

Adolescent Bullying Prevention Program in Educational Institutions: From Comprehensive Research to Modification

Valentina Panfilova¹, Aleksey Panfilov², Yulia Gerasimova³, & Yulianna Enina⁴

Abstract

The article discusses the issues of preventing bullying among adolescents in the educational organization and the design and promotion of comprehensive preventive programs for educational organizations. The relevance of the study lies in the fact that bullying of students by peers and adults, one of the most common problems in the educational environment, which significantly increases the risk of psychological trauma among adolescents, leads to an escalation of aggression and violence in groups of students, a decrease in the quality of education, to emotional and neurotic problems in adolescents both during the period of study and in future adult life. The novelty of the research is seen in the fact that it is proposed to build a bullying prevention program in an educational organization in a certain sequence: “a comprehensive study - an invariant software platform -a program modification for the specifics of an educational organization”. Such an approach has a number of effects for an educational organization: a database on the socio-communicative and personal characteristics of students' development, a database on the uniqueness of the socio-psychological climate, increasing the involvement of the teaching staff in the design and implementation of anti-bullying programs. The article describes an experimental work on unfolding the sequence of building an invariant software platform for anti-bullying programs for adolescents. Empirical research results are presented. It is proved that the proposed approach to the design, launch and promotion of preventive anti-bullying programs for adolescent students increases the awareness of subjects of the educational process about bullying, reduces the frequency of situations of school bullying, and improves the socio-psychological climate of the educational organization.

Keywords: *Bullying, adolescent, bullying prevention, comprehensive research, modification.*

Introduction

The issue of preventing situations of violence in the education system is urgent both throughout the world and in Russia. According to the United Nations, at least 1 billion children in the world are exposed to violence every year, i.e. every second child. In schools, every second child experiences peer violence (Annual Report of the Special Representative of the Secretary-General

¹ Assoc. Prof., Kazan Federal University, Russian Federation, v.panfilova2010@yandex.ru

² Assoc. prof., Kazan Federal University, Russian Federation, panfiloval@mail.ru

³ Assoc. Prof., Irkutsk National Research Technical University, Irkutsk, Russian Federation, avtos5630@mail.ru

⁴ Assistant, Sechenov First Moscow State Medical University, Moscow, Russian Federation, enina.yu.i@mail.ru

on Violence against Children, 30 July 2019). In Russia, annually, on average up to 30% of young people aged 14 to 18 are exposed to violence in a certain way. About one-fifth of all cases of violence against children, adolescents, and adults occur in the education system.

Harassment of students by peers and adults, the so-called bullying, is one of the most common problems of educational organizations today, which significantly increases the risk of psychological trauma among adolescents, leads to an escalation of aggression and violence in the team, decreased academic performance, emotional and neurotic problems. At school, bullying is more common among adolescents. Firstly, this happens because adolescence is the most difficult, conflicting and contradictory stage of personality development, there is a struggle for leadership, conflicts. Secondly, the educational environment is the most important sphere of social interaction for most adolescents (Camarero-Figuerola et al., 2020; Shatunova et al., 2021). In this regard, the issue of preventing bullying in an educational organization becomes especially relevant: attracting the attention of the school community to create conditions that prevent the occurrence of this phenomenon, teaching teachers and parents the skills to recognize a bullying situation against a child, timely help, correct adult behavior tactics, if bullying has already taken place.

The urgency of the problem of preventing teenage bullying at school is that universal methods of dealing with this problem have not been created. Many pedagogical collectives are not ready psychologically and methodically to diagnose the reasons for bullying among adolescents, cannot identify the personality traits of adolescents involved in bullying, do not know the technologies for developing preventive programs taking into account the specifics of a particular educational organization. As a result, the necessary support and assistance is not provided on time for “victims” and “offenders”. Teenagers participating in bullying in an educational organization cannot cope with the bullying situation on their own without the intervention of school teachers, which negatively affects their psychological state and may have negative consequences in future adult life.

Research Questions

To guide the research process, the following two research questions are sought to answer:

- 1) What personality similarities among adolescent school bullying are indicated in the prevention program of education institution in the comprehensive research to modification?

- 2) What level of aggression and hostility do students indicate in the prevention program of education institution in the comprehensive research to modification?
- 3) What anti-bullying programs are implemented in the education institutions in the comprehensive research to modification?

Theoretical Review

The phenomenon of bullying in the adolescent environment of an educational organization in the last decade has increasingly become a problem of pedagogical, social, and psychological research. Many researchers in their works (Furmanov, 2014; Grebenkin, 2016; Hieneman et al., 2015; Kon, 2006; Lane, 2011; Olweus, 1993; Sobkin & Markina, 2009; Vishnevskaya & Butovskaya, 2010) point out that bullying develops and becomes more active in a closed community. Any educational institution is a rather closed community with its own socio-pedagogical boundaries. Research shows that bullying in its most violent and visible forms are most common in schools. Evidence of this is the avalanche-like video recordings of bullying of peers and school teachers appearing on the Internet.

