

## **Changes in Aggression of 13-17 year-old Adolescents after Intervention Based on Cognitive-behavioural Therapy**

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### **Abstract**

**This article discusses how intervention based on cognitive behaviour therapy affects aggression.**

In this research, 13 to 17 year-old high school pupils were divided into two groups: the experimental group which participated in the training and the control group which did not. Research results have revealed that after the intervention based on cognitive-behavioural therapy the numbers of male and female physical and verbal aggression decreased. However, no such changes were observed in the control group. Moreover, after the intervention based on cognitive-behavioural therapy, the numbers of male and female hostility decreased in both groups. Female numbers of anger decreased after the intervention based on cognitive-behavioural therapy. However, the numbers of aggression in the control group and the numbers of male aggression in the experimental group have not changed.

**Keywords:** secondary school pupils, verbal aggression, physical aggression, hostility, anger, intervention, effect.

### **Introduction**

Anger eruptions and unsuitable anger expressions frequently appear among adolescents; however, it has been noticed that manifestations of aggression tend to occur more frequently in schools (Reyes et al., 2003; Karatas and Gokcakan, 2009; Wienclaw, 2009). One of the most often observed forms of aggressive behaviour in high schools is bullying (Valeckiene, 2007). Zaborskis et al. (2002) state that the rate of bullied pupils and the pupils who bully others in Lithuania is higher than in other European countries: every third pupil aged between 11 and 15 becomes a victim of frequent bullying. Bullying and other forms of aggressive behaviour have negative outcomes not only to the victims of aggression, but to the producers of aggression as well (Wienclaw, 2009).

The reasons for bullying are related to common reasons of aggression (Targamadze and Valeckiene, 2007). Usually aggression occurs due to uncontrolled anger. Anger is one of the most difficultly controlled reactions, occurring when a person, reasonably or not, wants to defend his/her position (Lochman, 2005). Other authors declare that anger is the element of thinking, emotions, and physiology, and if anger is intense, it can distort the information and display itself as uncontrolled stimulation that unleashes in an action, most often, in aggression (Karatas and Gokcakan, 2009; Blacker, 2008). Nevertheless, aggressive behaviour and bullying can be the outcomes of various phenomena; researchers declare that uncontrolled anger is one of the most probable phenomena related to such behaviour. Therefore, in order to reduce various forms of aggression (verbal, physical, bullying etc.) in schools, it is important to teach pupils how to control anger. However, in comparison with adults, the efficiency of children and adolescents' anger management programs has been far less researched (Olatunjini and Lohr, 2004). Therefore, there is a greater need for research on the efficiency of the latter anger management programs.

A great scope of research has been conducted in Lithuania that discusses the issues of aggressive behaviour, bullying, and emotional difficulties, but only a few instances of research have tested the effectiveness of applied programmes, aiming at reducing aggressive behaviour in a natural school environment. Norgeliene and Grigaite (2008) have analysed the relation between psychological consultations of violently behaving 7 year-old children and the shift in aggressive behaviour. Then, the effectiveness of the Second Step programme among the first grade pupils (Children Support Centre, 2009) has been evaluated. However, profound research into the effectiveness of aggressive behaviour programmes during adolescence is still necessary.

Literature overview in this article surveys foreign research on the effectiveness of anger management programmes which justifies the aim of this article: to evaluate the effectiveness of the cognitive-behavioural

therapy based anger management intervention on aggressive behaviour. Further, the sample, procedures, and methods of the research are discussed; the result analysis, discussion, and conclusions are provided.

### The review of research on the effectiveness of cognitive-behavioural programme in the treatment of anger

After the meta-analysis of intervention effectiveness in anger management, Sukhodolsky et al. (2004) have concluded that cognitive-behavioural interventions are effective in teaching adolescents to control anger. According to the assumptions of Knorth et al. (2007), the most effective reduction of aggressive behaviour occurs when using cognitive-behavioural intervention which is based on children's cognitive reconstructing, development of social skills, and impulse control. According to Howells et al. (2008), cognitive-behavioural interventions of anger and aggression usually encompass various elements: teaching to relax, social skills training, and cognitive reconstructing, all of which can have different effects on different dimensions of anger. White (2000) states that cognitive-behavioural intervention encompasses person's thoughts, emotions, and behaviour, whereas, according to the research conducted by Voltan-Acar (2005), it is also an effective means of teaching anger management which should include three components: thoughts, emotions, and behaviour (Karatas and Gokcakan, 2009, quoted in White-Freeman, 2000 and Voltan-Acar, 2005). Thus, cognitive-behavioural intervention is an effective means for anger management, because it is oriented towards these aspects which are important in learning to control negative emotions; nevertheless, every component of the intervention teaching have different effects on anger.

