

MINISTERSTVO ZDRAVOTNICTVÍ ČESKÉ REPUBLIKY CZ11/MGS/031 Supported by Norway grants.



Evaluation Report of Zippy's Friends Program

in the Czech Republic

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Groundwork for the Study

This research study is based on the implementation of *Zippy's Friends* methodology, which was supported by Ministry of Health of the CR in 2015–2016 as a part of Norway Grant scheme Psychiatric Care. The methodology represents a long-term, systematic and structured programme for 5–7 years old children in the area of emotions, communication, conflict agreement and strategy for solving difficult situations. The programme has been established in more than 30 countries worldwide.

The Zippy's Friends programme focuses on the prevention of mental illnesses and their consequences. The aim of the methodology is to increase skills and competences of children at the age of 5 to 7 (i.e. pupils of lower grades of primary schools in our case) in the area of emotions, communication, self-confidence and social interactions, which helps to lower the risk of incidence of mental illnesses and risk behaviour of these children, especially in adolescence and adulthood.

Nowadays, there are many preventive programmes for late and middle school age and adults, focusing on suppressing demonstrations of specific areas of risk behaviour (such as racism, xenophobia, extreme aggression, drug abuse etc.). However, there is a critical lack of such programmes, especially those targeted at **mental health**, for children of **early school age**.

In early school age children enter a new environment and group, diametrically different from their previous experience. They are mature enough to learn new things, accept new behaviour patterns, form their own attitudes and opinions, and to assert themselves in the group. This age is ideal for forming healthy attitudes and relationships with peers and towards authority figures.

Design and the Methodology Used

The aim of the research was to assess the effectiveness of the *Zippy's Friends* programme, using a **prospective, controlled and randomized study**. The study comprised 14 schools randomly divided (randomized study) into two groups of the same size – the experimental and control groups (controlled study). In the school year 2015/2016 the experimental group worked with *the Zippy's Friends* methodology, the control group did not. The entry level of the monitored phenomena was detected by pre-testing in both the groups. The comparison was carried out after post-testing after the end of programme implementation.



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For the needs of study, we prepared a **questionnaire** (Appendix 1) monitoring the phenomena which were the focus of *Zippy's Friends* modules and which we expected to influence the children in the experimental group during the implementation of the programme. The questionnaire consisted of a set of 31 questions for teachers' assessment of the individual behaviour of pupils in the areas of self-management and social skills. All the questions had a 4-point scale answers assessing the frequency of the incidence of the monitored phenomenon (1 = never, 4 = almost every time).

Besides this, the questionnaire also monitored whether the children made progress in academic skills and what the success of the children with special educational needs was during the programme implementation.

The teachers filled in the questionnaire before the start (pre-test) and after the end (posttest) of working with the methodology. For each child, a unique code was created, enabling matching the completed questionnaires and securing anonymity and safety for individual children and schools taking part in the study.

After the end of implementation, the questionnaire was also given to the pupils' parents who could provide another view of developmental progress of their children.

In the study, statistical methods for comparison of experimental and control groups were used. We expected a comparable level in the monitored phenomena in the control and experimental groups when comparing a pre-test of both the groups. Furthermore, we expected a significant difference in the monitored phenomena in the control and experimental groups when comparing a post-test of both the groups.

Schedule of the Study

The programme Zippy's Friends (ZF) was realized in the school year 2015/2016 in our project.

In the preparatory period, before the start of the school year, we designed the research survey and created the questionnaire, which was used in the study.

The teachers from both the experimental and control groups were informed in detail about the questionnaire content and method for data collection. All uncertainties were resolved continuously and immediately.

In September and October 2015 data from the pre-test were collected – the pre-test had been finished before the actual implementation of the ZF programme started.

The teachers from the experimental group (from 7 primary schools) were trained in the methodology at two workshops taking place at the beginning of the school year. They used 6 modules divided into 24 units in the work with the ZF methodology.



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The pre-test data were processed and evaluated in the autumn 2015 and at the beginning of 2016.

During the work with the programme 3 methodological meetings of teachers from the experimental group took place – every two months so that they could work with approximately 2 modules in the meantime.

In June 2016, after the end of the ZF methodology implementation, the post-test in both the experimental and control groups was carried out.

Finally, processing and analysis of data collected from the pre-test and the post-test took place and was finished in October 2016. The main conclusions, important for the evaluation of the effectiveness of the ZF programme, are given in this final evaluation report.

Description of the Research Sample

The respondents in the pre-test and the post-test were teachers, in the post-test also parents. The teachers gave answers for individual pupils; data from the pre-test and the post-test were matched by identification codes. The sample characteristics are derived from the number we got after matching the questionnaires; these data were the input for processing and analysis.