In many countries of the world and in Russia, this phenomenon is acquiring new characteristic features: an increase in the diversity of species (a new type, cyberbullying, has been added to the known types of bullying); scale; regularity. Bullying is a concept denoting harassment, violence, discrimination. This is a special type of physical or moral violence of one person and/or group against another person/other people, mainly manifested in children's groups. The problem of bullying in children's communities in educational institutions has been known for a long time. The first mentions of this problem were recorded at the beginning of the 20th century and belong to Dukes, who published an article on school bullying (Mosina & Ustenko, 2016). Later in the 1970s, the study of the problem of bullying became systemic and associated with the names of the researchers (Hieneman et al., 2005; Olweus, 1993; Olweus et al., 2007; Pikas, 2002). In the 1990s, research on bullying problems was undertaken by several scholars (Cross, 2017; Dix et al., 2013; Dix et al., 2012; Lane, 2001; Ortega et al., 2004;). Definition of bullying appears in table 1.

Table 1
Definitions of bullying

Despite the existing history of studying the problem of bullying, Russian researchers began to actively deal with this problem only at the beginning of the 21st century. Bochaver & Khlomov, 2013; Grebenkin, 2016, Glazman, 2009	The meaning of the concept of bullying
E.V. Zmanovskaya, D. Olweus, T. Fuld	bullying is a type of behavior that harms mental and physical health
V.R. Petrosyants, D.N. Solovyova	bullying is a destructive interaction aimed at causing physical or mental harm to health (Petrosyants, 2011)
D. Lane	bullying is deliberate harm to others, manifested in a physical way (violent actions, physical harm, involvement in the use of psychoactive substances) or psychological pressure (insult, threats) (Lane, 2001)
E. Miller	bullying is a process of deliberately abusing a group of people or one person to a weaker child
I.S. Kon	bullying is intimidation, psychological or physical terror in order to create fear in others and subdue them (Kon, 2006)
S.V. Krivtsova	bullying is a manifestation of the aggression of some children against others, when there is an inequality of forces between the aggressor and the victim, the aggression tends to recur (Krivtsova, 2011)
I.G. Malkina-Pykh	bullying means the actions of the aggressor towards his victim, focused on humiliating the individual through emotional, physical or sexual violence and aggression (Malkina-Pykh, 2005)
O.A. Maltseva	bullying in the behavior of children and adolescents is the harsh treatment of children and neglect of their interests (Maltseva, 2009)

Based on the above interpretations, it can be argued that bullying is a complex social, psychological, and pedagogical phenomenon that brings physical, psychological, and moral harm to a child in the school social environment (Ajaps & Obiagu, 2020; Camarero-Figuerola, 2020; Donohue, 2020; Volkova et al., 2020). There are three main directions, in which it is necessary to conduct research on bullying in the school social environment: studying the personal and individual properties and qualities of the offender and victim of a certain age and gender; studying the socio-psychological characteristics of the processes of bullying and victimization (how one student makes another student his or her victim) in an educational institution; studying macro- and micro-social patterns of development of groups of students of different ages, different student communities, as well as from mixed communities: school teachers – students in an educational institution.

Adolescent Bullying

The analysis of the above scientific research and actual educational practice showed that adolescent students were most susceptible to bullying in an educational institution. In our research, our opinion is that there are objective and situational grounds for bullying adolescents in the school social environment. We consider the characteristics of age development and individual personality traits of adolescents to be the objective grounds for bullying.

Teens are more likely to be rebellious, deviant, addictive, and bully peers. Bullying in adolescence manifests itself as a destructive form of behavior, with the help of which adolescents meet natural needs to fulfill their potential in interpersonal communication with their peers, to create a group structure based on domination in the school adolescent community. Therefore, a dominant adolescent (offender) has a desire to take a leading position at the expense of his or her classmates or students who are younger in age. This is when an offender (bully) and a victim appear in an educational institution (Breslav, 2016). Bullying can also occur if a teenager has certain individual personality traits, among which aggressiveness is most often distinguished. Over the past few decades, scientists have noted an increase in the number of adolescents with a high level of aggression and aggressive behavior (Ushakova, 2009).

Thus, the main feature of an adolescent offender (bully) in the school social environment is increased aggressiveness, cruelty, desire for power, domination. They usually have a positive attitude towards all types of aggressive behavior; enjoy manifesting their aggression and manipulating others.

Bullying in Education

Teenage bullying is impossible in the school social environment without victims. The appearance of bullying victims also has objective and situational reasons. The victims of bullying in an educational institution are most often: introverted, anxious, insecure adolescents who have difficulties in interpersonal interaction with peers; adolescents of both sexes with low self-esteem and lack of expressed educational motivation; adolescents with psychosomatic disorders; adolescents with attention deficit disorder, speech and physical defects, chronic diseases, diseases of the autism spectrum, “too feminine” ones. By school teenage bullying in the current study, we

mean the actions of a “bully” or a group of “offenders” in school life situations in relation to their “victim” (a peer or younger), focused on humiliating a person through emotional and/or physical violence and aggression.

The most often type and manifestation of school teenage bullying in educational institutions is physical and psychological school bullying. Violence associated with an effect on the psyche, causing psychological trauma through verbal abuse or threats, which deliberately inflicts emotional insecurity (an offensive name or nickname with which the victim is constantly addressed, name-calling, ridicule, spreading offensive rumors, endless remarks, biased assessments, humiliation in the presence of other children, spitting, direction, showing indecent gestures, use of threats, blackmail, deliberate isolation, distribution of insulting notes, derogatory inscriptions on the blackboard, in public places of school extortion of money, valuables and objects, theft, robbery, hiding the victim's personal belongings. School cyberbullying became to manifest itself very actively - insult, humiliation via the Internet, social networks, e-mail, telephone or through other electronic devices (sending ambiguous images and photographs, anonymous phone calls, name-calling, spreading rumors are injured, victims of bullying are filmed and posted on the Internet).

