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Physical Games as a Means of Developing Children's Social Skills in Kindergarten

Viktor Pacholík – Martina Nedělová*

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Abstract:
Introduction: The text presents the results of a study conducted in the years 2015 - 2016. The objective of the study was to examine a programme of physical activities aimed at developing children's social skills.
Methods: The research was conducted in a kindergarten. This was a deliberate choice on the basis of availability. The experimental group comprised of 24 children, the control group comprised of 11 children. A 12-lessons programme of physical activities was applied, with a frequency of 1 lesson per week. Entry and exit measurements were taken before the commencement of the programme and after its end, with the help of structured observation, CATO projective tests and interviews with teachers. The data were processed by means of a descriptive statistics level by comparing the average levels. The achieved changes in the level of social skills were subsequently displayed through percentage values.
Results: The results indicate that physical activities have a positive effect on the development of children's social skills. Although the changes are not significant, the experimental group recorded greater changes than the control group in all the evaluated areas; in terms of the overall results, it was actually more than twofold.
Discussion: The results cannot be generalized. The results are only valid for our group of children. The reason is the insufficient size of the research sample.
Limitations: A significantly limiting factor showed to be the low number of children in the control group. This caused a lack of balance between the two groups in terms of the number of children and their entry level. The length of the intervention program was another limit.
Conclusions: Despite the limits of the study, the authors view the results as positive. The reason is the improvement in all the children's social skills in all the monitored areas, and the more than twofold improvement by the experimental groups compared to the control group.

Key words: preschool child, kindergarten, physical activities, psychomotor games, social skills.

1 Introduction

The kindergarten provides an environment in which the child spends a large part of their day. The child normally spends seven to eight hours in this environment. During this time, children must function according to the rules of the kindergarten and the specific

* Viktor Pacholík, Tomas Bata University in Zlín, Faculty of Humanities, Zlín, Czech Republic; pacholik@fhs.utb.cz
Martina Nedělová, Tomas Bata University in Zlín, Faculty of Humanities, Zlín, Czech Republic; m_nedelova@fhs.utb.cz

class which they attend. Children are in regular contact with other children and pedagogues, so they get into many situations which they must learn to handle, resolve or prevent. If we think of the openness and guileless sincerity of children at this age, it is evident that many situations which occur among children can be very unpleasant, and a child's reactions may seem harsh to another child. Life in the kindergarten, and the child's social contacts with other children and the teacher, can arouse intense emotions. If these emotions are negative, the associated experiences can reflect not only in the child's relationship with other children in the kindergarten, but also with the kindergarten as a whole.

The authors of the Framework Educational Programme for Preschool Education (hereinafter FEP; Splavcová, Šmelová, Kropáčková, & Syslová, 2016) are also aware of this fact. Figure 1 shows the defined key competencies which children should achieve in preschool education. It is evident that the social area assumes an important place among them.

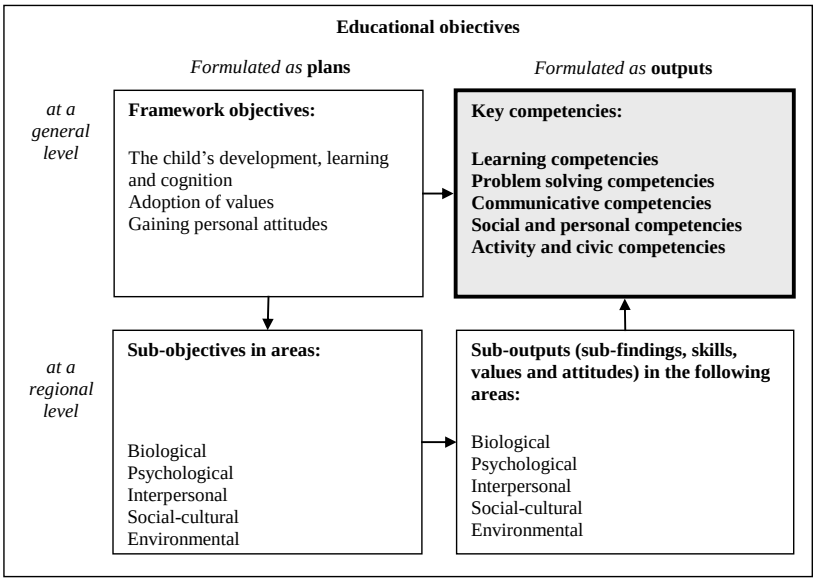

Figure 1. System of objectives in the FEP (Splavcová, Šmelová, Kropáčková, & Syslová, 2016, p. 9).

