. The Post-Traumatic Stress Questionnaire (Frederich, Pynoow, & Nader, 1992): for students.
4. Evaluation of the program – Questionnaires for evaluation of the program: for teachers and students of experimental schools (only to the experimental schools after the application of the program).

Findings

Based on children's answers (N = 532) on the SDQ, it appears that: (see [Table 3](#))

- More than 20% of children face emotional difficulties;
- More than 25% of children present conduct problems and relational issues;
- Only 4% of children face social skills difficulties;
- 50% of children face some difficulties as indicated by the global index of the SDQ;

Table 3. Frequency of symptomatology based on Strength and Difficulties Questionnaire (SDQ) answers of students and teachers for experimental and control group (pre and after).

		Group			
		Experimental		Control	
		Count	Column <i>N</i> (%)	Count (%)	Column <i>N</i> (%)
Emotional_Symptoms PRE grouped	Normal	176	62.4	174	69.6
	Borderline	31	11	29	11.6
	Abnormal	75	26.6	47	18.8
Contact_Problems PRE grouped	Normal	153	54.3	153	61.2
	Borderline	44	15.6	43	17.2
	Abnormal	85	30.1	54	21.6
Hyperactivity PRE grouped	Normal	257	91.1	237	94.8
	Borderline	8	2.8	7	2.8
	Abnormal	17	6.0	6	2.4
Peer_Problems PRE grouped	Normal	154	54.6	172	68.8
	Borderline	53	18.8	36	14.4
	Abnormal	75	26.6	42	16.8
Prosocial PRE grouped	Normal	243	86.2	228	91.2
	Borderline	24	8.5	14	5.6
	Abnormal	15	5.3	8	3.2
SDQ_PRE grouped	Normal	65	23	69	27.6
	Borderline	45	16	53	21.2
	Abnormal	172	61	128	51.2
Emotional_Symptom POST grouped	Normal	233	82.6	197	78.8
	Borderline	20	7.1	21	8.4
	Abnormal	29	10.3	32	12.8
Contact_Problems POST grouped	Normal	163	57.8	154	61.6
	Borderline	51	18.1	43	17.2
	Abnormal	68	24.1	53	21.2
Hyperactivity POST grouped	Normal	261	92.6	244	97.6
	Borderline	7	2.5	2	.8
	Abnormal	14	5	4	1.6
Peer_Problems POST grouped	Normal	198	70.2	199	79.6
	Borderline	30	10.6	19	7.6
	Abnormal	54	19.1	32	12.8
Prosocial POST grouped	Normal	241	85.5	211	84.4
	Borderline	25	8.9	20	8
	Abnormal	16	5.7	19	7.6
SDQ_POST grouped	Normal	114	40.4	115	46
	Borderline	58	20.6	40	16
	Abnormal	110	39	95	38

- These results, based on students' answers, point out that a significant percentage of school children face psychosocial difficulties that may develop into permanent psychological disorders, may impede their academic progress, functionality and productivity and reduce their general level of mental well-being and quality of life.

Based on teacher's answers on the SDQ it appears that:

- They have responded very differently from their students;
- They can hardly recognize children's emotional and conduct problems or hyperactivity and

- They seem to be focusing more on the area of student's relationships with peers stating that a very high percentage (80%) of students have problems with their peers and that a much smaller percentage (10%) have difficulties in pro-social relations. The very high rate of difficulties of children in the area of relationships with their peers has affected the global index in SDQ difficulties for teachers at 80%.

Questionnaire: PTSD

The PTSD questionnaire detects the percentage of children who experience bullying (for which they have personal experience) as a traumatic event. Ten percent of children reported severe to extremely severe post-traumatic stress disorder for which they needed expert help (see [Table 4](#)).

Questionnaire: The Olweus Bully and Victim Questionnaire

The Bully and Victim Questionnaire (BVQ) detects the perceptions, trends and frequency of bullying and victimization (including the various types). Based on children's responds, it appears that (see [Table 5](#)):

- 17% of students were victims of bullying at least once a week;
 - 7.7% of pupils were bullies at least once a week and
 - 6.3% of pupils were bully–victims.
- Verbal bullying was 8%, a finding that is in accordance with previous findings (Cyprus epidemiological survey conducted in 2007 for DAFNE II) using the same questionnaire; 6.9% was the reported slander and defamation, and social exclusion was reported at 6%.
 - The rate of cyber-bullying and bullying via mobile phone messages was very low (0.8%) may be due to the fact that these means are not very popular to the specific age group.
 - According to statements of the bullies, the most common types of bullying are verbal bullying at 4%, slander and defamation at 3.8% and social exclusion at 3%. Bullies appear to have lower ratings compared to victims. Cyber-bullying and bullying via mobile phone messages were very low at 1.4% (see [Table 6](#)).