Sukhodolsky et al. (2004) in their meta-analysis of the effectiveness of anger cognitive-behavioural interventions among adolescents conclude that the greatest effectiveness of such interventions in anger management is achieved by learning problem solving skills; the effectiveness can be boosted by feedback and home assignments which help apply the learned skills beyond the boundaries of intervention, and by the observation of behaviour, emotions, and thoughts during the conflict. Furthermore, greater effectiveness can be achieved by training skills, in comparison to teaching about emotions. Thus, the techniques which encompass behaviour are more effective than those which provide knowledge. However, according to the results of the research carried out by Howells et al. (2008), it could be stated that the greatest achieved effect, in comparison with the control group, is that this cognitive-behavioural therapy based on intervention provides knowledge about anger which is significant for anger management. Repeated testing has revealed that this knowledge is long-term, remaining longer than for six months after the application of intervention. According to Olatujni and Lohr (2004), it could be stated that cognitive interventions have more effect on thinking than on physiology and behaviour. Applied relaxations have more

effect on physiology than cognitive intervention does. Effective interventions should encompass not only thinking, but behaviour and physiology as well. Even though it is not clear which application of techniques might be more effective, a wide spectrum of interventions can provide knowledge, skills, will affect thinking, emotions, and behaviour, all of which are related to effective anger management.

Humphrey and Brooks (2006) have conducted research among 13-14 year-old adolescents in order to reveal how an intervention program based on cognitive-behavioural techniques helps high school pupils learn anger management. The program lasted for four weeks, six meetings a week. The results of the investigation have revealed that this short but intense application of the program does help adolescents improve the control of anger and aggressive behaviour. Qutaiba (2010) has investigated how cognitive-behavioural intervention affects anger management among pupils aged between 12 and 15. The research results have revealed that these types of interventions are effective in anger management. Similar research, carried out by Qutaiba (2010) among pupils from 12 to 15 year old, has revealed the effectiveness of a cognitive-behavioural intervention in teaching anger management for high school pupils. Ireland (2004) has also investigated the effectiveness of cognitive-behavioural therapy among the 19 year-olds, applying session cycles for three days, one hour a day. The results of the investigation have proved that this program is effective for anger and aggression management. In conclusion, it could be stated that anger management interventions based on cognitive-behavioural therapy can be effective in adolescence.

According to the research carried out by Karatas and Gokcakan (2009), it is evident that cognitive-behavioural intervention (10 sessions) is effective in teaching adolescents to control anger, physical aggression, and indirect aggression, but it is ineffective in trying to control verbal aggression. The results of the inquiry carried out by Cenkseven (2003) have revealed that cognitive-behavioural therapy, applied in teaching adolescents to control anger, is ineffective, because no change has been found in any of respondents' questionnaires. The results of the research conducted by Howells et al. (2008) have shown that cognitive-behavioural therapy has a small effect on anger management. Thus, these instances of exploration have proved that cognitive-behavioural interventions are effective only in some anger displays or are ineffective at all.

Cognitive-behavioural interventions encompass various techniques which are important in dealing with anger management. The research has proved that such interventions are effective in adolescence and with persons having complex problems; however, there are some instances of inquiry which do not reveal cognitive-behavioural intervention effectiveness within particular forms of aggression, and there are some that do not reveal any changes at all.

Table 1

**Division of participants according to sex and group type**

Group type	Gender				Total:			
	Boys		Girls					
	n	%	n	%				
Control	62	42,8	80	58	142	50,2		
Experimental	83	57,2	58	42	141	49,8		
Total:	145	100	138	100	283	100		

Table 2

**Reliability of scales**

Scales	First testing		Second testing	
	Questions	Cronbach alpha	Questions	Cronbach alpha
Verbal aggression	5	0,552	5	0,684
Physical aggression	9	0,737	9	0,769
Hostility	8	0,718	8	0,807
Anger	7	0,644	7	0,734

Due to such varied outcomes, it is important to conduct further research to reveal the effect of intervention based on cognitive-behavioural therapy on adolescents' anger management. Furthermore, it is not clear how such interventions, applied in high schools, affect anger management of adolescents, because there has been little investigation conducted in the natural school environment (Smith, 2005). Therefore, the aim of the current research is to evaluate the effectiveness of anger management intervention on aggressive behaviour.

## Method

### Sample

286 high school pupils, aged between 13 and 17, studying at two gymnasiums and two secondary schools in Kaunas, Lithuania, participated in this investigation. According to Pruskus and Tuziene (2011), aggressive behaviour is spread more among school pupils in the city than in the countryside, thus, it has been chosen to conduct a research in one of the biggest cities of Lithuania.

The institutions have been chosen by convenience sampling. In the control group, the male age average was 15,2 ( $\sigma= \pm 1,3$ ), female age average was 15,1 ( $\sigma= \pm 1,2$ ); in the experimental group, the male age average was 14,2 ( $\sigma= \pm 1,1$ ), female age average was 14,8 ( $\sigma= \pm 1,2$ ). The division of the participants according to sex and group type is provided in Table 1.

Two groups have been surveyed, the experimental and control (Table 1), in order to compare high school pupils who attended the training and the pupils who did not.

### Psychometric measure

In the measurement of aggressive behaviour, Buss and Perry's Aggression Questionnaire (AQ) has been used

(Fisher an Corcoran, 1994). A double translation has been provided by Dovile Normantaite and Lina Normantiene. The questionnaire measures physical aggression, verbal aggression, anger, and hostility. It has been composed of 29 questions with five possible answers each: extremely uncharacteristic of me; somewhat uncharacteristic of me; neither uncharacteristic nor characteristic of me; somewhat characteristic of me; extremely characteristic of me. The more points are gathered, the more of a particular feature is characteristic to the respondent. The reliability of Buss and Perry (1992) is 0,89; test-retest – 0,8 (Buss and Perry, quoted in Campano and Munakata, 2004). The reliability of scales in this research is provided in Table 2.