During their work in the academic environment, the authors of this paper discuss various themes with the teachers, including the issue of developing children's social skills. In these interviews, the teachers often mention that, in the effort to fulfil all the objectives stipulated by the FEP (Splavcová, Šmelová, Kropáčková, & Syslová, 2016) and all their other work obligations, they do not have sufficient time to apply the specific processes (activities) focused on developing the social skills of children. That is why they are usually limited to resolving conflicts which have arisen, and they try to reinforce appropriate behavioural models in the children, mainly in relation to these situations. However, we do not regard that as sufficient. The authors believe that targeted development is necessary, rather than random action based mainly on conflict resolution.

The second problem which we encounter with the teachers is their inner conviction that they are not sufficiently prepared for the targeted development of children's social skills. They complain about insufficient theoretical knowledge of these areas, and they also believe that they are not capable of leading and directing such activities, or reacting suitably to situations which can arise during them.
This led the authors to the idea of offering the pedagogues activities whose character supports the development of children's social skills, but which at the same time are not demanding in terms of time, space or specific aids and equipment, and which the pedagogue can manage with the abilities and skills that they normally apply during their everyday teaching.

1.1 Terminological definition

In connection with the development of a person's social aspect, we encounter considerable inconsistencies in the use and definition of terms. The most frequently used terms in this context include competence and skill.
Competences are normally perceived as a term superior to social skills. Průcha, Walterová and Mareš (2009, p. 129) understand competence as *"the ability, skill, and capability to successfully realize certain activities and resolve certain tasks, particularly in work and other life situations"*. This concept perceives competence and skill as synonyms. However, in specialized literature, we can encounter various interpretations. Basically, we can observe three approaches to understanding social competences:

- Authors who perceive social competences as effective social behaviour, and view social competences as the ability to successfully and appropriately choose and implement one's interpersonal objectives (compare with Guralnick, 1990). The success of these strategies is then usually put in the context of popularity, involvement in the group, and other people's positive evaluations.
- Other authors understand social competences as the cognitive processing of social information. In this sense, Rubin and Rose-Krasnor (1992) define social competence as the ability to achieve personal objectives in social interactions, while simultaneously maintaining positive relationships with others over time and across situations. Their model of processing social information is formed by the following steps:
  1. Selection of social objectives;
  2. Interpretation of context;
  3. Finding or creation of possible strategies;
  4. Selection of strategy;
  5. Evaluation of the strategy's results.
- The last concept perceives social competences as a set of social skills. In this sense, social skills are perceived as *"prerequisites for adequate social interaction and communication, gained by learning"* (Gillernová, Krejčová, Horáková Hoskovcová, Šírová, & Štětovská, 2012, p. 32). Průcha, Walterová and Mareš (2009, p. 59) state that although the term "skill" is one of the basic concepts of pedagogy, it has still not been sufficiently clarified. They also present a general definition, according to which it means *"a person's ability to perform a certain activity"* (2009, p. 59). Švec (1998) understands skill as a subject's capability to resolve task and problem situations, which manifests itself by observable activity, and which is saturated with abilities, experiences, learning styles, motives and other variables.

Caldarella and Merrell (1997) identified five dimensions of social skills:
- dimension of peer relationships;
- dimension of self-regulating mechanisms;
- dimension of skills associated with education and school attendance;
- dimension of mutual harmony;
- dimension of the skills of asserting oneself in interactions with others.

Gillernová et al. (2012) point to the fact that skills relating to the dimension of mutual harmony actually express skills connected with cooperation in many respects.