Results deriving from the responses to SDQ are essentially the same for both teams. Although at the initial measurement there was a slight advantage of the control group, at the second measure, both groups showed significant progress.

The above findings can be interpreted by several factors:

- The beneficial effect of the intervention program for the experimental group.
- The possibility that schools were running various formal or informal programs of social and emotional education.

Table 4. PTSD answers of students (experimental and control) before the program.

PTSD (pre)	Frequency	%
Borderline	170	31.7
Mild	213	39.7
Average	100	18.6
Serious	49	9.1
Very serious	5	0.9
Total	537	100.0

Table 5. Frequency of bullying before the program for experimental and control group.

Evidences (pre)		Frequency	%
OLWEUS: Victims	No	302	83.0
	Yes	62	17.0
OLWEUS: Bullies	No	337	92.3
	Yes	28	7.7
OLWEUS: Both	No	345	93.8
	Yes	23	6.3

- In the case of the control group, completion of questionnaires may have sensitized children.
- The presence of psychologists–researchers in schools.
- The beneficial effects of the close relationships developing between teachers and children during the school year (may have therapeutic and healing effects).
- The time elapsed between the pre- and the post-measurement may have matured children.

It is important to note that the intervention program implemented in the five schools targeted at informing and raising awareness about bullying as well as on suggesting ways to address the problem. In addition, a secondary goal was to tackle psychosocial difficulties that some children may have faced.

In sum, research results highlight three important issues:

- The quality of the dynamics and the relationships developed in the school environment can enhance the psychological well-being of children.
- The various intervention programs of emotional education conducted during the school year can enhance the therapeutic effects that school can have on children.
- The school environment being the place where children develop their personality can be suitable for conducting intervention programs in order to improve the level of mental health of all students. This in turn can have multiple positive effects such as improving the academic progress of students and quality of life, increase their productivity and reduce the number of referrals of pupils in expensive specialized mental health services, etc.

PTSD Pupils

A total of 538 pupils answered the PTSD (283 belonged to experimental group, 255 belonged to the control group). Based on the results, once again the experimental group was more psychologically impaired (even slightly) compared to the control group (see [Table 7](#)).

Table 6. Forms of bullying reported by students before the program (experimental and control).

Forms of bullying	Victims	%	Bullies	%
Verbal bullying	29	8.0	14	4
Spreading rumours	25	6.9	13	3.6
Social exclusion	22	6.1	13	3.8
Cyber bullying	3	0.8	5	1.4
Discrimination	12	3.3	8	2.2
Sexual harassment	13	3.6	8	2.2

Table 7. Comparison between experimental and control (pre and post).

		Group			
		Experimental		Control	
Degree of PTSD		<i>f</i>	%	<i>f</i>	%
Pre	Borderline	86	30.4	84	33.1
	Mild	112	39.6	101	39.8
	Average	55	19.4	45	17.7
	Serious	27	9.5	22	8.7
	Very serious	3	1.1	2	.8
Post	Borderline	144	50.9	124	48.6
	Mild	85	30.0	83	32.5
	Average	33	11.7	36	14.1
	Serious	21	7.4	10	3.9
	Very serious	0	.0	2	.8

There was a statistically significant difference ($p \leq 0.0001$) between the first and second measurement of the experimental group, indicating a reduction of PTSD symptoms.

The two groups were similar both in size and the global value of post-traumatic stress during the initial measurement. There was a statistically significant reduction in post-traumatic stress in both groups. Consequently, the reduction of symptoms was most likely due to multifactorial causes of similar nature described previously about the SDQ results. In the case of the experimental group, the reduction was slightly larger, which may support the hypothesis that the intervention contributed to a further reduction of post-traumatic stress symptoms. It would be useful to further investigate individual cases of students belonging to a risk group (i.e. high post-traumatic stress during the original measure, victims of bullying, etc.) in order to examine in depth the nature of change occurred.