Table 1 Characteristics of the research sample

	Number (N)
Filled-in questionnaires in the pre-test and the post-test in total	807
Questionnaires in the experimental group	466
Questionnaires in the control group	341
Schools in the experimental group	7
Schools in the control group	7
Teachers in the experimental group	25
Teachers in the control group	18
Questionnaires filled-in by parents	114



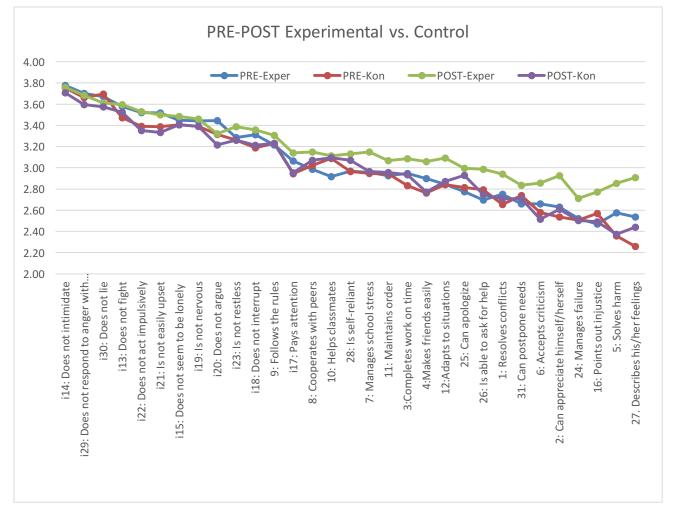
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Results: Success Rate of Children from the Experimental Group Compared with the Control Group

In the following figure there is an obvious difference in the success rate of the experimental and the control group. After implementation of the programme, the children from the experimental group had better evaluation in almost all the monitored areas in the post-test.

Figure 1 The differences between the experimental and control groups in the set of questions in the pre-test vs. post-test; a summary

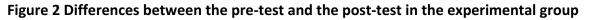


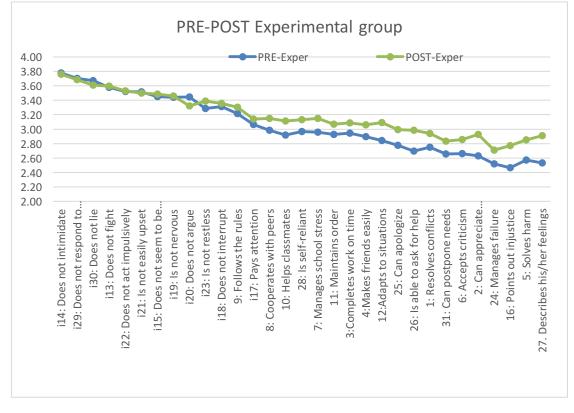
Experimental and control groups. N = 807, incl. Nexp = 466, Ncont = 341.

The difference between the pre-test and the post-test for the experimental and control groups is also shown in Figures 2 and 3.









Experimental and control groups. N = 807, incl. Nexp = 466, Ncont = 341.

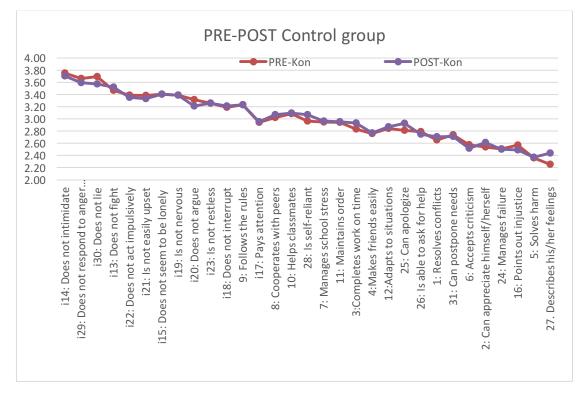


Figure 3 Differences between the pre-test and the post-test in the control group

Experimental and control groups. N = 807, incl. Nexp = 466, Ncont = 341.





The **difference** in the experimental and control groups **was not proved** in case of the following phenomena:

- fights
- is impulsive
- is lonely
- is nervous in the group of children.

Significant differences appearing in both the groups:

In both the control and experimental groups the children argue and lie more. The difference between the pre-test and the post-test is smaller in the experimental group. The children in both the groups are more self-reliant and complete work on time more often; they can apologize and are better in describing their feelings. However, in the experimental group, the children made more progress in phenomena "Describes his/her feelings" and "Can apologize".

Significant differences between the experimental and the control groups appeared in the following areas:

(pre-post test comparison showed a bigger difference in the experimental group)

- Self-management skills:
 - can postpone needs
 - is self-reliant
 - manages school stress
 - maintains order
 - completes work on time
 - adapts to situations.
- Social skills:
 - cooperates with peers
 - is able to ask for help
 - resolves conflicts
 - accepts criticism
 - points out injustice
 - describes his/her feelings (much more significantly different in the pre-post comparison than in the control group).





The following Figure 4 shows the difference in evaluation of children in the experimental and the control groups in the post-test.