We believe that one must thoroughly distinguish between the terms social skills and social competences. After all, gaining a certain skill does not necessarily mean that it is effectively utilized. Thus, we understand "skill" more as the ability to realize a certain behavioural model. However, this can occur schematically, according to a learned pattern, without any change. On the contrary, the term "competence" indicates a kind of evaluation standpoint, and expresses the ability to adequately use specific skills in contact with others (Cook, Gresham, Kern, Barreras, Thornton, & Crews, 2008). However, in this text, we will deal mainly with children's observable behaviour in all kinds of social situations. We will not deal with the children's ability to effectively choose and utilize these skills. That is why, in accordance with many authors (compare with Cook et al., 2008; Čáp, 1997), the term "skills" will be used in this text in connection with the child population.

1.2 Development of social skills

As indicated above, the development of social skills in preschool children should be an integral part of a kindergarten teacher's work. The targeted and systematic development of the child's basic social skills already occurs during the preschool period. Some skills are based on general social rules. Greeting people and saying "please" or "thank you" should be a normal part of a child's behaviour before attending a primary school. However, other areas of the child's social behaviour must also be developed. Among these, Bednářová and Šmardová (2011) mainly rank:
- communication (verbal and non-verbal);
- appropriate reactions to new situations;
- adaptation to a new environment;
- understanding own feelings and self-control;
- understanding other people's emotions and behaviour; and
- objective self-concept and self-evaluation.

The experiences of pedagogues and many experts show that a one-time inclusion of a certain exercise or block of activities is not sufficient for an effective influence on the child's social area (compare with Gillernová et al., 2012, Hermochová, 2005, Hermochová & Vaňková, 2014, Mohauptová, 2009). Regular meetings of a shorter duration seem to be optimal. Gillernová et al. (2012) see the main advantage in a more long-term dosing, and the possibility of gradually including the newly-developed skills in real social situations. However, an essential condition for the successful training of social skills is the feeling of psychological security. Fulfilling these conditions allows participants to be sufficiently open and sincere. However, it is in this very condition that we see a considerable risk in a children's collective. Preschool children are naturally sincere, and cannot think through the impacts of their behaviour. That is why certain utterances by children, and reactions to others, can seem harsh, and can arouse fear of

open, sincere speech in the other child. That is why we consider it appropriate to use playful forms, whose character supports children's spontaneity and natural behaviour.

1.3 Social skills and physical games

In our work, we tended towards physical games. The starting point is the assumption that the concept of physical activities offers sufficient opportunities for developing the child's social skills, and building a healthy social group within the class. They usually take the form of a game, and so are engaging and entertaining for the child. The unconventionality of many activities and new aids with which the child can work and which enliven normal PE-oriented activities, also have a motivating effect.

Playful activities and unconventional aids (tools and equipment) support children's spontaneity, allowing the child to express themselves naturally while unintentionally experiencing the joy of movement, as well as the many different emotions evoked by physical activity. Thus, they offer the child the opportunity to become aware of their own emotions and reactions and orient themselves in them, thereby making work with their own experiences more effective. Orientation in oneself is an essential basis for getting to know and understanding others. *"Most physical activities and games consist of playing together which is why the expected outputs formulated in the interpersonal area can be realized in them"* (Dvořáková, 2011, p. 24). At the same time, physical activities are considerably variable in their demands on spatial, time and material conditions. That is why we believe that they can be integrated into the appropriate parts of pedagogical work, such as for example during physical education times, outdoor stays, PE lessons etc., completely without coercion and without significant time or other requirements.

Physical activities, particularly from the area of psychomotor games, offer a range of themes for developing children's social skills in kindergartens. Psychomotorics, as a system of physical activities aimed at enjoyment (Blahutková, 2003) is an optimal means of utilizing movement and the evoked emotions for deeper self-knowledge, but also of coping with intense emotions, desires and all kinds of conflicts among children. Adamírová (2006) defines "psychomotorics" as responsible training by movement. Under natural conditions, a child penetrates deeper into their experiences, tendencies and normal reactions, and learns to deal with them. However, they also get to know the reactions of others which provides them with valuable feedback in relation to their behaviour. Furthermore, the conditions of devising psychomotor activities, which Zimmer sets forth, create a suitable psycho-social environment for the development of social skills. According to Zimmer (2012), the child should, first and foremost:

- experience itself as a participant in the action;
- be able to relate successes and failures to themselves;
- create their own scale of values, and orient their own behaviour towards them;
- assume responsibility for their own actions;
- familiarize themselves with alternatives to disruptive forms of behaviour, and incorporate them into their own conduct.