### Procedure

In this investigation, two groups have been singled out: the experimental and control. Participants within both groups have been chosen by convenience, but they all participated voluntarily and with their parents' permission. Both experimental and control groups were tested twice. First, the adolescents were introduced to filling the instructions.

In the control group, the first and second filling of questionnaires were performed in class, with the agreement by teachers and school administration. The second measurement was given five weeks after the first measurement.

In the experimental group, the first measurement was performed during the first training, before introducing the intervention, and the second measurement was performed after the final training. Filling of the questionnaires lasted for 10-15 minutes.

In the experimental group, trainings based on cognitive-behavioural therapy by Feindler, on the grounds of anger management method, were applied (the program has been adapted from the book 'Adolescent anger control

cognitive-behavioural techniques' by Goldstein et al., 1986). The original program is intended for 13-17 year-old adolescents and consists of 12 sessions. In this research, it has been chosen to reduce the number of sessions up to 5 trainings, because, according to the investigation carried out by Humphrey and Brooks (2006), Bennett and Gibbons (2000), short-term trainings are as effective as long-term training. Shortened trainings have not decreased the number of applied techniques, used for anger management, only the methods, used in teaching these techniques, have been modified. The assignments were given by using role-plays, discussions, training of the techniques, and brainstorming. The aim of the first meeting is usually to create rules of the group and to motivate group participants; the aim of the second training is to introduce the anger management process and three ways of relaxation (imagining, deep breathing, counting back). In the third meeting, the groups are introduced to progressive muscle relaxation, thinking-ahead and reminding techniques; in the fourth meeting – acquainted with the self-evaluation procedure and the defending technique; in the fifth meeting they are introduced to conflict resolution methods. It is important to note that prior to the investigation, trainings were provided for a pilot group of six members in order to find out whereas the assignments

were interesting, useful, and comprehensible. The trainings were carried out in groups; one training lasted for 45 minutes, once a week, so the pupils had to participate in the training once a week for weeks in a row. The trainings were carried out during classes, in school time; the group usually consisted of 10-15 pupils, sitting in a circle. The trainings were conducted and adjusted by the authors of this research.

## Results

The data analysis was carried out using SPSS version 17 for Windows. Each dependent variable was examined, depending on a group (control vs. experimental), gender (male vs. female), and testing (before vs. after treatment) using a  $2 \times 2 \times 2$  mixed ANOVA model.

Table 3 shows the descriptive statistics of aggression for boys and girls in the first testing. Table 4 reveals the descriptive statistics of aggression for boys and girls in the second testing.

Pupils' physical aggression was computed using the  $2 \times 2 \times 2$  ANOVA model with regard to Group and Gender as between-subjects factors and Testing, as a repeated-measures factor (Table 5).

Table 3

### Descriptive statistics of aggression depending on gender and group in the first testing

	Boys			Girls		
	Experimental N=54	Control N=78	Total	Experimental N=75	Control N=57	Total
	Mean (St.deviation)	Mean (St.deviation)		Mean (St.deviation)	Mean (St.deviation)	
Physical aggression	22,6 ( $\pm 6,7$ )	22,6 ( $\pm 5,7$ )	22,6 ( $\pm 6,1$ )	20,3 ( $\pm 7,1$ )	18,6 ( $\pm 6,4$ )	19,6 ( $\pm 6,8$ )
Verbal aggression	13,7 ( $\pm 3,8$ )	13 ( $\pm 3,6$ )	13,4 ( $\pm 3,7$ )	13,5 ( $\pm 3,9$ )	14,4 ( $\pm 3,6$ )	14 ( $\pm 3,7$ )
Anger	17,2 ( $\pm 5$ )	16,7 ( $\pm 5,3$ )	17 ( $\pm 5,1$ )	18,8 ( $\pm 5,1$ )	19,5 ( $\pm 4,4$ )	19,2 ( $\pm 4,7$ )
Hostility	19,9 ( $\pm 6,6$ )	21 ( $\pm 6,1$ )	20,3 ( $\pm 6,3$ )	21 ( $\pm 5,5$ )	21,9 ( $\pm 5,8$ )	21,6 ( $\pm 5,7$ )

Table 4

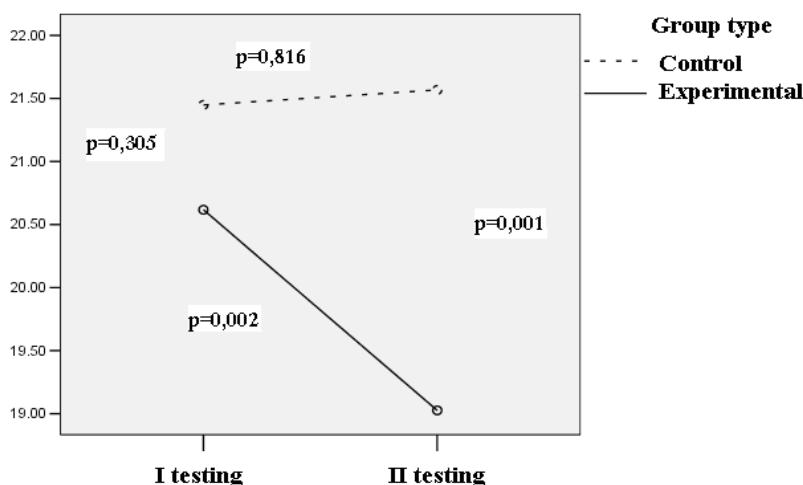
### Descriptive statistics of aggression depending on gender and group in the second testing