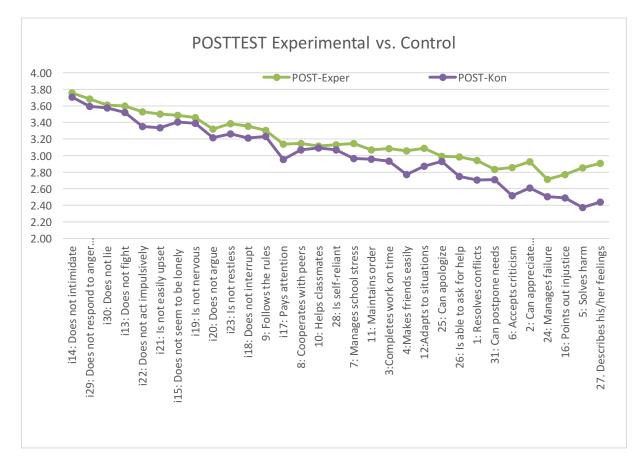


Figure 4 Differences between the experimental and the control groups in the post-test

Experimental and control groups. N = 807, incl. Nexp = 466, Ncont = 341.



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Results: According to the Grades

All the figures, comparing success rate in the particular grades, show a significant progress in the experimental group, with the most significant improvement in the monitored phenomena in the first and second grade. This can be compared with the teachers' observation saying that the easiest work with children is in the second grade, see Summary of Teachers' Experience. We can conclude that in the second grade, the ZF programme brings the apparent benefit (even though not so high a one as in the zero and first grade) and at the same time children have adapted to the school environment.

In the case of zero grade we can speculate that the progress is caused by implementation of ZF programme or the natural development of children at this age. We do not have comparison with a control group in this grade, as they stopped collaborating during the period of data collection.

In the third grade the differences are not so big; one of the causes might be a lower number of pupils in the group, another one the age of children (i.e. 8–9 years). These children are older than the target group of the ZF programme (5–7 years).

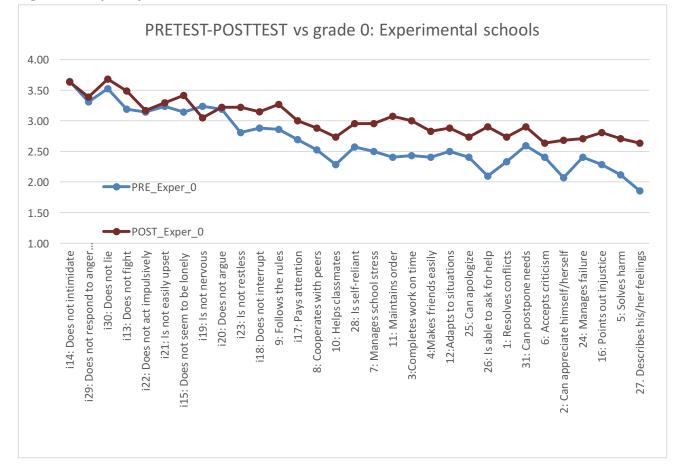


Figure 5 Frequency of the monitored demonstrations of behaviour

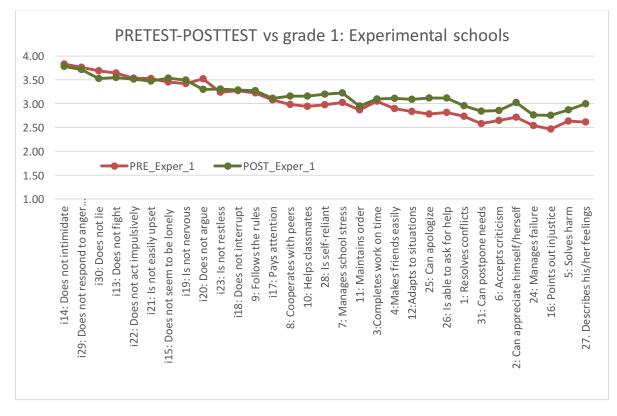
N grade 0 = 41.



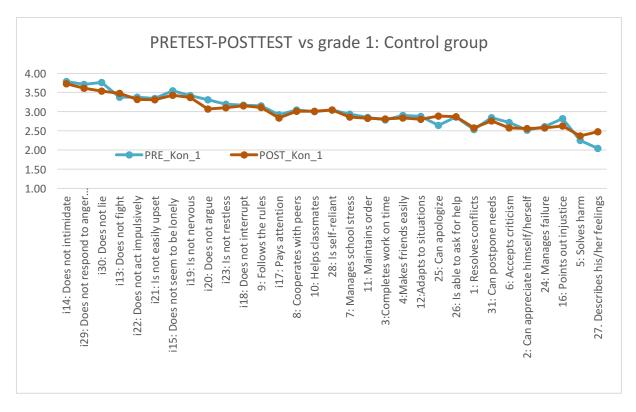
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Figure 6 Experimental group grade 1





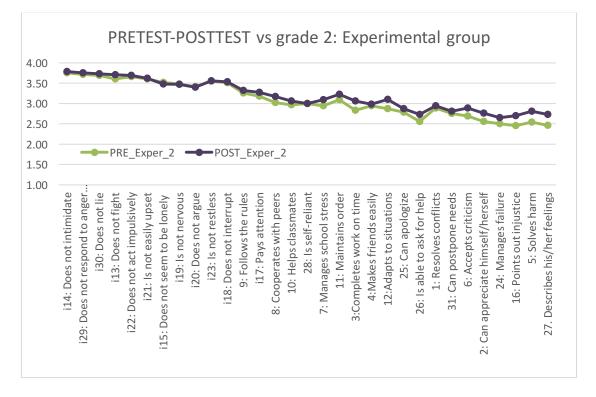


N grade 1 = 376.