To fulfil these plans, one can use all kinds of aids, tools and equipment, e.g. a psychomotor parachute, pedal walker, balance platform, skipping ropes, cables, skittles etc., by means of which children provide basic assistance to one another. Thus, they learn to sensitively perceive each other via verbal and non-verbal communication, develop empathy and own responsibility, and build a relationship of mutual trust among themselves. Apart from individual use (or use in pairs), these aids enable a number of

group activities. In some cases, however, it is a quite financially demanding equipment which a normal kindergarten can only afford in exceptional cases. However, a system of psychomotor activities offers a rich scale of activities and games with regularly available items (balls, skipping ropes, construction sets with large building blocks, benches etc.), objects of everyday use (PET bottle lids, yoghurt tubs, pegs), or alternatively completely without aids. Therefore, these activities become easily accessible to every kindergarten.

2 Methodology of the research

2.1 General background of research

In 2015 - 2016, the authors of this paper conducted research focused on the development of preschool children's social skills by physical activities. The research took place within the framework of the IGA (IGA/FHS/2015/10 Support for the Building of Social Relationships in the Children's Collective via Physical Activities) project at Tomas Bata University in Zlín. The main objective of the research was to examine the programme of physical activities from the area of psychomotor activities, and its effect on the development of the child's social skills in the kindergarten environment. Given the character and objectives of the research, a quasi-experiment design was chosen.

The original assumption was that the duration of the experiment would be 6 months. However, due to some fundamental changes in the project, there was a considerable delay. The research survey itself only took place in the last quarter of the 2015/2016 school year, and had to be completed by the end of the school year. Thus, the length of realization of the intervention programme had to be shortened to just 12 lessons, with a frequency of 1 lesson per week and lesson duration of 90 - 120 minutes. The finalisation of the survey shortly before summer holidays led to a significant reduction in the number of children in the control group. Thus, the shortening of the experiment and the date of its completion proved to be a considerable limit.

2.2 Research sample

The research was realized in a kindergarten. This was a deliberate choice on the basis of availability. The selected kindergarten had two classes of children 5 - 6 years of age. This was a major advantage which was utilized when compiling the experimental and control groups. The fact that all the children from both groups attended the same kindergarten guaranteed a very similar environment, material resources and overall institutional philosophy. Therefore, it was possible to eliminate one of the core disruptive variables, consisting of the institution's different effect on children from the experimental group and children from the control group. Of course, despite the considerable similarity of these conditions, one must be aware of the different approaches by the teachers in the two classes.

The plan was to work with all the children in both classes, i.e. 28 children in the experimental group and 29 children in the control group. However, as a result of the changes in the length and timing of the experiment described above, there was a reduction in the number of children. The research could only include children which underwent the entry and exit measurement and, in the case of the experimental group, also attended most of the lessons in the intervention programme. However, the conclusion of the research survey shortly before the holidays meant that, at the time of the exit survey, some of the children no longer attended the kindergarten. Thus, for these children, the exit survey could not be realized. This led to a considerable reduction in the

number of children in the control group. The final numbers of the children are shown in Table 1.

Table 1

Numbers of children in the experimental and control groups

	Control Group	*Experimental Group*
Girls	6	9
Boys	5	15

As the research involved minors, written informed consent had to be obtained from parents and legal representatives. After personal talks with the school management and the teachers in the classes involved, oral consent was also obtained from the kindergarten.

2.3 Instrument and procedures

Before applying the intervention programme, and after its completion, entry and exit measurements were realized using the following methods:

- Structured observation;
- CATO;
- Unstructured interview.

The main method for assessing the children's social skills was structured observation. An observation record sheet was created for the needs of the research. The authors were led to create their own observation structure by the fact that the available Czech assessment scales and similar methods are intended primarily for pedagogues in practice. That is why they place emphasis on the simplicity and speed of the evaluation; they usually work with a three-point social skill evaluation scale (copes - copes with difficulties/with help - does not cope). However, such an assessment is too wide for research purposes, and does not sufficiently discern the child's actual level.

