

## Efficacy Study of a Primary Intervention School Violence Program

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### Abstract

School violence is a significant public health problem and the lack of prevention and control strategies can have a major negative impact on the health of the young generation. The goal of this study was to evaluate the efficacy of a prevention and reduction program among middle-school students. The Anti-Violence Program in School is based on "Program Achieve. You Can Do It!" of Bernard to which a component for parents was added. The questionnaire for evaluating violent behavior was filled out before and after the implementation of the Anti-Violence program by a number of 264 students (122 – experimental group; 142 – control group) with an age ranging from 10 to 14 years old. The students were from two middle-schools from Cluj-Napoca, Romania. Despite obtaining an effect size of low intensity or at most medium, the results of the study still have the expected direction. It was pointed out a downward trend on the experimental group and an upward trend on the control group in the posttest stage comparing to pretest stage regarding the frequency of different forms of violent manifestations. Employing the Anti-Violence Program on a longer period of time could increase the program's efficacy.

**Keywords:** School violence; Intervention program; Middle-school

### Introduction

Youth violence is a widespread problem and significant public health issue in many countries of the world [1-5]. This phenomenon is very complex having multiple causes: familial, societal, educational (school), personal, cultural [6].

Certain researchers [7-9] assert that when schools lack strategies of prevention and/or intervention, violence can lead to negative effects on the mental and physical health of the students, as well as their social development. Thus, social and emotional wellbeing of the victims and of the bullies can be affected both on long and short term.

Regarding the negative consequences on health youth and future generations of youngsters

(taking into account the contagion effect from a generation to another) along the years there were developed different programs of prevention and intervention of school violence in numerous countries [10-14].

The general strategy for violence behavior prevention and treatment interventions is focused to reduce the modeling and reinforcement of violence as a means of solving problems and to ameliorate those social conditions which generate and support violent lifestyles [15].

Certain researchers assert that efficient interventions must focus not only on bullies, but also on spectators that encourage violent behavior in a passive or active way [16-17].

Limber [7] states that, in order to change the school climate and behavior norms, the most efficient and comprehensive strategies are those that involve the entire school.

According to Schwartz [18] the most effective school antiviolence programs employ four strategies: teaching social competence; creating a positive, calm environment; establishing behavior standards; establishing rules and regulations for responding to violence

The most successful strategies to help children develop social competence are those implemented as part of a comprehensive, multidisciplinary approach to nurturing children at home, at school, and in the community [19].

The goal of this study was to test the efficacy of "The Anti-Aggressivity Program in School" which targets the development of social and emotional abilities of the students through the influence of factors such as "school" (lessons taught by tutors during Bernard's "Program Achieve. You Can Do It!" [20] and "family" (employing *Parent's Journal* which was elaborated with the goal of realizing the objective of the present study).

## Material and Method

### *Design of the Research*

In hopes of obtaining the anticipated effects and in order to have authentic evidence on the frequency of the studied phenomenon, it was considered necessary to act at the whole school level, and include all students present at the aggressive act. Therefore, it is necessary that students from all grades from at least one gymnasium form a group, either experimental or control.

Considering this aspect, in the present study the selection of the students for the experimental and control group through the randomization method was not possible, therefore, two schools were chosen on the similarity criteria. These criteria are presented in the section participants.

The sample groups (experimental and control) were formed on the basis of the natural criteria (two gymnasium schools) and made use of a quasi-experimental type of group pre-posttest nonequivalent [21]. The used research strategy was the global evaluation of the anti-aggressivity intervention.

An imposed condition by the choice of this design (quasi-experimental) is that the chosen groups must be similar, especially regarding the dependent variables, thus, any of the groups can be taken as experimental or control.

Hence, along the choice of the two schools by certain similarity criteria, a study of "similarity" regarding to the violence frequency among them was conducted. This study represents in the same time the pre-test stage. According to the obtained results it was considered that the schools can represent the experimental and control group in the study.