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Figure 8 Experimental group grade 2



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Figure 9 Control group grade 2

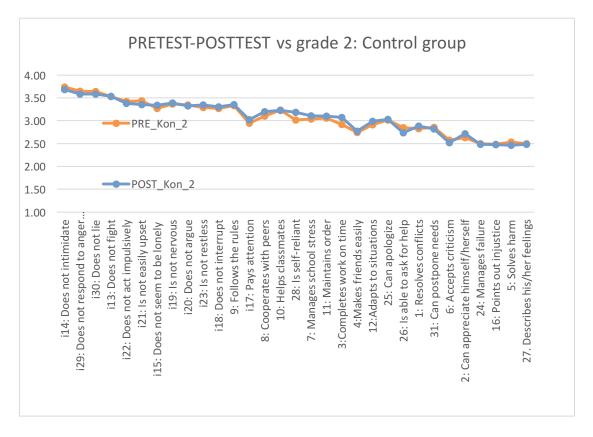








Figure 10 Experimental group grade 3

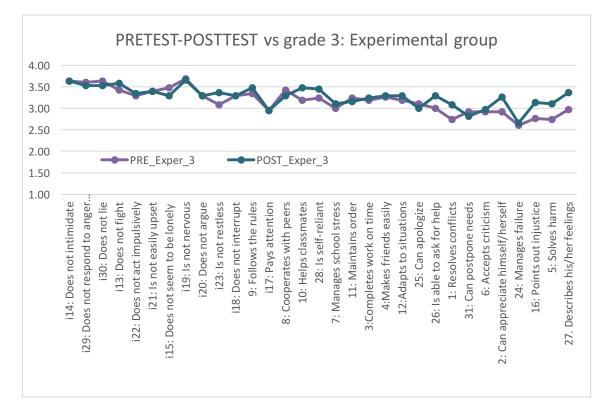
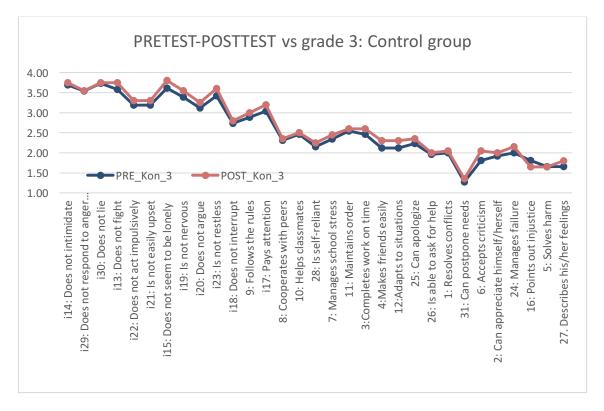


Figure 11 Control group grade 3



N grade 3 = 58.





Results: Comparison of Boys and Girls

Figure 12 compares the changes of the level of the monitored phenomena between the target group of boys and the group of girls in the experimental group. In general, the boys got a lower evaluation than the girls in the pre-test. After the implementation of the ZF programme and the post-test it showed that both the girls and boys had made comparable progress in the monitored areas. Thus we can conclude that the implementation of the ZF programme brings similar benefit for both girls and boys.

The boys made significant progress in the phenomena "Can appreciate himself" and according to the teachers, they are also better at describing their feelings, even though, in case of this item, the girls got a higher score. In the question "Points out injustice" the girls and the boys got the same results after the implementation of the programme.

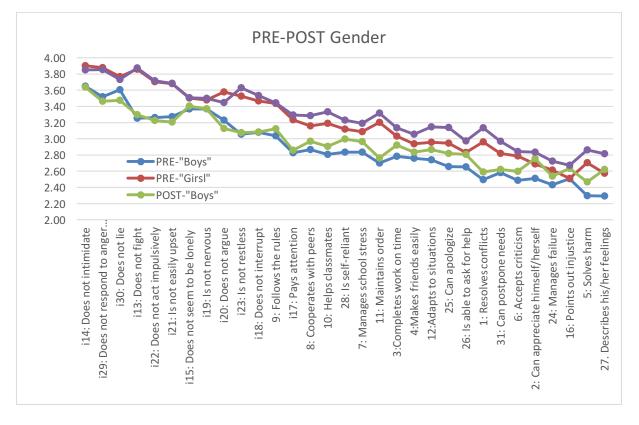


Figure 12 Gender

Nexp = 466.