Initially, in order to investigate further the above change, cases of children (from both experimental and control groups) that had a total value of post-traumatic stress greater than 40 (i.e. severe or very severe post-traumatic stress) were selected. The statistical analysis showed that this group of children (from both experimental and control group) had a similar reduction of post-traumatic stress. It is very interesting to see that the improvement shown by the second measurement (compared to the first) in both groups in this category of children was much higher! Specifically, the difference in the means between pre- and post-measurement in this category of children was around 20–22 points while for the whole sample the difference was only about 4–5 points. It is very encouraging the fact that the specific program, as well as other interventions possibly running in the schools – in addition the close student–teacher relationships developing – had a positive impact on children as shown by the statistically significant reduction of post-traumatic symptomatology.

Olweus Questionnaire (BVQ)

There was no statistically significant difference between the two measurements (pre and post) regarding the number of victims, bullies and bully–victims in the control group (Wilcoxon signed ranks test, $p > 0.05$). There was no significant change between the first and second measurement (see Table 8).

A statistically significant difference between the two measurements (pre and post) regarding the number of victims, bullies and bully–victims was found only in the case of victims (Wilcoxon signed ranks test, $p = 0,02$). The initial measurement of the victims

Table 8. Comparisons between groups and questionnaires – OLWEUS experimental (pre and post).

Students		Count	Column <i>N</i> (%)
Victims PRE	NO	144	80.9
	YES	34	19.1
Victims POST	NO	158	88.8
	YES	20	11.2
Bullies PRE	NO	165	92.7
	YES	13	7.3
Bullies POST	NO	158	89.3
	YES	19	10.7
Victims and bullies PRE	NO	169	93.9
	YES	11	6.1
Victims and bullies POST	NO	171	95.5
	YES	8	4.5

was 34 (19.1% of the sample) while in the second measurement it decreased to 20 (11.2%). The intervention program carried out in the experimental group seems to have had a significant impact in reducing the number of victims of bullying to a significant extent. On the other hand, the number of bullies increases, however not statistically significant, as it seems that after the intervention program children are more ready to acknowledge their actions. There was no statistically significant difference between the two measurements (pre and post) regarding the number of victims, bullies and bully–victims in the control group (Wilcoxon signed ranks test, $p > 0,05$). There was no significant change between the first and second measurement.

Comparative results based on all clinical sample victims of bullying – not victims during the initial measurement:

A statistical analysis was conducted in order to examine whether there was a statistically significant difference between these two groups with regards to PTSD and the SDQ (students and teachers) as well as the demographics of children. Victims of bullying identified in both the experimental and control groups during the initial measurement had much higher ratings in both the PTSD questionnaire and the SDQ than other children. This difference is statistically significant (see [Table 9](#)).

The following comments can therefore be made:

- The reasonableness and consistency characterizing the responses of victims of bullying on both the SDQ and BVQ confirm the reliability of their answers.
- This survey confirms that the phenomenon of bullying is a serious aggravating factor in the Mental Health of the school population and affects many areas of human behavior as well as mental well-being.
- School victimization could cause PTSD symptomatology.

In the case of SDQ questionnaire completed by teachers no statistically significant differences were found between the two groups of children (victims of bullying and non-victims) with the exception of the subscale Emotional Symptoms (emotional symptomatology). This suggests that the assessment of teachers on the SDQ is far from that of students.

- A possible cause of the difference between teacher and student assessment may be the fact that some of the psychological dimensions examined by the SDQ had to do primarily with the ‘inner world’ of children.

Table 9. Comparisons between groups and questionnaires.

	Independent samples test					
	Levene's test for equality of variances		t-test for equality of means			
	F	Sig.	t	df	Sig. (2-tailed)	Mean difference
Total score (PTSD) PRE	16.434	.000	-8.719	361	.000	-14.233
			-7.085	74.786	.000	-14.233
Students' emotional symptoms – PRE	.252	.616	-6.994	362	.000	-2.154
			-6.556	82.856	.000	-2.154
Students' conduct disorder – PRE	4.532	.034	-3.526	362	.000	-.835
			-3.180	80.308	.002	-.835
Students' hyperactivity–PRE	.441	.507	-2.504	362	.013	-.649
			-2.468	86.623	.016	-.649
Students' peer relation – PRE	.448	.504	-4.347	362	.000	-1.296
			-4.556	92.234	.000	-1.296
Students' pro-social – PRE	3.383	.067	-.127	362	.899	-.032
			-.109	77.479	.914	-.032
Students: SDQ total – PRE	.002	.960	-6.562	362	.000	-4.966
			-6.502	87.096	.000	-4.966
Teachers' emotional symptoms – PRE	3.757	.053	-2.398	362	.017	-.570
			-1.993	75.812	.050	-.570
Teachers' conduct disorder – PRE	6.286	.013	-1.609	362	.108	-.376
			-1.309	74.803	.195	-.376
Teachers' hyperactivity – PRE	3.469	.063	-.389	362	.697	-.067
			-.355	81.050	.723	-.067
Teachers' peer relation – PRE	.122	.727	.894	362	.372	.138
			.874	86.016	.384	.138
Teachers' pro-social – PRE	5.065	.025	.985	362	.325	.312
			.859	78.366	.393	.312
Teachers: SDQ total PRE	2.380	.124	-1.140	362	.255	-.563
			-.988	77.964	.326	-.563