The observation structure and evaluated items were based on tools with a similar focus (compare with Bednářová & Šmardová, 2011). The evaluation was based on 7 categories:

- Work, rules, respect towards authority;
- Targeted behaviour, self-reflection;
- Regulation of emotions;
- Communication;
- Openness towards people;
- Peer relationships;
- Cooperation.

Each category included 5 – 6 items (the child's specific manifestations) which were evaluated on a 0 (does not cope, does not occur) to 5 (copes without difficulties, manifests to a sufficient extent) scale. This relatively fine scale allowed the recording of even a partial improvement or deterioration by the child in a certain behavioural manifestation. The total number of points that could be obtained was 190. In the individual categories, it was 30 (in the case of the 5-item category) or 35 (in the case of the 6-item category).

We must mention that this is the first version of the observation record sheet, which will be further developed and examined more thoroughly. Thus, in terms of the creation of this tool, this is actually a pilot study, whose data will be used not only for the purposes of the study, but also for further increasing this tool's quality.

The CATO method belongs among projective tests. The objective is to *"gain as much information as possible about the interpersonal relationship in the child's family, and about situations and relationships outside the family which the child regularly experiences and which have a certain significance for him"* (Svoboda, Krejčířová, & Vágnerová, 2001, p. 253). In accordance with the authors' claim that, while working with this method, one can only focus on certain issues (Boš & Vágnerová, 2012), we placed emphasis primarily on the kindergarten environment (relationships with peers, perception of the teacher's authority etc.), and we also touched relationships in the family marginally, in order to illustrate and better understand the child's attitudes.

The essence of the test is working with images (1 introductory - initiation and 14 thematic), which depict a general, unspecified situation. The child is asked to describe the image, and try to interpret the situation in it. With the help of the pre-induced identification with one of the child characters in the image, the child's actual attitudes, experiences and social relationships are expected to be reflected in their interpretation of it (the projection principle).

The interview with the child took place (just like the administration of other methods) individually, away from the other children in the class. It focused on the child's subjective perception of the social environment of the class and kindergarten. The child's relationships with other children (the class as a whole) and some mutual relationships between specific children (friends, "enemies") were analysed. The interview also focused on the area of relationships with the teacher and other kindergarten workers.

The obtained interviews were not evaluated independently; they served primarily as a supplement to the previous methods for a better understanding of the situations and conditions under which the child moves in the school and in its family.

2.4 Data analysis

This section focuses only on the data gained by observation. The data were processed mainly on a descriptive level, as the size of the control group does not allow a statistical verification to be performed. Thus, the results were evaluated on the basis of a rough score obtained in individual items and categories. The overall score, obtained by adding up the points in all the evaluated items, was also evaluated. To evaluate the obtained data, we worked with the average numbers of obtained points for variously defined groups. The respondents were divided into groups according to the membership in the experimental or control group. However, the gender of respondents was also taken into consideration.

Based on the maximum number of points which could be obtained, the rough score was converted into a percentage. The percentage expression enabled a better assessment of the changes which occurred during the experiment. When assessing the achieved changes, the coefficient of determination, which *"determines the extent to which the action of an independent variable influences the variability of a dependent variable"* (Mareš, Rabušic, & Soukup, 2015, p. 223), was also taken into consideration.

3 Results and discussion

The results pointed to some typical differences in the general level of social skills between boys and girls (Figure 2). In terms of the overall results, the girls achieved better results than the boys, both at the start of the research survey and at the end. During the exit survey, the boys actually did not even reach the girls' initial level. This finding is in not surprising, as the research points to the generally better social skills of girls and women compared to boys and men (compare with Guralnick, 1990; Pohl, Bender, & Lachmann, 2005; Anme et al., 2010; Villa & Del Prette, 2013). However, the boys showed a greater improvement in the area of social skills then the girls. This result does not take into consideration the division of the children into experimental and control groups, but only into the group of boys and the group of girls across the entire research group. The reasons can be seen in the previous finding: boys achieved generally worse results, so the potential for development was also greater in boys than in girls. Furthermore, some of the girls from the experimental group proved as shy, which was not observed with the boys (this is the authors' subjective view, not a fact verified by the research study). This may have been the reason for the lower openness towards the influences in effect. Thus, with these girls, one could expect a lower level of social skill development, which a more detailed analysis of these girls' individual results confirmed.