Results: Pupils with Special Educational Needs¹

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When we started the project, one of our points of interest was also the reaction of pupils with SEN to the programme implementation. Thus we included several questions in the questionnaire helping us to identify such children. They were from the following groups²:

 children with disabilities (physical disability, visual impairment, hearing impairment, intellectual disability, mental disorders, autism, speech impediment, combined disabilities, developmental learning disabilities, and behaviour disorders)

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- children with a health problem or handicap (weakened by their health state, longterm illness and light handicaps leading to learning disabilities and behaviour disorders)
- children with a social handicap (from families with low socio-cultural status, threatened with socially pathological phenomena, with institutional education or protective custody, pupils with an asylum-seeker status).

The following Figures 13 and 14 show the changes in the monitored phenomena level of pupils with SEN and compare them between the control and experimental groups.

It is obvious that in the control group the level of the monitored phenomena did not change significantly, unlike the case of experimental group, in which the progress between the pretest and the post-test (i.e. after the end of programme implementation) is clear.

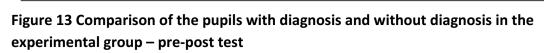
The pupils with SEN made such significant progress in the monitored phenomena that in the post-test their results approximate those of children without identified diagnosis.

In the control group, no such progress was made and the pupils with SEN got a much lower score than the rest of class.

We can conclude that ZF programme considerably contributes to the adaptation of children with SEN to the school environment and their integration among peers; the latter one is proved by the phenomenon with the highest progress made "Is able to ask for help".

¹ In the study we mean a child that had been diagnosed by school counselling department and belongs to the category of children with special educational needs.

² Article 16 of Act No. 561/2004 Coll. of 24 September 2004 on Pre-school, Basic, Secondary, Tertiary Professional and Other Education.



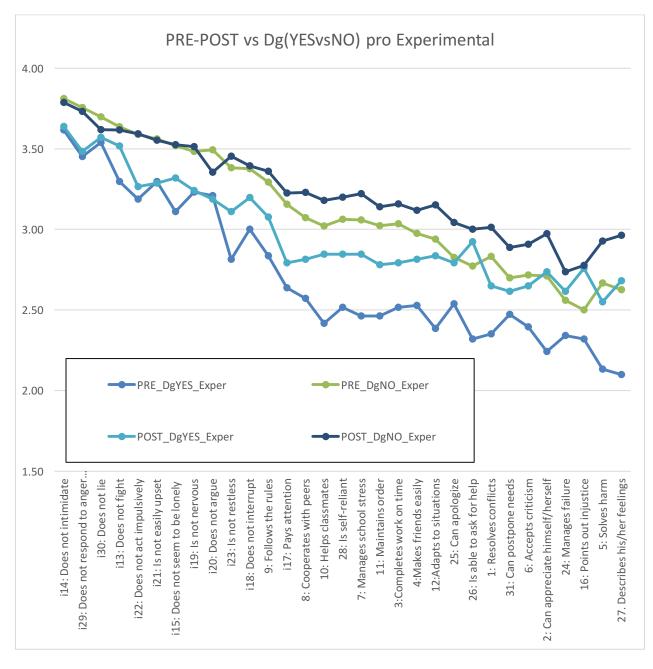
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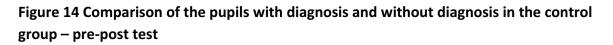


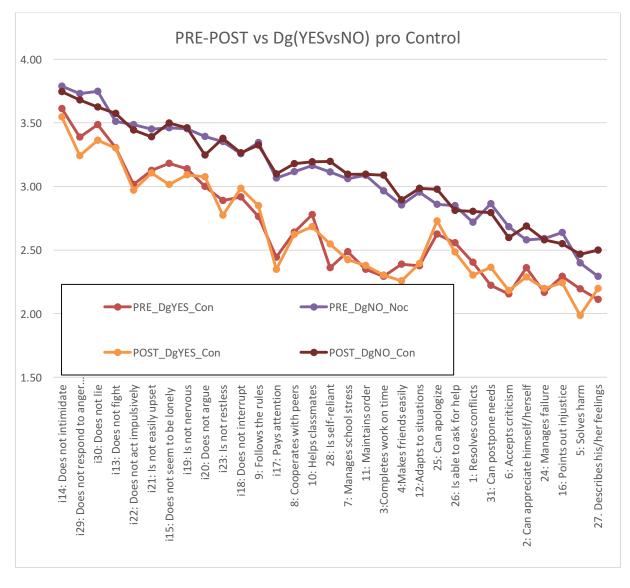
N exp Dg.yes = 97, Dg.no = 369.



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N cont Dg.yes = 75, Dg.no = 266.



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Results: Academic success

The teachers rated individual pupils according to their abilities to master the curriculum on the 4-point scale ("excellent", "very good", "average", "below average").

The following Table 2 shows the evaluation by teachers in the pre-test, i.e. before the implementation of ZF programme.

Table 2 Mastering the curriculum: results of the pre-test.

The difference in the results of the experimental and control groups is not statistically significant.