- However, this questionnaire also assesses behaviors that can easily be perceived by teachers such as 'hyperactivity, relationship with peers' and yet it appears through research results that there is great disparity in teacher–student responses.
- Teachers need systematic training focusing on children's mental health, so they can identify any problems of students in this area, can handle minor problems and promptly refer to relevant specialist services.
- Teachers also need information about the phenomenon of bullying; in particular, they should be trained on how to recognize and handle it.

Discussion

The findings of the survey provide much-needed and long-awaited knowledge about bullying among primary school children in Cyprus. Such knowledge can be used by future researchers as well as by officials in the Ministry of Education and Culture who would like to introduce bullying-prevention intervention programs in schools. Schools presented their programs at the end of the school year 2010, to parents, educators and the community

through theatres, paintings, songs, dances and other celebrations. A conference was also held that presented the findings to the public, at which educators, students and educational psychologists had the opportunity to discuss the program and make suggestions for future planning. The Transnational Project 'Increasing the awareness and prevention of bullying among pupils: develop and implement a training curriculum for educators' (Awareness raising and prevention on bullying among students: development and implementation of a school-based training program for teachers) seemed to have had positive results as implemented at the elementary school level. This research project has shown that the number of victims of bullying decreased significantly after the introduction of a structured tool and through a series of experiential workshops. Simultaneously, the phenomenon of bullying has become more recognizable and more understood by both teachers and the students. This research confirms the findings of previous studies (Daphne II, ISRD-2) in relation to bullying in schools in Cyprus. Research findings suggest that the phenomenon of bullying in schools is a reality and is a serious aggravating factor in the mental health of the school population affecting many areas of human behavior and mental well-being. In addition, research confirms that the phenomenon of bullying, characterized by aggressive behavior, can cause victims PTSD symptomatology, resulting in serious problems in mental health and overall functionality. The school must provide security and protection to all children so that they can develop their skills in a healthy human environment.

Based on the research data obtained, the following are suggested:

1. Development of prevention and intervention programs in schools, in primary and secondary education in order to increase awareness and understanding of the phenomenon of bullying.
2. These programs should be integrated into the curriculum so that they can be operated effectively.
3. Each such program implemented in the school needs to be addressing all educational partners (parents, students and teachers) in order to be effective.
4. Teachers need to receive systematic training on bullying and ways to address it.
5. Teachers need to develop the skills needed for prompt and early recognition and handling of problems of bullying in order to prevent serious disruption and negative effects on the mental health of children.
6. There is a need to train teachers to be able to recognize the needs of the school unit as a whole as well as the individual needs of every student.

References

- Bernstein, J. Y., & Watson, M. W. (1997). Children who are targets of bullying: A victim pattern. *Journal of Interpersonal Violence, 12*, 483–498.
- Brunstein, K., Marrocco, F., Kleinman, M., Schonfeld, I., & Gould, M. (2007). Bullying, depression and suicidality in adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry, 46*, 40–49.
- Craig, W. M. (1998). The relationship among bullying, victimization, depression, anxiety, and aggression in elementary school children. *Personality and Individual Differences, 24*, 123–130.
- Fanti, C., Frick, P., & Georgiou, S. (2009). Linking callous-unemotional traits to instrumental and non-instrumental forms of aggression. *Journal of Psychopathology and Behavioral Assessment, 31*, 285–298.
- Farrington, D. (1995). Understanding and preventing bullying. In M. Tonry (Ed.), *Crime and justice: A review of research* (Vol. 17, pp. 348–458). Chicago, IL: University of Chicago Press.
- Georgiou, St. (2008a). Beliefs of experienced and novice teachers about achievement. *Educational Psychology, 28*, 119–131.