### *Involved Variables*

Dependent variable - level of violent manifestations

Independent variables - Anti-aggressivity School Program

### *Conditions*

First condition - conducting the Anti- aggressivity Program with all its components. All students (N=122) from grades 5th - 6th and 7th - 8th from the school where the bullying intervention

program was implemented were involved. Thus, the students from this school (school A) formed the experimental group.

Second condition - control. Students (N=142) from grades 5th - 6th and 7th - 8th from the school where the Anti-aggressivity Program was not conducted formed the control group (school B).

*Participants*

The sample consists of 264 students (142 <53.8%> girls and 122 <46.2%> boys) of ages ranging between 10 and 14, from two middle schools in Cluj-Napoca (Table 1).

**Table 1.** Distribution of the student lot according to school and school level

School level	Experimental grup	Control grup	Total
V-VI	51	62	113
VII-VIII	71	80	151
Total	122	142	264

The schools involved in research were chosen on the similarity criteria from a number of 16 middle-schools from Cluj-Napoca city, Romania.

The similarities criteria between the two schools which were took into account were: number of students - low; social-economic-cultural level of the parents - average; school performance - average; location - neighborhood school; frequency of student behavior problems – average - compared to the middle schools in Cluj-Napoca.

*Instruments*

The Questionnaire for evaluating school violent behavior of Roşan [22] filled out by students evaluates aspects regarding aggressive events that take place in school, as well as outside school in the last three months before conducting the research. The goal is to examine the level of safety in schools and to identify the factors that cause feelings of unsafety and safety.

For this study, the first part of the questionnaire which consists of 18 items was employed. These items target violent events in which students were involved.

The set values for answering the survey items pertaining to the first and second part of the questionnaire were: 0 – never; 1 – once or twice; 2 – over two times. On the third part of the questionnaire, students were able to choose one, more or none of the answer choices. In cases where the students have chosen one or more of the choices, each was noted with “1” and the answer choices that were not chosen were noted with “0”.

The alpha Cronbach consistency index was calculated with a value alpha Cronbach = 0.76 (number of subjects = 257, number of items = 18) which reflects a high internal consistency of the items pertaining to this certain part of the questionnaire.

*Procedure*

*Stage 1. Pre-testing*

Students from both schools (experimental and control group) filled out School Violent Behavior Evaluation Questionnaire in the pre-test stage in the months of October 2009. The questionnaire was filled individually by each student during the tutor’s course. The time necessary for questioner filling was 30 minutes.

*Stage 2. Conducting The ANTI-AGGRESSIVITY Program in School*

The Anti-aggressivity Program in School was applied to the experimental group.

The objective of the Anti-Aggressivity Program in School is to prevent and minimize the frequency of violent behaviors in middle-school students.

The program targets the development of social and emotional abilities in students who manifest aggressive behaviors, victimized students, as well as non-aggressive and non-victimized students.

The Anti-Aggressivity Program in School is based on "Program Achieve. You Can Do It!" of Bernard [20] to which were added advertising materials for parents and students.

The program is comprised of: Tutor guide - refers to a set of lessons (taught to the entire class by their tutor) from the "Program Achieve. You Can Do It!" of Bernard [20] translated and adapted in Romanian. The "Program Achieve. You Can Do It!" of Bernard represent a part of the Australian program "Education. You can do!" which has as the main goal to promote welfare and socio-emotional achievements of students. The theory "You Can Do It!" is based on the idea that there is a specific set of social and emotional skills that determine the extent of success that the students register on school activities, creating positive relationships and emotional wellbeing. This program was successfully applied in more than 6000 school from United States of America, Australia, New Zealand and England. A set of 19 lessons from 34 of this volume, presented in "Tutor's Guide" were taught by tutors and the religion teacher during tutor classes (12 hours) and religion classes (6 hours), to 5<sup>th</sup>-6<sup>th</sup> grades, as well as 7<sup>th</sup> – 8<sup>th</sup> grades in School A, starting from January to June, 2010.