Crosstab: pre-test Total Group 2: Control (21-28) 1: Experimental (1-11) EvaluationMasteringtheCurriculu 1: excellent 148 354 Count 06 % within TypSkoly 38 40,5% 39,5% Adjusted Residual 5 2: very good 131 353 Gour 41,8% 35,9% 39,4% % within TypSkoly Adjusted Residual 1,8 -1,8 3: average 91 73 164 Count 17,1% 20,0% 18,3% % within TypSkoly Adjusted Residual -1.1 1.1 4: bellow average Count 12 13 25 2,3% 3,6% 2,8% % within TypSkoly -1,2 1,2 Adjusted Residual 365 896 531 Total Count 100,0% 100,0% % within TypSkoly 100,0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4,373 ^ª	3	0,224
Likelihood Ratio	4,358	3	,225
Linear-by-Linear Association	,448	1	,503
N of Valid Cases	896		

a. 0 cells (,0%) have expected count less than 5. The minimum expected count is 10,18.





Table 3 Mastering the curriculum: results of the post-test.

The difference in the results of the experimental and control groups is statistically significant.

Crosstab: post-test

			Group		Total
			1: Experimental (1-11)	2: Control (21-28)	
EvaluationMasteringtheCurriculum 1: exce	llent	Count	232	138	370
		% within TypSkoly Adjusted Residual	49,8%	40,5% -2,6	45,8%
2: very	good	Count	2,0 168	127	295
		% within TypSkoly Adjusted Residual	36,1% -,3	37,2% ,3	36,6%
3: aver	age	Count	62	68	130
		% within TypSkoly	13,3%	19,9%	16,1%
		Adjusted Residual	-2,5	2,5	
4: bell	ow average	Count	4	8	12
		% within TypSkoly	,9%	2,3%	1,5%
		Adjusted Residual	-1,7	1,7	
Total		Count	466	341	807
		% within TypSkoly	100,0%	100,0%	100,0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	12,119 ^ª	3	0,007
Likelihood Ratio	12,058	3	,007
Linear-by-Linear Association	11,600	1	,001
N of Valid Cases	807		

a. 0 cells (,0%) have expected count less than 5. The minimum expected count is 5,07.

In the control group, there was no change in the evaluation of academic success; the percentage of pupils classified as excellent stays the same, nor are there any significant changes in other categories in the pre-test and the post-test.

In the experimental group, the pupils made a significant progress as far as their academic skills are concerned. The number of pupils with excellent score grew by 11 per cent.

These results accord with the hypothesis that the positive influence on the environment, development of social skills and self-management skills have a positive effect on academic success of pupils.



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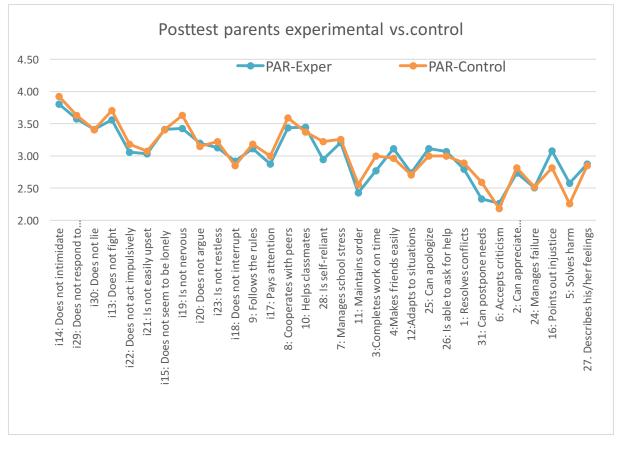


Results: Parents' View

Parents in both the control and experimental groups have a very similar view of their children (see Figure 15, post-test). However, the view of individual children by teachers and by parents differs in both the control and experimental groups to a considerable extent (see Figures 16 and 17).

We can conclude that teachers and parents have a different view of the children. This might be caused by the fact that teachers and parents see the children in different environments and social groups.

Figure 15 Comparison of the view of children by their parents in the experimental and the control groups – post-test



N Parents = 114.



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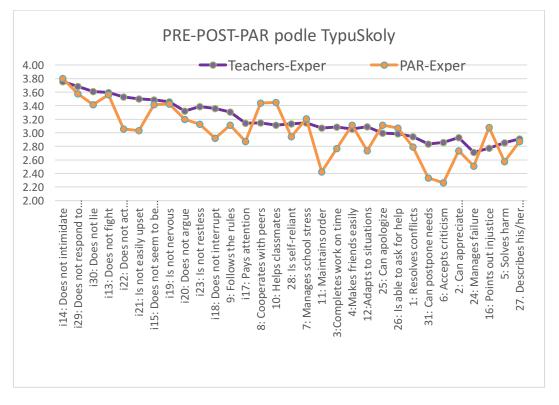
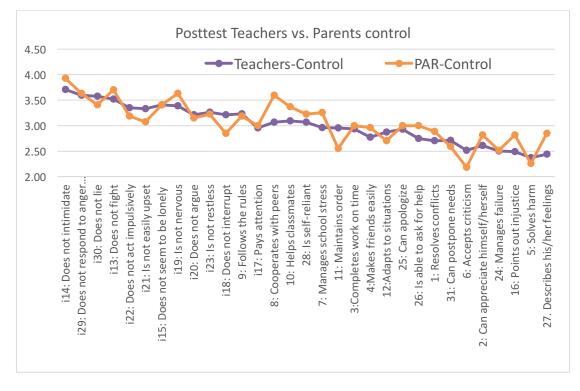


Figure 16 Comparison of the view by parents and teachers in the experimental group

Figure 17 Comparison of the view by parents and teachers in the control group



N Parents = 114.