	Boys			Girls		
	Experimental N=54	Control N=78	Total	Experimental N=54	Control N=78	Total
	Mean (St.deviation)	Mean (St.deviation)		Mean (St.deviation)	Mean (St.deviation)	
Physical aggression	21,9 ( $\pm 6,6$ )	22,5 ( $\pm 5,8$ )	22,1 ( $\pm 6,1$ )	16,2 ( $\pm 5,6$ )	20,7 ( $\pm 6,9$ )	18,7 ( $\pm 6,7$ )
Verbal aggression	12,6 ( $\pm 4,2$ )	13,4 ( $\pm 3,7$ )	12,9 ( $\pm 4$ )	11,7 ( $\pm 4,6$ )	14,1 ( $\pm 3,7$ )	13,1 ( $\pm 4,2$ )
Anger	17 ( $\pm 5$ )	17,4 ( $\pm 4,4$ )	17,2 ( $\pm 4,7$ )	16,1 ( $\pm 6,2$ )	20 ( $\pm 5,1$ )	18,4 ( $\pm 5,9$ )
Hostility	19,7 ( $\pm 6,8$ )	20,3 ( $\pm 6,4$ )	19,9 ( $\pm 6,6$ )	17,5 ( $\pm 6,5$ )	21,5 ( $\pm 5,8$ )	19,8 ( $\pm 6,4$ )

Table 5

**Analysis of Variance of physical aggression**

Source	df	F	p	Eta parcial <sup>2</sup>
Within group				
Testing	1	3,348	0,068	0,013
Testing x Group	1	5,753	0,017	0,022
Testing x Gender	1	0,0717	0,398	0,003
Error	261			
Between groups				
Group	1	5,680	0,018	0,021
Gender	1	24,049	0,001	0,084
Error	261			



**Figure 1.** Comparison of physical aggression scores of the first testing and the second testing of the control and the experimental groups

Table 6

**Analysis of Variance of verbal aggression**

Source	df	F	p	Eta parcial <sup>2</sup>
Within group				
Testing	1	7,772	0,006	0,028
Testing x Group	1	8,557	0,004	0,031
Testing x Gender	1	1,731	0,189	0,006
Error	265			
Between groups				
Group	1	4,611	0,033	0,001
Gender	1	0,273	0,602	0,017
Error	265			

The following main significant effects have been noted: Group F(1, 261) =5,680, p=0,018,  $\eta^2 = 0,021$ . Gender F(1, 261) =24,049, p=0,001,  $\eta^2 = 0,084$ . Moreover, Testing interacted significantly with the Group [F(1, 261) = 5,753, p=0,017,  $\eta^2 = 0,022$ ] (Figure 1).

According to a posteriori Bonferroni correction, physical aggression significantly decreased (p=0,002) in the experimental group and after the second testing there were significant differences between the experimental and control groups (p=0,001); the experimental group scores of

physical aggression were lower than the control group scores of physical aggression after the intervention.

Pupils' verbal aggression was computed using the  $2 \times 2 \times 2$  ANOVA model, with regard to Group and Gender as between-subjects factors and Testing as repeated-measures factor (Table 6).

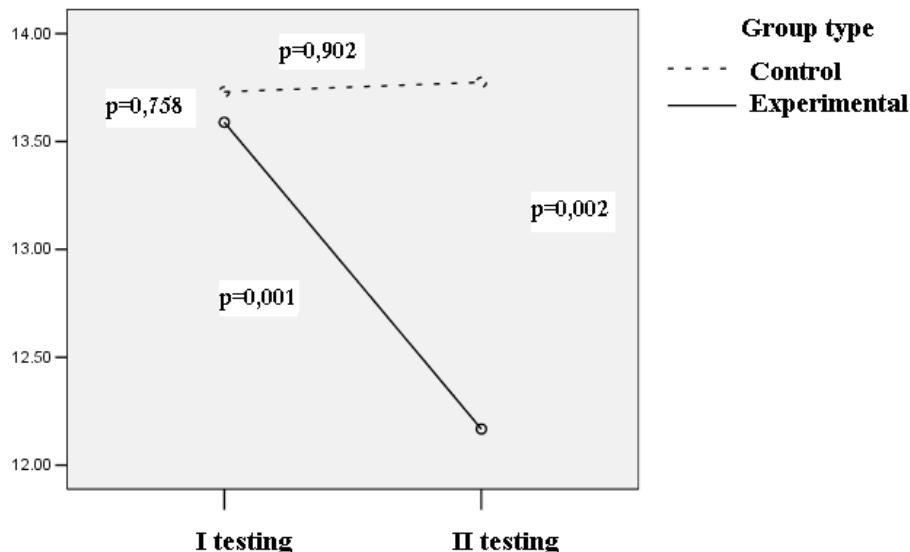
There have been the following main significant effects: Group F(1, 265) = 4,611, p=0,033,  $\eta^2 = 0,001$ . Moreover, Testing interacted significantly with Group [F(1, 265)=8,557, p=0,004,  $\eta^2=0,031$ ] (Figure 2).