To the situational grounds of bullying, we refer to the features of the influence of the school social environment of a particular educational institution on the attitude towards the phenomenon of bullying. Firstly, the positive reinforcement in the school social environment becomes aggressive behaviors of the adolescent bully. As a result, offenders may develop negative personal and behavioral attitudes characteristics: confidence that they will be able to subdue any peers and younger ones at will; desire to be in the spotlight; striving to be a leader in all situations; aggressiveness and weak self-regulation are manifested. Secondly, the absence in a specific educational institution of the emotional background can create a negative attitude towards offenders (bullers) and the position of protecting the victim. Adolescence is one of the most difficult stages in personal development. During this period of life in the school social environment, students undergo a transformation of psychological structures that have developed in childhood, the foundations of conscious behavior are laid, and a general direction in the formation of moral ideas and social attitudes emerges. During adolescence, dangerous behavior such as bullying becomes active. Therefore, the problem of preventing bullying manifestations

among adolescents occurs in the school social environment. The analysis of the experience of using bullying prevention programs (Hieneman et al., 2005; Lane, 2001; Petrosyants, 2011) in the school social environment shows that the use of programs significantly reduces the number of adolescent students (from 30 to 50%) who have been exposed to or have subjected their peers to school bullying.

Thus, in order to reduce the incidence of bullying, it is necessary to carry out preventive work with real and potential participants. We believe that preventive work to prevent bullying of adolescents in an educational organization will be effective if the teaching staff of an educational organization is able to carry out a comprehensive study to identify the individual psychological characteristics of adolescents in an educational institution as potential participants in bullying. The revealed individual psychological characteristics of adolescents in an educational institution become the basis for constructing an invariant of an anti-bullying program. With the similarity of the individual psychological characteristics of adolescents, the invariant of the program can be used in different classes of the school and even in different educational institutions.

Specialists of the educational institution like social teachers, psychologists, teachers modify the invariant of the preventive program to the level of an effective program. It is necessary to modify an invariant program for an educational institution on a situational basis. It is a fact that the manifestations of bullying in any educational institution have specific features: they are latent, mediated by the existing system of social, psychological and pedagogical relations, behavioral reinforcements in the educational institution.

Methods

Design

This study is a survey design (Creswell, 2009). Survey research is a quantitative research method used for collecting data from a set of panel or respondents (Creswell, 2014; Rowley, 2014). This study examined how bullying prevention was programmed in an educational program that emphasized modification of institutional policy. As a survey research quantitative analysis was utilized applying descriptive statistic and t-test. This research was carried out in educational institutions, during the implementation of the educational program for one academic year. This study took place in Nabereshnye Chelny, Nishnekamsk, Elabuga and Mendeleevsk, Russia.

Sample

This study applied census research and recruited 800 students consisting of 399 (49.87%) aged 13-14 year old, and 401 (50.13%) aged 14.5-15.5. The students came from 14 city schools in four cities: Nabereshnye Chelny, Nishnekamsk, Elabuga and Mendeleevsk. The cities were selected as research setting because adolescent bullying was reported to increase at the cities and adolescents have been the major objects of education reform in the cities. Distribution of the sample appears in table 2.

Table 2

Sample description

School	city	Age 13,5-14,5		Classes	age 14,5-15,5		Class	total subjects	
		number of subjects	percentage of subjects		Number of subjects	percentage of subjects		number of subjects	percentage of subjects
1.	NCH	25	3,125	6	25	3,125	8	50	6,25
2.	NCH	50	6,25	6,7	50	6,25	7,8	100	12,5
3.	NCH	25	3,125	6	25	3,125	7	50	6,25
4.	NCH	25	3,125	6	24	3,0	8	49	6,125
5.	NCH	25	3,125	7	25	3,125	8	50	6,25
6.	NCH	25	3,125	7	25	3,125	8	50	6,25
		175	21,875		174	21,75		349	43,625
7.	N	25	3,125	6	27	3,375	7	52	6,5
8.	N	50	6,25	6,7	50	6,25	7,8	100	12,5
9.	N	26	3,25	7	25	3,125	8	51	6,375
10.	N	25	3,125	7	25	3,125	8	50	6,25
		126	15,75		127	15,875		253	31,625
11.	E	24	3,0	6	25	3,125	8	49	6,125
12.	E	24	3,0	6	25	3,125	8	49	6,125
		48	6,0		50	6,25		98	12,25
13.	M	25	3,125	7	25	3,125	7	50	6,25
14.	M	25	3,125	7	25	3,125	7	50	6,25
		50	6,25		50	6,25		100	12,5
		399			401			800	

Note: NCH – Nabereshnye Chelny; N – Nishnekamsk; E – Elabuga; M – Mendeleevsk

Research Instrument

Major research instrument of this study is an online survey questionnaire. The questionnaire examined level of aggressiveness and hostility in adolescents. The indicators to be identified through the questionnaire were “offenders” group and the “victim” group. In the groups of “victims” and “offenders”, total indices (index of aggression and index of hostility) were determined, as well as aggressive reactions (physical aggression, indirect aggression, irritation,

negativism, resentment, suspicion, verbal aggression, guilt). The questionnaire was made in a closed-ended question so that no validity and reliability testing were required to see the quality of items. Wording and appropriateness of the indicators however were examined by an expert during the process of item development.