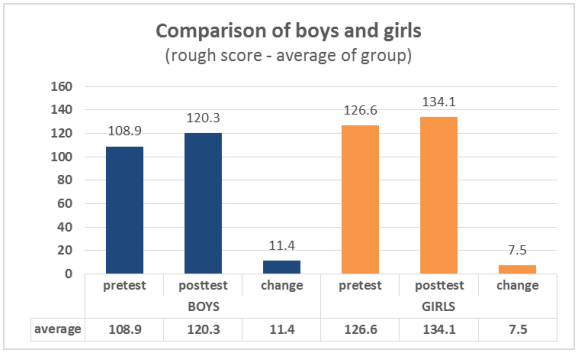

Figure 2. Comparison of the boys' and girls' results.

Furthermore, attention will be devoted to observing the changes in the control and experimental groups. Table 2 presents the average changes in the rough score in the pre-test and post-test in the control and experimental groups. Although the changes are not significant, it is necessary to draw attention to some rather important moments. In each of the monitored areas, a greater shift was recorded in the experimental group than in the control group. This difference was most significant in the area of cooperation. This is connected with another interesting finding: cooperation is the only area in which we could see worsening, rather than improvement in the results, and this was in the control group (an average deterioration of 0.7 points). A more detailed examination of individual children's results showed that the deterioration in the control group was caused by the significant deterioration of one boy. It can be assumed that situational influences played a significant role as the teacher did not mention such manifestations in the boy's behaviour in the subsequent interview. However, the boy could no longer be repeatedly observed. At the same time, in such a small sample, the boy's results could not be

excluded from the analysis. However, a core finding arising from the analysis can be considered to be the more than twofold improvement by the experimental group compared to the control group in terms of the overall results. While an average shift of 5.4 points was recorded in the control group, in the experimental group it was 11.8 points. Therefore, the experimental group showed a 6.4 points higher improvement in average than the control group. Subsequently, the coefficient of determination was calculated, which showed that 26.2% of the changes can be explained by the effect of the experiment, which can be regarded as a relatively large effect. The children's gender also had an effect on the changes in the score, as the coefficient of determination also shows that, for the boys, as much as 27.9% of the achieved changes can be explained by the effect of the experiment, while for the girls it is only 23.4%.

Table 2

Differences in the point gain in the pre-test and post-test in the control and experimental groups (average number of points per group)

	Control		*Experimental*		*Difference*	*Coefficient Determination*
	Average	*SD*	*Average*	*SD*	*Averages*	*(%)*
Work, rules, authority	0.8	0.9	1.3	1.1	0.5	5.4
Targeted behaviour, self-reflection	1.0	0.6	1.5	1.1	0.5	5.9
Regulation of emotions	1.0	1.1	1.5	1.1	0.5	5.5
Peer relationships	1.1	0.8	1.7	2.7	0.6	1.4
Communication	1.3	0.5	2.0	1.3	0.7	7.6
Openness towards people	0.9	0.7	1.7	1.3	0.8	9.9
Cooperation	-0.7	4.8	2.0	3.2	2.8	11
Overall change in score	5.4	5.6	11.8	4.9	6.4	26.2