According to a posteriori Bonferroni correction, verbal aggression significantly decreased (p=0,001) in the experimental group, and after the second testing there were significant differences between the experimental and control groups (p=0,002). The experimental group scores of verbal aggression were lower than the control group scores of verbal aggression after the intervention.

Pupils' anger was computed using the  $2 \times 2 \times 2$  ANOVA model, with regard to Group and Gender as

between-subjects factors and Testing as repeated-measures factor (See Table 7). There have been the following main significant effects noted: Gender F (1, 259) = 6,997, p =0,041,  $\eta^2=0,026$ , Group F (1, 259) = 4,234, p =0,009,  $\eta^2=0,016$ . Moreover, Testing interacted significantly with Gender [F (1, 259) = 5,176, p = 0,024,  $\eta^2 = 0,020$ ] and Group [F (1, 259) = 11,495 p = 0,001,  $\eta^2=0,042$  (Figures 3 and 4).

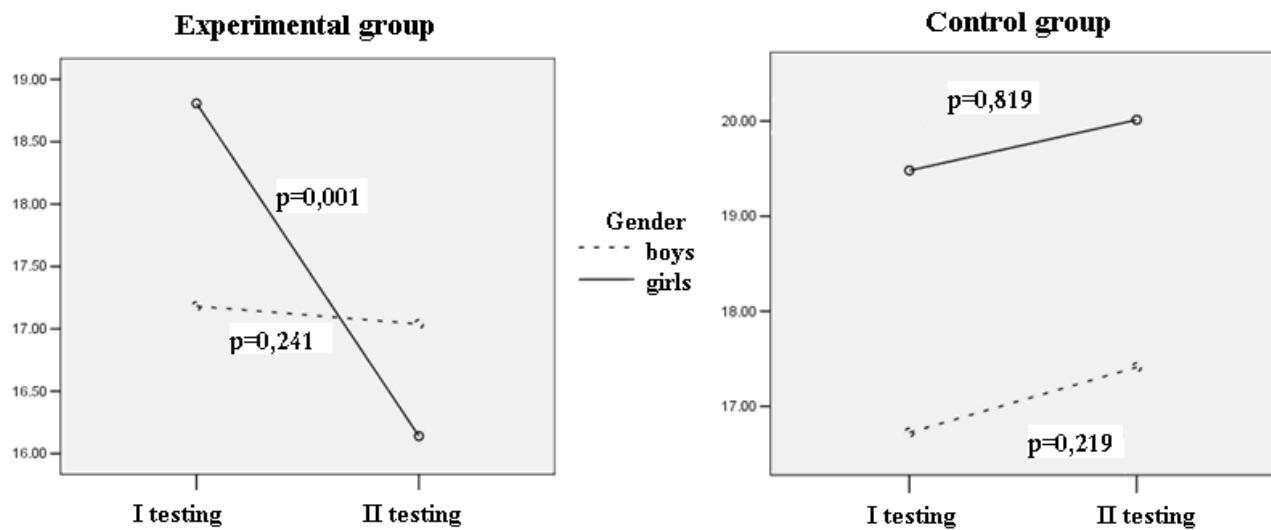
According to a posteriori Bonferroni correction, the anger of girls significantly decreased (p=0,001) in the experimental group. Whereas boys from the experimental group did not show significant differences between the first and the second testings (p=0,241). After the intervention, girls' scores of anger were lower than boys'. However, the control group did not show significant differences between the first and the second testings.



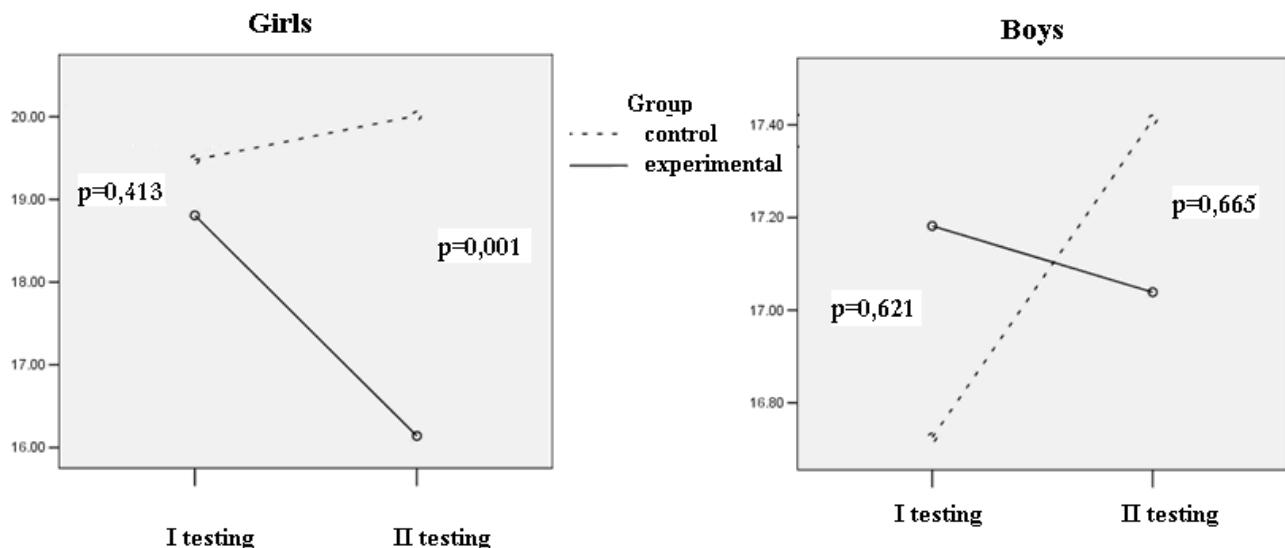
**Figure 2.** Comparison of verbal aggression scores of the first testing and the second testing of the control and experimental groups