This is a cognitive program which teaches students to use Habits of the Mind that support and nourish: Confidence - being aware of the fact that probably you will be successful and liked by others. It means not to be afraid to make mistakes or try new things; Persistence - making an effort and not give up when things appear difficult or boring; Organisation - setting the goal of work hard in school, listen carefully what the teacher says, planning time in a way you would not have to always be in a hurry, have all the materials ready and know when papers are due; Getting-Along - getting along with teachers and colleagues, amicably resolving all misunderstandings, respecting class rules and positive contributions at school, at home and in the community, including protecting the rights of others and taking care of the environment; Resilience - know how to keep calm and not become angry, depressed or too worried when something "bad" happens. To have the ability to calm yourself and feel better when you get really upset. Moreover, to be able to control your behavior when you are extremely angry and surpass the problem in order to get back to work or play.

Beside these, the program includes activities created to inform the youth about the way they think (e.g. internal language), about how their thinking influences their feelings and behaviors and how to transform irrational, negative thoughts (which are illogical or untrue) in rational, positive thoughts (logical, true and useful) that can help them take responsibility not only for their own person, but also for the learning process.

Prior to starting teaching these lessons there was a stage (two hours) in which tutors and religion teachers were informed about the content and the objectives of the program.

During the lesson teaching stage there were established periodical meetings with the teachers at approximately 2-3 weeks (20 minutes length of time) meant to clarify problems that could emerge during the lessons.

- Advertising materials:
  - Flyers for the students "Assertiveness as a middle way between aggressivity and passivity" created with the purpose of informing the students regarding aspects which describe aggressive, passive and assertive behavior and in the same time convincing them to adopt an assertive behavior instead of a passive or aggressive behavior.
  - Parents Journal - was conceived with the purpose of familiarizing parents with some information they should know (regarding ways of developing social and emotional abilities of the child) and in the same time urge them to contribute to increase the social and emotional level of their child. These represent a self-evaluation for the parents regarding the relationship with their child and a foothold for the parents who wish to develop the social and emotional abilities of the child.

This material was sent to parents through their children at the beginning of the first class taught by tutors.

### *Stage 3. Post-test*

Students from both schools (experimental and control lot) filled out the same questionnaires from the pre-test stage. Post-test data was gathered at the end of June 2010. The questionnaire was filled individually by each student during the tutor course. The time necessary for questioner filling was 30 minutes.

### *Statistical Analysis*

For evaluating the difference significance between pre-posttest means and effect size on the experimental and control group regarding violent manifestations, there were employed different statistical methods (descriptive statistics, t-test, Cohen index, coefficient of correlation and determination). Thus, in order to gather a clear listing of each case concerning pre-posttest differences regarding violent manifestations, "t" test was employed between sample pairs on the level of each school (experimental and control group). SPSS program version 16 was used for statistical analysis.

A value of  $p < 0.05$  was considered statistically significant.

Also, in order to find out the size effect (in the situations in which significant differences were obtained between pre-test and post-test) Cohen "d" index was employed and coefficient of determination  $r^2$ .

## **Results**

According to the obtained results (Table 2), on the experimental group the frequency of violent manifestations has decreased in the posttest stage compared to the pretest stage. On the control group the frequency of the forms of violent behavior has increased in the posttest stage comparing to the pretest stage in the majority of the cases.

In the case of "hitting or shoving from the school personnel" (item 15) the frequency of these violent manifestations has significantly decreased on both groups. At the same time, the size effect is of low intensity suggesting that the results do not hold a practical importance. Another explanation for this situation could be the minimization of the emergence of violent behaviors by some of the school personnel members (control group) due to information regarding the study and monitoring of violent behaviors.