Data Collection

Data of this study were collected using closed ended survey questionnaire given online. The distribution was conducted in one month for one city sharing approximately 200 samples, so that the whole 800 samples was completed in four months. To prevent from defective responses or not all questionnaires were returned properly, the researchers share 1,000 sheets of questionnaire. Responses of the fixed questionnaire were identified their themes based on the frequency and rate percentage. Finally, a number of 308 responses from adolescents of 13-14 ages were revealed proper to the sample, and so did 401 responses from the 14-14.5 aged samples.

Data Analysis

In our research, we use descriptive data analysis. The data of respondents from the “offenders” group compared with the data of respondents from the “victim” group to identify the degree of similarity and difference in personality traits of real and potential participants in school bullying of adolescence. We compared the mean values in two independent groups "victims" and "offenders", since the data in both groups obey the law of normal distribution, the study uses the Student's test. The data on the personality traits of adolescents was compared: the severity of the scales of aggression in the groups of “victims” and “offenders” at the level of significance $p \leq 0.05$ and $p \leq 0.01$; the severity of destructive attitudes in interpersonal relationships in the groups "victims" and "offenders" at the level of significance $p \leq 0.05$ and $p \leq 0.01$; the severity of personal and situational anxiety in the groups "victims" and "offenders" at the level of significance $p \leq 0.05$ and $p \leq 0.01$. It turned out that the obtained mean values did not differ significantly, when comparing the severity of self-esteem in the “victim” and “offender” groups. Fisher's test was used at the significance level of $p \leq 0.05$ and $p \leq 0.01$ to answer the survey whether there are differences in the degree of homogeneity of self-esteem indicators between the groups. At the research, Student's test and Fisher's test were calculated based on the resources of the Excel program.

Findings

Personality Similarities among Adolescent School Bullying

This result is the answer to the following question: “Are there personality similarities among adolescent school bullying participants?” Results for the first diagnostic indicator indicate the frequency of bullying in educational institutions among adolescents. The findings show that 68% of adolescents have never been bullied in an educational institution (gender was not taken into account in the study). The 19% of adolescents were bullied from time to time. Thirteen percent of the subjects in the general sample were often bullied. Results for the second diagnostic indicator: the frequency of participation of adolescents in bullying in relation to another student in the educational institution. Some 75% of adolescents have never been bullied against another student. Sometimes (one or several times) 16% of teenagers participated in bullying. Often (many times) 9% of adolescents were involved in bullying against another student.

The data obtained allowed us to design two experimental groups. The “victim” group - adolescents who were bullied at least once in the educational process 32% (256 adolescents) of the total sample. The group of "offenders" adolescents participated in bullying in relation to other students once or more times 25% (216 adolescents) of the total sample. At the next stage of the study, it was found out: what are the personal characteristics in the groups of "victims" and "offenders", what are the similarities and differences in the personal characteristics of adolescents from the groups of "victims" and "offenders". The results of the Buss-Durkey Aggression Questionnaire are presented in Table 3.

Table 3

Distribution of groups of “victims” and “offenders” by the levels of aggression and hostility

Indicators of aggression	Distribution by the level of aggression			
	Normal level		Increased level	
	“Victims”	“Offenders”	“Victims”	“Offenders”
Aggression index	76%	45%	24%	55%
Hostility index	76%	45%	24%	55%

Based on the above results, it can be concluded that the level of aggression and hostility in 55% of “offenders” exceeds the normal level, in 45% – the level of aggression is normal. In 76% of “victims” the level of aggression and hostility is within the normal range, in 24%, it is overestimated. The comparative analysis of the scales of aggression in the experimental groups showed as follows (Table 4).

Table 4

The severity of the scales of aggression in the groups of “victims” and “offenders”

Scales of aggression	“Offenders”	“Victims”	t-criteria
Physical aggression	7.05	5.4	3.2**
Indirect aggression	4.95	4.72	0.4
Irritation	7.4	6.84	0.8
Negativism	4.25	3.8	1.3
Resentment	5.3	4.28	2.0
Suspicion	5.1	4.16	2.5*
Verbal aggression	8.8	6.72	2.9**
Guilt	4.25	4.0	0.5
Aggression index	23.25	18.96	2.9**
Hostility index	10.4	8.44	2.8**

Note: critical values *2.02 with $p \leq 0.05$, **2.7 with $p \leq 0.01$, ***3.5 with $p \leq 0.001$

Level of Aggression and Hostility Compared

A comparative analysis of the data showed that the level of aggression and hostility in the groups of “victims” and “offenders” significantly differed at a high level of significance ($p \leq 0.01$). Higher values (mean value of 23.25 points) in terms of aggression are common to adolescents from the “offenders” group ($t=2.9$, with $p < 0.01$) rather than to adolescents from the “victims” group (mean value of 18.96 points). Higher values (mean value of 10.4 points) in terms of hostility are peculiar to adolescents from the “offenders” group ($t=2.8$, with $p < 0.01$) rather than to adolescents from the “victims” group (mean value of 8.44 points). Teenagers from the “offenders” group are more aggressive and hostile than teens from the “victims” group. As a consequence, this group may experience difficulties in relations with the peer community and the community of teachers in the school social environment.