Table 7

Analysis of anger Variance				
Source	df	F	p	Eta parcial <sup>2</sup>
Within group				
Testing	1	7,809	0,006	0,029
Testing x Group	1	2,849	0,040	0,011
Testing x Gender	1	4,251	0,093	0,016
Error	257			
Between group				
Group	1	6,003	0,015	0,001
Gender	1	0,153	0,696	0,023
Error	257			



**Figure 3.** Comparison of the scores of anger in the first and second testing among boys and girls



**Figure 4.** Comparison of anger scores of the first and second testing of the experimental and control groups

Table 8

#### Analysis of Variance of hostility

Source	df	F	p	Eta parcial <sup>2</sup>
Within group				
Testing	1	7,809	0,006	0,029
Testing x Group	1	2,849	0,040	0,011
Testing x Gender	1	4,251	0,093	0,016
Error	257			
Between groups				
Group	1	0,142	0,115	0,001
Gender	1	0,153	0,696	0,023
Error	257			

According to a posteriori Bonferroni correction, girls' anger decreased in the experimental group, and after the second testing there were significant differences between the girls in both groups ( $p=0,001$ ). The scores by the experimental group girls were lower than the scores by the control group girls after the intervention. The boys did not show any significant differences between the first and the second testings.

Pupil hostility was computed using the  $2 \times 2 \times 2$  ANOVA model, with regard to Group and Gender as between-subjects factors and Testing as repeated-measures factor (See Table 8). There were the following main significant effects: Testing,  $F (1, 257) = 7,809, p = 0,006, \eta^2 = 0,029$ . Moreover, Testing interacted significantly with Group [ $F (1, 257) = 2,849, p = 0,040, \eta^2 = 0,011$ ], but there were no significant differences among the control and the experimental groups [ $F (1, 257) = 0,142 p = 0,115, \eta^2 = 0,001$ ].

## Discussion

After the intervention, the participants of the experimental group showed less signs of physical and verbal aggression. After the intervention, females from the experimental group had less signs of anger. The outcomes of this research support the results of the previous research, showing that cognitive-behavioural interventions are effective in anger management, because such kind of interventions encompasses the aspects that are significant in anger control: thinking, emotions, behaviour, physiology (Humphrey and Brooks, 2006; Ireland, 2004; Mohammadi, 2010; Qutaiba et al., 2010). According to Ellis (1997), the incorporation of techniques which encompass thinking is important in teaching anger management, because it teaches a person to distinguish irrational thoughts that raise aggressive behaviour (Charlesworth, 2008, quoted in Ellis, 1997). The integration of techniques which encompass emotions is very significant, because it helps understand that it is normal to feel anger, that it should not be suppressed, but expressed in an appropriate manner. After expressing anger, it is important to understand one's emotions, because the feelings of an adolescent after appropriately or inappropriately expressed anger could be predicted. Usually pro-social behaviour causes positive emotions, therefore, a person predicting after particular behaviour to feel positively, will likely to act accordingly. (Johnson and Krettenauer, 2011). An appropriate expression of anger is learned through techniques which encompass teaching behaviour, because, according to Charlesworth (2008), the biggest challenges occur not due to the raised anger, but due to the inability to express it. Therefore, adolescents who learn appropriate behavioural expression will know how to act in particular situations. Techniques which include physiology are useful in anger management, not only because they help understand what happens within person's body before and during the feeling of anger, but also they teach how to relax (Gardner, 2002). This intervention, including thinking, emotions, behaviour, and physiology helps explain why pupils

become more successful in anger management after the intervention.

A greater impact of intervention has been observed on females than on males. It can be related to the statement proposed by Nadelson et al. (2005) which says that in adolescence, the impact is greater when a group therapist is of the same sex as the participants, because adolescents tend to learn and identify easier with the therapist of the same sex. According to the research carried out by Burney (2006), Palujanskienė and Uzdila (2004), another possible explanation why females have a greater impact than males is that females tend to behave less aggressively and have a greater control of emotions. Thus, when females did not know how to control their emotions appropriately before the intervention, they acted aggressively, but during the intervention they found out how to control anger, and because anger control is more typical for them than to the male population, the intervention had a greater impact.