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Summary of Teachers' Experience Based on their Testimonie and Subjective Evaluation

As a part of implementation of ZF programme, regular methodological meetings took place. The aim of these meetings was to enable the teachers implementing the programme in their classes to share experience and to help them to overcome difficulties that might have emerged during their work with the methodology.

At the beginning teachers were worried about the time demanded for individual units and the whole programme. In the case of the youngest children, they had difficulty in concentrating for the whole session , which was solved by spreading the unit in time and switching it with other activities. In course of time most teachers agreed that the children could manage to concentrate better for the time required for the session, and only exceptionally did they continue with the unit in the next lesson.

Some teachers had a positive feedback on improvement in the collaboration with parents, which frequently exceeded their expectations. Only exceptionally the teachers saw situations when parents suggested solutions that were contrary to the meaning of the programme (e.g. fight back etc.). The teacher-trainers in charge of the meetings and the teachers agreed that similar suggestions should be discussed with the children, using the tools offered by the ZF methodology (e.g. "Rules for choosing a good solution – it makes me feel better and it doesn't hurt me or anyone else"), and that teachers should avoid criticizing the parents.

One of the topics that worried teachers in the implementation in class was loss and death. The feedback from the methodological meetings did not confirm such worries. Children considered the topics as interesting, and from their reaction we could conclude that they welcomed the possibility to share such topics (based on the number of feedbacks, activities and paying attention in the class).

The attendees of methodological meetings considered the programme meaningful; they even observed changes in conflict frequency. They refer to ZF when solving situations in other lessons. The work with younger children seems to be more difficult. The easiest way of implementation of the ZF methodology seems to be in the second grade, based on the teachers' experience.

The teachers taking part in our study want to continue with the methodology – e.g. to deepen acquired skills of the children by additional activities. It also follows that the teachers would appreciated training of other colleagues from their schools, and they think after-school care centres should also be involved.



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From teachers' feedback:

"I realized small children have the same urge to talk about their feelings and troubles as adults." (Lucie, teacher)

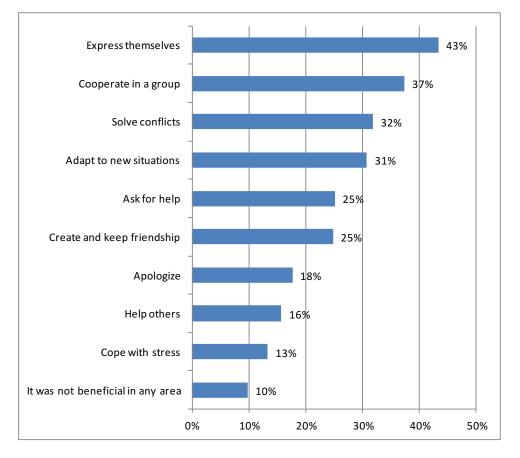
"Zippy gives all children the chance to explain various life situations, learn how to anticipate them and cope with them." (Jaroslava, teacher)

"The fact the project works can be observed from the children, since they are sincere and cannot be fooled. My son could not wait for the lessons with Zippy and enjoyed them all. I also got positive feedback from teachers at school." (2nd grade pupil's mother)

"The whole project is well-prepared, it is comprehensive and attractive for both children and teachers." (2nd grade pupil's mother)

"We use techniques from the ZF programme in the everyday life of the classroom, e.g. conflict agreement." (Veronika, teacher)

The following figure shows teachers' opinions on the benefit of the programme for the individual children.



In which area was the programme beneficial for the child?

Teachers' opinions, post-test. Respondents could choose more options. Nexp = 467.



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Conclusion

This research report summarizes basic findings from the assessment of the effectiveness of the *Zippy's Friends* programme by a randomized, controlled study. The aim of the study was to find out whether the implementation of the ZF programme brings significant benefits for the pupils of zero, first, second and third grades of randomly chosen primary schools, evaluated by their teachers and parents. For the evaluation we used a questionnaire reflecting phenomena on which the ZF programme focuses in its modules. Besides that we were also interested in the question of whether the programme would have any influence on the pupils' performance in the classroom.

The data analysis clearly shows significant benefits in most monitored phenomena for children working on the programme over the whole school year. The only phenomena with not so significant differences were "Is impulsive, Is lonely, Is nervous in a group of children", however no change happened in the control group either. We can conclude that these monitored phenomena are rather related to the personal traits of the children assessed, so the question is whether, with such a type of intervention, it is possible to significantly influence them in a short space of time.