The features of aggressive behavior in the groups of “victims” and “offenders” significantly differ at a high level of significance in terms of such indicators as physical aggression ($t=3.2$ $p \leq 0.01$), suspicion ($t=2.5$ $p \leq 0.05$), verbal aggression ($t=2.9$ $p \leq 0.01$). This indicates that “offenders” in the process of bullying more often use physical and verbal forms of influence in relation to “victims”. In addition, in the process of interpersonal interaction, “offenders” are more suspicious than “victims”. The results of determining destructive attitudes in interpersonal relations according to the method of Boyko appear in Table 4.

Table 5

The severity of destructive attitudes in interpersonal relationships in the groups of “victims” and “offenders”

Destructive attitudes	“Offenders”	“Victims”	t-criteria
Veiled cruelty	74.75	57.8	2.3*
Open cruelty	63.51	39	3.8***
Justified negativism	62	49.6	1.7
Grumbling	53	25.2	4.2***
Negative personal experience with others	55	38.6	2.2*

Note: critical values *2.02 with $p \leq 0.05$, ** 2.7 with $p \leq 0.01$, ***3.5 with $p \leq 0.001$

The comparative analysis of data on destructive attitudes in the groups of “victims” and “offenders” showed the presence of significant differences in indicators. Adolescent “offenders” are characterized by significantly ($t=2.3$, with $p < 0.01$) higher values (mean value of 74.75 points) in terms of “veiled cruelty” rather than adolescent “victims” (mean value of 57, 8 points). The group of adolescent “offenders” is characterized ($t=3.8$, with $p < 0.001$) by higher values (mean value of 63.51 points) in terms of “open cruelty” rather than adolescents in the “victims” group (mean value of 39.0 points). According to the “grumbling” indicator, higher values (mean value of 53.0 points) are peculiar ($t=4.2$, with $p < 0.001$) to adolescents from the “offenders” group rather than to adolescents from the “victim” group. In addition, adolescents from the “offenders” group are characterized by significantly ($t=2.2$, with $p < 0.01$) higher values (mean value of 55.0 points) by this indicator rather than adolescents from the “victims” group (mean value of 38.6 points). This indicates that adolescents from the “offenders” group show more cruelty in bullying, both in an open and veiled form, than adolescents from the “victims” group. Grumbling, i.e. the tendency to make unreasonable generalizations of negative facts in the field of relationships with partners and in observing social reality is more characteristic of adolescents from the “offenders” group. The analysis of indicators of the severity of destructive attitudes in interpersonal relationships in the “victims” and “offenders” groups indicates higher cruelty, both explicit and disguised one, among adolescent “offenders”. The results of the Anxiety Assessment Questionnaire by Spielberger and Khanin are presented in Table 6.

Table 6

Distribution of the “victims” and “offenders” groups by the level of personal and situational anxiety

	Distribution by level of personal and situational anxiety					
	High level		Average level		Low level	
	“Victims”	“Offenders”	“Victims”	“Offenders”	“Victims”	“Offenders”
Personal anxiety	36%	15%	36%	55%	28%	30%
Situational anxiety	36%	15%	48%	60%	16%	25%

A comparative analysis of the severity of personal and situational anxiety in the groups of “victims” and “offenders” is carried in Table 7.

Table 7

The severity of personal and situational anxiety in the groups of “victims” and “offenders”

Anxiety	“Offenders”	“Victims”	t-criteria
Personal anxiety	33.9	36.1	2.4*
Situational anxiety	34.9	38.4	2.6*

Note: critical values *2.02 with $p \leq 0.05$, ** 2.7 with $p \leq 0.01$, ***3.5 with $p \leq 0.001$

The comparative analysis of the severity of personal and situational anxiety in the groups of “victims” and “offenders” showed significant differences. Significantly ($t=2.4$, with $p < 0.01$) higher values (mean value of 36.1 points) in terms of personal anxiety are characteristic of adolescents from the “victims” group rather than of adolescents from the “offenders” group (mean value of 33.9 points). The adolescents from the “victims” group are characterized by significantly ($t=2.6$, with $p < 0.01$) higher values (mean value of 38.4 points) in terms of situational anxiety rather than adolescents from the “offenders” group (mean value of 34.9 points).

Thus, adolescents from the “victims” group are more anxious than adolescents who are “offenders”. Moreover, in both groups, situational anxiety is more expressed; it is characterized as a state of subjectively experienced emotions: tension, anxiety, concern, nervousness. This state arises as an emotional reaction to a stressful situation in the school social environment and can be different in intensity and dynamism over time. The results of diagnostics of self-esteem in adolescents from the “victims” group and the group of “offenders” according to the methodology “Study of general self-esteem according to the questionnaire by Kazantseva”.