A decrease of hostility in both the experimental and control groups has been observed. However, this change cannot be ascribed to the results of intervention, because the change has also been observed in the control group. This does not comply with the result of other investigations. The research conducted by Malinauskienė and Zukauskiene (2007) reveals that aggression problems are stable during adolescence. It is likely that such inconsistencies might have appeared due to usage of different methods of analysis. In the research of Malinauskienė and Zukauskiene (2007), a questionnaire with one scale of aggression was used to reveal adolescents' emotional and behavioural difficulties. In this research, in order to reveal emotional and behavioural difficulties (uncontrolled anger), other questionnaires, analysing emotional and behavioural difficulties in a more dissolved manner, e.g. hostility, physical, verbal aggression etc., were used. Therefore, the analysis of how particular elements of emotional and behavioural difficulties change in adolescence could be a subject for further investigation.

The research presented in this paper has a few limitations. The participants were chosen according to convenience; therefore the results can not be applied to whole population of adolescents. In order to avoid such limitations in the future, participants should be chosen at random order. Moreover, some of the adolescents had a low initial degree of aggression, so the application of intervention was not necessary. Consequently, when testing the effectiveness of intervention in the future, it is important to select adolescents with a high degree of aggression. Adolescents' anger management evaluation was implemented by the adolescents, answering questions about themselves, thus, this subjective evaluation might have not reflected certain changes. As a matter of fact, the questioning of teachers and parents on adolescents' aggression could provide a better understanding of adolescents' changes in various contexts. This investigation has only evaluated the short term effectiveness of the program. Unfortunately, it is difficult to assess how high school pupils control their anger after a

longer period of time, when the intervention is over. Thus the future research should be oriented towards long-term evaluation, when repeated measurement is done after a longer period after the intervention.

## Conclusion

1. After the intervention based on cognitive-behavioural therapy the scores of girls and the boys' physical aggression decreased. However, no such changes were observed in the control group.
2. After the intervention based on cognitive-behavioural therapy the scores of girls and the boys' verbal aggression decreased. However, no such changes were observed in the control group.
3. Girls' scores of anger decreased after the intervention based on cognitive-behavioural therapy. However, the scores of aggression in the control group and the scores of aggression of the boys in the experimental group did not change.
4. After the intervention based on cognitive-behavioural therapy the scores of the girls and the boys' hostility decreased. But such changes also were observed in the control group.

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## 13-17 metų mokiniai agresijos pokyčiai, taikant intervenciją, grįsta kognityvine-elgesio terapija

Santrauka

Paaugliams dažnai pasitaiko pykčio proveržiai ir netinkama jo išraiška, tačiau pastebima, jog mokyklose vis dažnėja agresijos apraiškų, ypač patyčių forma (Karatas and Gokcakan, 2009; Wienclaw, 2009; Valeckienė, 2007).

Patyčių reiškinio priežastys siejamos su bendromis agresijos priežastimis (Targamadzé, Valeckienė, 2007). Agresija dažniausiai atsiranda dėl pykčio nekontroliavimo, nes pykštis yra viena iš sunkiausiai kontroliuojamų reakcijų, atsiradusiu, kai asmuo pagrįstai ar ne, nori ginti savo poziciją (Lochman, 2005). Vadinas, nors agresyvus elgesys, patyčios gali būti įvairių reiškiniių pasekmė, tačiau tyrejai pastebi, jog būtent pykčio nekontroliavimas vienas iš labiausiai su tokiu elgesiu

susijusių reiškinių. Taigi siekiant sumažinti agresijos išraiškų (verbalinės, fizinės, patyčių ir t.t.) pasireiškimą mokykloje, reikia mokinius išmokyti pykčio kontrolės. Tačiau lyginant su suaugusiais, vaikų ir paauglių pykčio kontroliavimo programų efektyvumas yra mažiau ištyrinėtas (Olatunjini, Lohr, 2004), todėl didėja pykčio kontrolės programų efektyvumo tyrimų aktualumas.

Yra nemažai atlikta tyrimų, siekiančių atskleisti, kaip kognityvine-elgesio terapija grįsta intervencija paveikia asmenų agresyvumą, tačiau nėra iki galo aišku, kaip tokios intervencijos, taikomos mokyklose, paveikia paauglių agresyvų elgesį, nes nėra daug tyrimų, kurie būtų atliekama natūralioje mokyklos aplinkoje (Smith, 2005).

Kognityvinės-elgesio intervencijos apima įvairias technikas, kurios yra svarbios mokantis kontroliuoti agresyvų elgesį. Tyrimai nusako, jog tokios intervencijos yra efektyvios paauglystėje ir su asmenimis, turinčiais kompleksinių problemų, tačiau yra tyrimų, kurie efektyvumo neaptinka su tam tikromis agresijos formomis, taip pat yra tyrimų, kuriuose neaptinkama visai jokių pokyčių. Todėl dėl tokio nevienareišmių tyrimų, svarbu atlikti tolimesnius tyrimus, kurie atrastų intervencijos, paremtos kognityvine-elgesio terapija, poveikį paauglių agresyviams elgesiui. Todėl šio straipsnio tikslas - įvertinti pykčio kontroliavimo intervencijos efektyvumą agresyviams elgesiui.