On the contrary, significant differences between the experimental and the control groups appeared in the area of self-management (in the post-test). After the programme, the children manage to postpone their needs, they are better at school-stress management, able to maintain order, finish work in time and they adapt to the school environment better. They had also higher scores in cooperation with peers, ability to ask for help, conflict resolution, accepting criticism, ability to point out injustice and to describe their feelings.

The evaluation of benefits after finishing the ZF programme for individual grades (zero, 1, 2 and 3) showed the following results. The improvement in assessment was obvious for most monitored phenomena in all the grades. For the zero grade, we could not compare the results of the experimental group with the evaluation of the control group, since the control group stopped the data collection during the programme. Even though the improvement is significant, it might be caused by natural development of skills in the course of the school year. Significant benefits showed especially in the cause of first and second grades. In the third grade the benefits are not so obvious, which might be caused by a higher age of the children (8–9 years) than the recommended age of the target group (5–7 years), but also by a relatively low number of children in this group.

When comparing the changes in the level of the monitored phenomena for boys and for girls, it showed that the boys in general got a lower score in the pre-test than the girls. After the implementation of the ZF programme it was apparent that both the girls and the boys had made comparable progress. Thus we conclude that the ZF programme brings similar benefits for both girls and boys.



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Very important results were found in the case of implementation of the programme for children with special educational needs. These pupils made such significant progress in the monitored areas that they approximated to the children without any identified diagnosis. There was no such progress recorded in the control group, in which the children with SEN stayed far behind the rest of class. We conclude that the ZF programme is an important help for the adaptation of children with SEN to the school environment and their integration in the classroom.

The data analysis considering academic skills and mastering the curriculum showed that in the experimental group, significant progress had been made in the evaluation of pupils' study results. This finding accords with the hypothesis that the positive influence on the environment, and the development of social skills and self-management skills, have a positive effect on the academic success of pupils.

Another finding of our study is the different view of individual children by teachers and by parents. This might be caused by the fact that teachers and parents see the children in different environments and social groups. Parents in both the control and experimental groups have a very similar view of their children.

A part of the evaluation report is also a brief description of methodological meetings, taking place in the course of implementation of ZF programme. As follows from the teachers' feedback from these meetings, they consider the programme meaningful; they even observe changes in conflict frequency. They refer to *Zippy's Friends* when solving situations in other lessons. The work with younger children seems to be more challenging. The easiest way of implementation of the ZF methodology seems to be in the second grade of primary school.

Annexe 1: Questionnaire for the teachers

ID of a pupil (anonymized code)

No. of the school in the system:

No. of the pupil in the classlist:

Grade

 \bigcirc 0. Grade (5-7 years old, 0. grade is not compulsary education, it is aimed for children, who are not prepared for regular school attendance yet)

○ 1. Grade (6-7 years old)

O 2. Grade (7-8 years old)

○ 3. Grade (8-9 years old)

Gender:

Ofemale

Omale

How many modules of Zippy's friends did he/she finish?

Ο0

- Ο1
- O 2
- Оз
- Ο4
- Ο5
- 06

Assess the pupil based on the following questions. Try to estimate his/her behaviour, if you did not experience the situation with the pupil.

	Never	Ocassionaly	Often	Almost always
Resolves conflict.	0	0	0	0
Can appreciate himself/herself.	0	0	0	0
Completes work on time.	0	0	0	0
Makes friends easily.	0	0	0	0
Solves harm.	0	0	0	0
Accept criticism.	0	0	0	0
Manages school stress.	0	0	0	0
Cooperates with peers.	0	0	0	0
Follows the rules.	0	0	0	0
Helps classmates.	0	0	0	0
Maintains order.	0	0	0	0
Adapts to situations.	0	0	0	0
Fights.	0	0	0	0
Intimidates.	0	0	0	0
Seems to be lonely.	0	0	0	0
Points out injustice.	0	0	0	0
Easily loses concentration.	0	0	0	0
Interrupts others.	0	0	0	0
ls nervous in a group of children.	0	0	0	0
Argues.	0	0	0	0

	Never	Ocassionaly	Often	Almost always
Easily upset.	0	0	0	0
Acts impulsively.	0	0	0	0
ls restless.	0	0	0	0
Manages failure.	0	0	0	0
Can apologize.	0	0	0	0
ls able to ask for help.	0	0	0	0
Describes his/her feelings.	0	0	0	0
Is self-reliant.	0	0	0	0
Responds to anger with agression.	0	0	0	0
Lies.	0	0	0	0
Can postpone needs.	0	0	0	0

Diagnosed by a specialist (e.g. Psychological-pedagogical centre, Centre for special pedagogy, a psychologist, a psychiatrist):

Please choose all relevant answers.

ADHD/ADD

Behaviour disorder

Learning disorder

□ Somatic disability

Mental disability

Autism

□ Speech impediment

Social handicap

 \Box Does not understand lessons (does not speak and understand Czech properly, not a diagnosis)

Other

□ No diagnosis

In mastering the curriculum I evaluate the pupil as: *

Oexcellent

○ very good

Oaverage

O below average