The rough score was then converted to a percentage (always of the maximum number of points which could be obtained in the given category). The results show that in both groups, there was an improvement in all areas, except cooperation. Only the boys from the control group recorded a deterioration of the results in this area, of 9.6%, which also affected the overall results of the control group in the area of cooperation (a deterioration of 2.9 %). The reasons were already discussed in the previous paragraph. In all categories, there was a more significant improvement in the experimental groups than in the control group. The only case where there was an improvement in the control group compared to the experimental group was the area of communication, in which the girls in the control group achieved an improvement of 3.9%, while the girls in the experimental group achieved an improvement of only 3.3%. At this point, we should once again mention the shyness and bashfulness of some of the girls in the experimental group, as was indicated above. Here, too, a more thorough analysis of the individual children's results indicates a certain relationship between the girls' shyness and the score achieved in the area of communication. However, given the more significant improvement by the boys in the experimental group (by 8.4%), this was not reflected

very much in the experimental group's overall results, which thus improved by 2.3% more than the control group in communication, too. There was a more significant improvement among the boys than among the girls in almost all areas. An exception is formed by the experimental group in the area of peer relationships, in which the girls achieved an improvement of 7.4%, while the boys achieved an improvement of only 4.4%. The complete results are summarized in Table 3.

Table 3

Average improvement by boys and girls in the control and experimental groups (in % of the maximum possible point gain in the given category)

	BOYS			*GIRLS*			*TOTAL*	
	Control	Experimental	Total	Control	Experimental	Total	Control	Experimental
Work, rules, authority	5.6	6.4	6.2	1.3	3.6	2.7	3.3	5.3
Targeted behaviour, self-reflection	4.0	6.2	5.7	2.8	3.0	2.9	3.3	5.0
Regulation of emotions	4.8	6.7	6.2	3.3	5.3	4.5	4.0	6.2
Communication	4.7	8.4	7.5	3.9	3.3	3.6	4.2	6.5
Openness towards people	4.8	7.7	7.0	2.7	5.3	4.3	3.6	6.8
Peer relationships	5.3	4.4	4.7	2.2	7.4	5.3	3.6	5.6
Cooperation	-9.6	9.6	4.8	2.7	5.8	4.5	-2.9	8.2
Overall change in score	3.0	7.0	6.0	2.7	4.8	4.0	2.8	6.2

4 Conclusions

Children spend a large part of the day in the kindergarten environment. The entire time they enter interactions with other children and teachers, and possibly other adults. In such an environment, they get into all kinds of social situations which they initially cannot deal with independently. They do not yet have a sufficiently rich repertoire of social behaviour patterns, which is why they cannot react adequately to the situations which arise. Thus, it is understandable that personal-social development is perceived as one of the pedagogues' basic tasks in the Framework Educational Programme.

The article presents the results of a research study which focused on the options of developing preschool children's social skills. A research survey was realized in a selected kindergarten, whose objective was to examine a programme of physical games focused on the development of social skills. The starting point was the belief that physical activities and games offer a considerable potential for the development of social skills. An advantage is the children's spontaneity, simultaneously combined with the need to respect stipulated rules, the option of cooperative and competitive activities, and alternating experiences of success and disappointment. With the help of structured observation, CATO projective tests and an interview with the teacher, the entry level of social skills of the children in the experimental and control classes was ascertained, and, after the realization of the physical activity programme in the experimental class, the same methods were used in both classes to determine the exit level. We compared the data from the entry and exit surveys at a descriptive statistics level (rough score, changes between the initial and final level expressed as a percentage of the maximum possible number of points in the rough score).

The results confirm the findings of some previous studies, particularly in the area of gender differences in the level of social skills. The girls generally achieved better results than the boys during both the entry and exit surveys, but a more significant improvement was recorded among the boys. In both the control and experimental group there was an improvement in the observed level of social skills in all the evaluated areas, but the experimental group showed more significant changes than the control group. In terms of the overall results, the experimental group showed an improvement more than double that of the control group. On the basis of the calculated coefficient of determination, as much as 26% of the determined changes can be explained by the effect of the experiment.

We must point out some of the significant limits of this study. A significantly limiting factor showed to be the low number of children in the control group which was caused by unavoidable organizational changes during the course of the survey. This subsequently caused a lack of balance between the two groups in terms of the number of children and their entry level. Given the above-mentioned organizational changes, it was also necessary to significantly shorten the implemented programme of physical activities to 12 lessons (with a frequency of 1 lesson per week).

Despite the afore-mentioned limits, the authors view the results as positive. The reason is the improvement in all the children's social skills in all the monitored areas, and the more than twofold improvement by the experimental group compared to the control group.

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