An underestimated level of self-esteem was revealed in 45% of adolescents from the “victims” group, in 35% – adequate self-esteem, while 20% of children have an overestimated self-esteem. It has been identified that 45% of adolescents from the “offenders” group had an overestimated

level of self-esteem, 40% –adequate self-esteem and 15% –low self-esteem. It means that adolescents of both groups cannot always objectively assess themselves and their abilities, do not always have adequate ideas about the importance of their personal activities among other people (in a peer group, in mixed child-adult groups), their own qualities and feelings, advantages and disadvantages. Comparing the results of self-esteem manifestation degree, one can say that adolescents from the “victims” group are characterized by a significantly ($\varphi^*_{emp}=4.78$ $p\leq 0.01$) lower level of self-esteem (45%) rather than in the case of adolescents from the “offenders” group (15%). Adolescents from the “offenders” group are characterized by a significantly ($\varphi^*_{emp}=3.84$ $p\leq 0.01$) increased level of self-esteem (45%) rather than in the case of adolescents from the “victims” group (20%) (Table 8).

Table 8

Comparative analysis of self-esteem manifestation degree in the groups of “victims” and “offenders”

Self-esteem	“Offenders”	“Victims”	φ^*_{emp}
Increased level	45%	20%	3.84**
Adequate level	40%	35%	0.72
Low level	15%	45%	4.78**

Note: critical values *1.64 with $p\leq 0.05$, ** 2.31 with $p\leq 0.01$

The data show that adolescents from the “offenders” group are more self-confident and more ambitious than their peers from the “victims” group. The confidence of adolescents from the “offenders” group is an objective basis for the emergence of confidence that they will be able to subdue all their peers. Thus, the assumption that adolescents from the “victims” and “offenders” groups show differences in personal characteristics was confirmed. The basis for the development of an invariant of a preventive program to overcome bullying in adolescent students is the data which obtained on the personality traits of adolescents (self-esteem, anxiety, aggressiveness, features of destructive attitudes towards peers).

Anti-bullying Program Compared

This section replies the question: “Is it possible to design an invariant of an anti-bullying program for an educational organization on the basis of data on the personality traits of adolescents?” The data obtained at the staging stage of the study showed that it was recorded the fact of bullying in educational organizations participating in the study. Adolescents from the “victim” group and the

“offender” group have differences in personal characteristics such as self-esteem, anxiety, aggressiveness, destructive attitudes towards the peer community. The next stage is the description of the development and testing of an invariant of a preventive program to overcome bullying among adolescents. The development of this kind of anti-bullying programs for educational institutions is aimed at solving the following tasks: psychological education of subjects of the educational process, their involvement in activities to study the characteristics of their own personality, behavior, the characteristics of their relationships with others for the purpose of self-disclosure, self-knowledge, and self-actualization in this activity; psychological diagnostics of individual characteristics, problems and prospects of personality development; psychological counseling of subjects of the educational process; teaching basic communication techniques, methods of conflict-free behavior, the ability to analyze behavioral situations and make decisions; teaching the basic techniques of overcoming barriers and fears, developing the ability to deal with difficult situations, analyze the motives of both one's own and others' (peers, adults) behavior, and overcome depressive states.

The invariant of the experimental preventive program was developed by the authors of this article, taking into account the identified psychological characteristics of adolescents in the “offenders” and “victims” groups and without taking into account the specifics of the social environments of educational institutions participating in the study.

During the formative stage of the experiment, two preventive programs were developed and carried out.

The first program “I Can Control My Behavior” was aimed at reducing the level of aggression, hostility, and cruelty of adolescents from the “offenders” group.

The preventive program is aimed at solving the following tasks:

1. Decrease in the level of aggression, hostility, and cruelty.
2. Development of communication skills.
3. Formation of constructive communication skills.
4. Development of self-regulation skills.
5. Formation of skills of behavior in a conflict situation.
6. Motivating adolescents to analyze their own behavior.

7. Formation of the skills of adequate anger expression.

The second preventive program “Confident Behavior” was aimed at reducing anxiety, increasing self-esteem, and developing competencies for confident behavior in adolescents from the “victims” group. The preventive program is aimed at solving the following tasks: reducing anxiety, working through fears; decrease in psycho-emotional stress; development of constructive interaction and communication skills; development of the ability to understand a communication partner; development of self-awareness, self-knowledge, self-expression skills; formation of a positive self-attitude, self-confidence, adequate self-esteem. Preventive work within these programs was carried out in the following areas: psychological education of adolescents, teaching staff of educational institutions, parents of students) through group and individual conversations, role-playing and psychological games, etc.; psychological counseling (group, individual) on the main problems of the personality of adolescents from the “offenders” and “victims” groups; psychological diagnostics and correction of personality traits (observation, questioning, testing, implementation of special corrective programs, training, etc.); sociological research in an educational institution – the study and analysis of public opinion in groups of students and mixed child-adult groups.

Participation in the pilot program was voluntary. Before the start of the training cycle, individual conversations were held with each teenager. Programs in educational institutions during one academic year were implemented by specially trained social teachers and educational psychologists of educational institutions. As a result of implementing prevention programs, it was expected that the number of cases of bullying involving adolescents in an educational institution would decrease, as there would be changes: in the objective basis of bullying: adolescents from the “offenders” group will have less aggression, adolescents from the “victims” group will have less psycho-emotional stress, constructive interaction skills will develop and self-confidence will increase; in the situational basis of bullying: the psychological climate in the educational institution will improve.