Regarding "received threatenings from a group of students" (Item 12) the frequency of these has decreased significantly in the posttest stage on the experimental group, while on the control group the frequency has significantly increased. In this case, even if the size effect is of low intensity, we can assert that the intervention is efficient. If we take into consideration the fact that at a d value of 0.22 the coefficient of determination  $r^2=0.013$  and  $r=0.0114$ , we can assert that on 114 students from 1000 the frequency of "received threatenings from a group of students on other students" (Item 12) decreases after conducting the intervention, which represents a good result.

Other statistically significant results on the experimental school were obtained in the case of "intentional hitting or shoving" (Item 15), "received threatenings from other students"(Item 8), "injured from other students" (Item 9).

Decreased intensities of the size effect were obtained for "intentional hitting or shoving" (Item 15), which shows that although statistically significant, the results do not hold great practical importance. However, we can assert that after the intervention 114 students from 1000 are not anymore intentionally hit or shoved by others ( $r^2=0.022$ ,  $r=0.148$ ).

In the case of "threatenings from other students" (Item 8) and "injured from other students" (Item 9) the values of the size effect are close to the mean which asserts that the effect seems to be important from a practical point of view. Also, this fact is supported by values of the determination coefficient  $r^2$  which have the following values for the two items: Item 8 -  $r^2=0.029$ ,  $r=0.170$ ; Item 9 -  $r^2=0.022$ ,  $r=0.148$ .

**Table 2.** Pre-posttest comparisons to experimental and control group on the frequency of violent behavior

Variables	Experimental group (N=122)					Control group (142)			
	Pretest	Posttest	t	p	d	Pretest	Posttest	t	p
1. Impact or intentionally kicked	M=0.95 SD=0.72	M=0.86 SD=0.72	2.582	0.01	0.23	M=0.91 SD=0.74	M=0.87 SD=0.76	0.925	NS
2. Impact with intent to cause harm	M=0.61 SD=0.77	M=0.57 SD=0.69	1.043	NS	-	M=0.4 SD=0.60	M=0.42 SD=0.62	-0.576	NS
3. Ownership blunt objects	M=0.14 SD=0.40	M=0.09 SD=0.30	1.747	NS	-	M=0.10 SD=0.38	M=0.08 SD=0.35	0.499	NS
4. Use of blunt objects in order to strike	M=0.20 SD=0.44	M=0.14 SD=0.4	1.122	NS	-	M=0.22 SD=0.46	M=0.23 SD=0.49	-0.377	NS
5. Medical care after altercations	M=0.10 SD=0.33	M=0.09 SD=0.29	1.420	NS	-	M=0.08 SD=0.29	M=0.06 SD=0.23	1.744	NS
6. Theft of personal items	M=0.30 SD=0.54	M=0.24 SD=0.45	1.906	NS	-	M=0.23 SD=0.47	M=0.25 SD=0.47	-0.576	NS
7. Holding and carrying a knife by students	M=0.08 SD=0.31	M=0.05 SD=0.25	1.268	NS	-	M=0.15 SD=0.44	M=0.14 SD=0.45	-0.192	NS
8. Threat from other students	M=0.58 SD=0.69	M=0.42 SD=0.61	3.718	0.000	0.34	M=0.43 SD=0.61	M=0.41 SD=0.63	0.492	NS
9. Injuries from other students	M=1.27 SD=0.76	M=1.11 SD=0.73	3.344	0.001	0.3	M=0.94 SD=0.70	M=0.96 SD=0.73	-0.729	NS
10. Insults from other students	M=0.98 SD=0.81	M=0.94 SD=0.78	0.928	NS	-	M=0.62 SD=0.65	M=0.61 SD=0.66	0.425	NS
11. Threatening with a knife by a pupil	M=0.11 SD=0.38	M=0.07 SD=0.29	1.070	NS	-	M=0.07 SD=0.30	M=0.06 SD=0.26	0.576	NS
12. Threats from a group of students from school	M=0.47 SD=0.68	M=0.36 SD=0.62	2.379	0.02	0.22	M=0.33 SD=0.59	M=0.42 SD=0.67	-2.302	0,02
13. Blackmail in the form of money or other valuables from a student	M=0.11 SD=0.36	M=0.07 SD=0.29	1.644	NS	-	M=0.04 SD=0.27	M=0.06 SD=0.31	-1.000	NS
14. Insults from school personnel.	M=0.36 SD=0.63	M=0.34 SD=0.62	0.687	NS	-	M=0.17 SD=0.48	M=0.16 SD=0.46	0.576	NS
15. Hitting or shoving by school personnel	M=0.23 SD=0.51	M=0.14 SD=0.37	2.582	0.01	0.23	M=0.11 SD=0.39	M=0.05 SD=0.22	2.166	0,03
16. Sexual harassment by school personnel	M=0.05 SD=0.18	M=0.04 SD=0.28	0.420	NS	-	M=0.02 SD=0.14	M=0.03 SD=0.18	-1.419	NS
17. Sexual harassment by a student	M=0.08 SD=0.35	M=0.04 SD=0.24	1.679	NS	-	M=0.01 SD=0.12	M=0.03 SD=0.16	-1.419	NS
18. Holding blunt objects at the school	M=0.02 SD=0.15	M=0.01 SD=0.13	0.570	NS	-	M=0.04 SD=0.25	M=0.05 SD=0.27	-1.000	NS