Straipsnyje nagrinėjamas intervencijos efektyvumas. Intervencijos priemonės buvo sudarytos remiantis Feindler pykčio kontroliavimo metodika (Goldstein ir kt., 1986). Originali programa skirta 13-17 m. paaugliams ir trunka 12 sesijų. Šiame straipsnyje pristatomame tyrimę buvo pasirinkta sumažinti sesijų trukmę iki 5 užsiemimų. Užsiemimų trumpinimas nesumažino taikytų technikų skaičiaus, tik buvo pakeistas šių technikų mokymo būdas. Užduotys buvo pateikiamos per vaidmenų žaidimus, diskusijas, technikų treniravimą, minčių sturmą. Pirmo susitikimo tikslas – sukurti grupės taisykles, motyvuoti grupės dalyvius; antro užsiemimo tikslas – pristatyti pykčio procesą bei tris atspalaidavimo būdus (įsivaizdavimą; gilių kvėpavimą; skaičiavimą atgal); trečio – pristatyti progresuojančią raumenų relaksaciją, mąstymo į priekį bei priminimų technikas; ketvirtio – pristatyti savęs įvertinimo procedūrą, gynimosi techniką; penkto – pristatyti konflikto sprendimo būdus.

Prieš pradendant vykdyti tyrimą, užsiemimai buvo pateikti šešių asmenų pilotinei grupei, siekiant išsiaiškinti, ar užduotys jdomios, naudingos bei suprantamos. Paaugliams užsiemimai vykdavo grupėms, vienas užsiemimas truko 45 min. kartą per savaitę, taigi mokiniai turėjo dalyvauti užsiemimuose vieną kartą per savaitę penkias savaites iš eilės. Užsiemimai vykdavo pamokų metu, vienoje grupėje dalyvavo 10-15 mokinii, kurių metu mokiniai sėdėjo ratu. Užsiemimus koregavo ir visus juos vedė viena iš šio straipsnio autoriu.

Tyime buvo išskirtos dvi grupės: tiriamoji ir lyginamoji. Abiejų grupių dalyviai buvo parinkti pagal patogumą, tačiau dalyvavo savo noru bei turėjo tėvų leidimus. Tiriamoji ir lyginamoji grupės buvo tirtos po du kartus. Lyginamosios grupės antras matavimas buvo pateiktas po pirmojo praėjus penkioms savaitėms, tiriamosios grupės antras matavimas buvo atliktas iškart po intervencijos taikymo.

Tyime dalyvavo 283 dvių Kauno gimnazijų ir dvių Kauno vidurinių mokyklų 13 – 17 metų mokiniai. Lyginamosios grupės amžiaus vidurkis vaikinų imtyje yra 15,2 ( $\sigma= \pm 1,3$ ), merginų imtyje – 15,1 ( $\sigma= \pm 1,2$ ); tiriamosios grupės amžiaus vidurkis vaikinų imtyje yra 14,2 ( $\sigma= \pm 1,1$ ), merginų imtyje – 14,8 ( $\sigma= \pm 1,2$ ).

Rezultatai atskleidė, jog po intervencijos, grįstos kognityvine-elgesio terapija, sumažėjo tiek vaikinų, tiek merginų fizinės ir verbalinės agresijos poskalių balai. Atitinkamoje lyginamojoje grupėje tokii pokyčiai nenustatyta. Taip pat po intervencijos, grįstos kognityvine-elgesine terapija, sumažėjo tiek vaikinų, tiek merginų priešiskumo poskalės balai, tačiau analogiški pokyčiai nustatyti ir atitinkamoje lyginamojoje grupėje. Po intervencijos, grįstos kognityvine-elgesio terapija, buvo geresni merginų pykčio poskalės balai. Atitinkamoje lyginamojoje grupėje bei tiriamosios grupės vaikinų imtyje tokii pokyčiai nenustatyta.

Šiame darbe atliktas tyrimas turėjo tam tikrų trūkumų. Tiriamieji buvo atrenkami pagal patogumą, vadinas, rezultatai gali neatspindėti visos paauglių populiacijos, taigi ateityje siekiant išvengti tokijų trūkumų, reikėtų tiriamuosius atrinkti atsitiktiniu būdu. Taip pat tarp tiriamujų buvo paauglių, kurių agresyvaus elgesio pradinis lygis buvo žemas, tad tokiemis tiriamiesiams intervencijos taikyti nereikėjo, todėl ateityje siekiant tikrinti intervencijos efektyvumą svarbu atrinkti paauglius, kurie pasižymėtų aukštais agresyvaus elgesio balais. Paauglių pykčio kontrolės įvertinimas vyko patiemis paaugliams atsakinėjant apie save, taigi tokis subjektyvus vertinimas gali neatspindėti tikrų pokyčių. Mokytojų bei tėvų apklausa apie paauglių agresyvų elgesį leistų geriau suprasti paauglių pasikeitimus skirtinguose kontekstuose. Šiame straipsnyje buvo vertinamas trumpalaikis programos efektyvumas, taigi sunku įvertinti, kaip mokiniai kontroliuojas pykčių pasibaigus intervencijai ir praėjus tam tikram laiko tarpui, todėl kiti tyrinėjimai turėtų orientuotis į ilgalaikio poveikio įvertinimą, pakartotinį matavimą atlikti praėjus ilgesniams laiko tarpui po intervencijos.

*Reikšminiai žodžiai:* mokinų verbalinė agresija, fizinė agresija, kognityvinė – elgesio terapija.

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