Participants in adolescent bullying cannot solve the problems with the bullying situation on their own without the intervention of school teachers, which negatively affects on their physical and psychological state. In the educational institutions participating in the study, was revealed the effectiveness of invariant the preventive program to overcome bullying among adolescent

students. The control stage of the experimental work solved the following problems: 1) conduct a repeated diagnostic study of personality traits in adolescents from the “victims” and “offenders” groups; 2) analyze, summarize the results of the control study and compare them with the results of the ascertaining stage of the study using the methods of mathematical statistics; 3) determine the frequency of bullying cases involving adolescents in an educational institution. Some of the results of the diagnostic examination of the “offenders” and “victims” groups after the end of prevention programs will be analyzed in Table 9.

Table 9

The severity of aggression and hostility in the “offenders” group after the end of the preventive program

Aggression	At the beginning of the program	At the end of the program	Φ^*_{emp}
Normal level	45%	80%	5.25**
Increased level	55%	20%	5.26**
Hostility			
Normal level	45%	80%	5.25**
Increased level	55%	20%	5.26**

Note: critical values *1.64 with $p \leq 0.05$, ** 2.31 with $p \leq 0.01$

The level of aggression and hostility at the end of the preventive program among adolescents from the “offenders” group significantly decreased: the number of adolescents with a high level of aggression and hostility decreased by 35%; the number of adolescents increased by 35% with a normal level of aggression and hostility. The data for the “victims” group will be analyzed in Table 10.

Table 10

The severity of personal and situational anxiety in the “victims” group after the end of the preventive program

Anxiety	At the beginning of the program	At the end of the program	t-criteria
Personal anxiety	36.1	33.4	2.1*
Situational anxiety	38.6	34.3	2.3*

Note: critical values *2.02 with $p \leq 0.05$, ** 2.7 with $p \leq 0.01$, ***3.5 with $p \leq 0.001$

The comparative analysis of the severity of personal and situational anxiety in the adolescent “victims” group at the beginning and at the end of implementing the preventive program showed significant differences both in personal anxiety ($t=2.1$, with $p \leq 0.05$) and in situational anxiety ($t=2.3$, with $p \leq 0.05$). These results indicate that adolescents from the “victims” group have a higher

personal and situational anxiety. Upon completion of the preventive program, the indicators decreased at a reliable level, bullying victims in the educational institution became less anxious.

Here are the data of the repeated diagnostic examination on the situation of bullying in educational institutions, according to the questionnaire “Bullying Situation at School” by Petrosyants. The survey was carried out four months after the completion of prevention programs; 82% of adolescents (658 adolescents of both sexes) from the original sample took part in the re-survey.

The effectiveness of prevention programs was assessed according to the following criteria: a steady decline in the prevalence of bullying during the period of testing and implementation of preventive programs in an educational institution; availability in educational institutions of fixed delayed results of preventive programs.

As a result of the implementation of preventive programs, the incidence of bullying among adolescents who participated in the pilot program decreased: the share of “offenders” decreased by 18%, the number of adolescents from the “victims” group who were repeatedly bullied during the year decreased by 12%. In the “victims” group, there was a 13% increase in the number of adolescents who said that their relationships with peers in the educational institution had improved.

Further questions arise: how to respond to the teaching staff; how to create a psychologically safe school environment; how to stop bullying if it has already started; how to provide the necessary support and assistance to both “victims” and “offenders” in time. This can be done if, on the basis of data on the groups of "victims", "offenders" not only to design and implement invariant anti-bully preventive programs at school, but also to modify them taking into account the specific characteristics of specific groups of adolescents in a particular educational institution or educational institution as a whole.

Discussion

Why is school bullying more common among adolescents? On the one hand, there are objective grounds for the manifestation of bullying an age-related development: rapid physical and psychological changes, puberty occurs, the search for one's “I”. Adolescents struggle for leadership in school social settings, leading to conflicts that can escalate into bullying. On the other hand, the developmental level of adolescents makes it possible to identify potential “victims” and

“offenders”, to determine and compare the personal characteristics of “victims” and “offenders” (self-esteem, anxiety, aggressiveness, features of destructive attitudes towards the peer community), focusing on their self-report.

The “victim” group 32% of adolescents from the total sample. The group of "offenders" adolescents participated in bullying in relation to other students once or more times 25% of the total sample. Thus, up to a third of adolescent students are involved in school bullying. Comparative analysis of data on the groups of “victims” and “offenders” showed differences in such personal characteristics as the level of aggressiveness and hostility, destructive attitudes. High rates are typical for the “offenders” group. For example, adolescents in the "offender" group are characterized by higher values (mean 10.4 points) in terms of hostility than adolescents in the "victim" group (mean 8.44 points). Teens from the bullying group are more aggressive and hostile than teens from the bullying group. The adolescents from the “offenders” group are characterized by significantly higher values (mean value 74.75 points) in terms of “veiled cruelty” than adolescents from the “victim” group (mean value 57.8 points).

The group of adolescents "offenders" are characterized by higher values (mean value 63.51 points) in terms of "open cruelty" than for adolescents in the group of "victims" (mean value 39.0 points). The data and conclusions obtained in the study generally coincide with the opinion of the researchers (Breslav, 2016; Ushakova, 2009). However, it should be checked whether the indicators for the “victim” and “offender” groups differ by gender?

The multiplicity of factors that can cause situations of bullying both in relation to students of different ages and in relation to employees of an educational institution dictates the need to design and promote comprehensive preventive programs for educational institutions. However, the problem remains open: is there a need for a unified bullying prevention program in an educational institution? It is obvious that with the existing and ongoing research on bullying all over the world, the need to identify invariant criteria by which bullying prevention programs will be designed and implemented in educational institutions will certainly arise.