N=number of subjects; M=mean; SD=standard deviation; p=significance threshold ( $p < 0.05$ =statistical significance); NS=not significant; d=Cohen index;

## Discussion

The obtained results support the research hypothesis according to which along with the development of social and emotional abilities of the students, the social and emotional wellbeing will be improved, thus, the frequency of violent manifestations will decrease.

This hypothesis is based on the results of another study according to which a decrease in the social and emotional wellbeing of the students increased the probability of emergence of varied problems [23].

The size of the effect for the situations in which significant differences were obtained was generally of low intensity, which indicates the fact that although statistically significant, the results

do not hold great practical importance. Sizes of the effect of average intensity were obtained in the case of the violent behavior "cuss words addressed to teachers", which suggest that the effect appears to be important from a practical point of view.

If taken into consideration the fact that reported to 1000 students, the program is generally efficient for more than 100 pupils (which is not negligible) it can be asserted that the intervention has achieved its goal.

This study has certain limitations: as the data is gathered based on information's provided by students in only two secondary schools used as such in a single Romanian city; because of the chosen participants, the obtained results refer to a certain category of students, that is, those who come from a medium socio-economical-cultural background, study at schools from the neighborhood periphery, have average school results and often encounter behavior problems; the anti-aggressivity program was conducted on a relative short period of time (aprox. 5 months); the intervention was not evaluated per components, but globally, thus, the impossibility to know which is the weight of the contribution of these components on the obtained results.

We hope that the results provided by this study will encourage further research of violent behaviours in Romanian schools, using larger samples of students, from more schools that are picked randomly, on larger areas of the country, both urban and rural and from more age groups.

Likewise, the intervention program could be conducted on a longer period of time, and the modality to persuade the family in order to involve themselves more and in the same time teach the members how to develop the social and emotional abilities of their child should be more consistent (periodical meetings with the parents, involving them in different activities especially for this purpose etc).

## **Conclusions**

This study offers basic information regarding the efficacy of a prevention and reduction program of violent manifestations in middle-schools from Romania in which students with at most a medium socio-economical-cultural background learn.

The results confirm the decrease of the frequency of violent behavior among middle-school students due to the development of social and emotional abilities provided by The Anti-Aggressivity Program.

The present paper brings forth an added help for school consellers and teachers who work in middle-schools and are confronted with violent issues among students, offering an intervention model with the purpose of improving social and emotional abilities of the child.

Aside the intervention strategies that can be used by the teaching personnel the program also offers a pillar for parents who wish to develop the social and emotional abilities of their child through the help of an easy advertising material.

## **Conflict of Interest**

The authors declare that they have no conflict of interest.

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