- Georgiou, St. (2008b). Bullying and victimization at school: The role of mothers. *British Journal of Educational Psychology*, 78, 109–125.
- Georgiou, St. (2008c). Parental style and child bullying and victimization experiences at school. *Social Psychology of Education*, 11, 213–227.
- Georgiou, St., & Stavrinides, P. (2008). Bullies, victims and bully–victims: Psycho-social profiles and attribution styles. *School Psychology International*, 29, 574–589.
- Georgiou, S. N. (2008). Bullying and victimization at school: The role of mothers. *British Journal of Educational Psychology*, 78, 109–125.
- Gottfredson, G. D., & Gottfredson, D. C. (1985). *Victimization in schools*. New York, NY: Plenum.
- Gottfredson, G. D., & Gottfredson, D. C. (1992). *Development and application of theoretical measures for evaluating drug and delinquency prevention programs*. Paper presented at the annual meeting of the American Society of Criminology, New Orleans.
- Goodman's Strengths and Difficulties Questionnaire (Goodman, 1997). Adaptation in Greek: Bibou, Stogiannidou, Kioseoglou, 2001.
- Graham, J., & Bowling, B. (1995). *Young people and crime* (Home Office research study no. 145). London: HMSO.
- Graham, S., & Junonen, J. (1998). Self-blame and peer victimization in middle school: An attributional analysis. *Developmental Psychology*, 34, 587–599.
- Grills, A. E., & Ollendick, T. H. (2002). Peer Victimization, global self-worth, and anxiety in middle school children. *Journal of Clinical Child and Adolescent Psychology*, 31, 59–68.
- Kaltiala-Heino, R., Rimpela, M., Rantanen, P., & Rimpela, A. (2000). Bullying at school: An indicator of adolescents at risk for mental disorders. *Journal of Adolescence*, 23, 661–674.
- Kokkinos, C. M., & Panayiotou, G. (2004). Predicting bullying and victimization among early adolescents: Associations with disruptive behavior disorders. *Aggressive Behavior*, 30, 520–533.
- Kumpulainen, K., Räsänen, E., & Puura, K. (2001). Psychiatric disorders and the use of mental health services among children involved in bullying. *Aggressive Behavior*, 27, 102–110.
- Kyriakides, L., Kaloyirou, C., & Lindsay, J. (2006). An analysis of the Revised Olweus Bully/Victim Questionnaire using the Rasch measurement model. *British Journal of Educational Psychology*, 76, 781–801.
- Olweus, D. (1991). Bully/victim problems among schoolchildren: Basic facts and effects of a school based intervention program. In D. Pepler & K. Rubin (Eds.), *The development and treatment of childhood aggression* (pp. 411–448). Hillsdale, NJ: Erlbaum.
- Olweus, D. (1993). *Bullying at school: What we know and what we can do*. Oxford: Blackwell.
- Olweus, D. (1995). Bullying or peer abuse at school: Facts and intervention. *Current Directions in Psychological Science*, 4, 196–200.
- Olweus, D. (1996). *The revised Olweus Bully/Victim questionnaire*. Bergen: Research Center for Health promotion (Hemil Center).
- Salmon, G., James, A., Cassidy, E. L., & Javaloyes, M. A. (2000). Bullying a review: Presentations to an adolescent psychiatric service and within a school for emotionally and behaviourally disturbed children. *Clinical Child Psychology and Psychiatry*, 5, 563–579.
- Stavrinides, P., Paradeisiotou, A., Tziogkourous, C., & Lazarou, C. (2010). Prevalence of bullying among Cyprus elementary and high school students. *International Journal of Violence and School*, 11, 114–128.
- Swearer, S. M., Song, S. Y., Cary, P. T., Eagle, J. W., & Mickelson, E. T. (2001). Psychosocial correlates in bullying and victimization: The relationship between depression, anxiety, and bully/victim status. *Journal of Emotional Abuse*, 2, 95–121.
- The Post-Traumatic Stress Questionnaire (Frederich, Pynoow, & Nader, 1992) adapted in Greek by Kolaitis et al. (for Students).
- The Revised Olweus Bully and Victim Questionnaire-for students (Olweus, 1995), Adaptation in Greek: Deligianni-Kouimzi et al., 2005.