Despite the abundance of bullying prevention programs, most of them are not universal, and this makes them difficult to use (Evans-Amalu & Claravall, 2021; Hieneman et al., 2005; Lane, 2001; Petrosyants, 2011). This problem can be solved by constructing an invariant platform suitable for

use in any educational organization with students of a certain age on the basis of existing effective bullying prevention programs. Further, the specialists of an educational institution (social workers, psychologists, teachers) complete the software platform to the level of an effective program. Completing the construction of an invariant software platform in an educational institution is a necessary process. The fact is that manifestations of bullying in any educational institution have complications and specificities: they are latent, are not always recognized by students due to their age, they are a systematic recurring phenomenon, always mediated by the existing system of social, psychological, and pedagogical relations in the educational institution.

The teaching staffs have to be taught how to diagnose the causes of bullying among adolescents, identify the personality traits of adolescents involved in bullying, and develop invariants of preventive programs taking into account the specifics of a particular educational organization. The study showed that the invariant program "I can control my behavior" should be aimed at reducing the aggressiveness, hostility and cruelty of adolescents from the "offenders" group. The second preventive program "Confident Behavior" should be aimed at reducing anxiety, increasing self-esteem, and forming the competencies of confident behavior among adolescents from the "victim" group. The effectiveness of the invariants of the designed and implemented experimental preventive anti-bullying programs is proved by the decrease in the frequency of bullying (the proportion of "offenders" decreased by 18%, the number of adolescents from the "victim" group decreased by 12%). However, the question arises, will invariant anti-bullying prevention programs provide a long-term reduction in the manifestations of school bullying among adolescents if only the groups of "victims" and "offenders" are included in the programs?

Another problematic issue of bullying prevention is the focus of most programs on working with the "victims" group, which significantly reduces the effectiveness of the programs. Programs of assistance to the initiators of bullying (the "offenders" group), and another large group of bullying participants "observers" reprogramming their personal attitudes and behavior to a more pro-social one, are rarely included as an element in prevention programs. It is necessary to use more actively the promising, so-called "rehabilitation approach", which will fill this gap in the prevention of bullying. The "rehabilitation approach" has spread only in recent years and is still used in Russian education in fragments. In our opinion, the prevention of bullying at school should be aimed at

changing the system of relations in the educational organization as a whole, the formation of acceptable statuses of adolescents in the group, based on the value of respectful relationships.

The results of the study are seen as significant in the fact that a successful option for the prevention of school bullying in adolescents has been demonstrated. The novelty of the research lies in two aspects: systemic work in an educational organization in the following sequence: “comprehensive diagnostic examination of adolescents of a particular educational organization - development and implementation of an invariant software platform - modification of an anti-bullying program for the specifics of an educational organization”; the work of the teaching staff was carried out as actively as possible at the level of school classes and the educational organization as a whole.

Conclusion

Bullying is a common problem in educational institutions around the world and in Russia in particular. Repeated aggressive behavior towards individual students or their groups has a powerful negative effect on all students and teaching staff of an educational institution. In our study, the school adolescent bullying understands like the actions of the “offender” or a group of “offenders” in school life situations in relation to their “victim” (a peer or younger), focused on humiliating a person through emotional and/or physical violence and aggression. It was assumed that educational organizations will be able to successfully cope with manifestations of teenage bullying if they can identify the individual characteristics of real and potential members of the groups of "victims" and "offenders" (self-esteem, anxiety, aggressiveness, features of destructive attitudes towards the peer community). To design and implement invariant anti-bully prophylactic programs and modify them taking into account the characteristics of specific groups of adolescents or educational organizations based of data.

The study has proven that in order to increase the effectiveness of preventive anti-bullying programs, it is necessary to hold in an educational institution purposeful and planned activities that differ in frequency, continuity and focus on typical age-related, personal characteristics of students and specific social and psychological-pedagogical characteristics of the educational institution’s environment. The proposed approach to the design, launch, and promotion of prevention anti-bullying programs for adolescent students showed certain effects: increased awareness of subjects of the educational process about what bullying is; decreased number of situations of school

bullying. The socio-psychological climate of the educational institution has improved, which is necessary for quality education, upbringing, and development of all students.

It is determined that bullying prevention among adolescents should be aimed both at an individual student and at the level of school groups as actively as possible: the class, interest group, educational institution as a whole. A mandatory element of all preventive anti-bullying programs for adolescents should be “rehabilitation”, so the help is not only the “victims” of bullying, but also the initiators of bullying “offenders”, reprogramming their behavior to a more pro-social one. The development of a bullying prevention program can be designed in an educational institution in the following sequence: “integrated research (identification of individual characteristics of real and potential bullying participants of different ages) –invariant software platform (development and launch of an invariant anti-bullying program based on the data of individual characteristics of real and potential participants in bullying) –modification of the program for the specifics of the educational institution (in any educational institution, manifestations of bullying have specific features: they are latent, mediated by the existing system of social, psychological and pedagogical relations, behavioral reinforcements in the educational institution)» Such a methodological approach can give a certain advantage, since the counteraction to bullying will be systemic, and schools will bear great responsibility for their actions, since they take into account the specifics of their educational institution.

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