

UNIVERSITY OF SZEGED  
FACULTY OF HUMANITIES AND SOCIAL SCIENCES  
DOCTORAL SCHOOL OF EDUCATION

SOCIAL AND EMOTIONAL EDUCATION

SZILVIA HEGEDŰS

**INVESTIGATION AND DEVELOPMENT OF THE SUBTYPES OF PROSOCIAL  
BEHAVIOR IN INSTITUTIONAL ENVIRONMENT AMONG PRESCHOOL  
CHILDREN**

Summary of the PhD dissertation

*Supervisors*

Prof. Dr. Anikó Zsolnai

Prof. Dr. Alice Dombi Fáyiné



Szeged

2019

## CONTENTS

<b>THE TOPIC AND STRUCTURE OF THE THESIS</b> .....	3
<b>THEORETICAL FRAMEWORK OF THE TESIS' RESEARCH</b> .....	4
<b>RESEARCH AIMS AND HYPOTHESIS</b> .....	5
<b>RESEARCH METHODS</b> .....	8
<i>Sample</i> .....	8
<i>Instruments</i> .....	9
<i>Developmental program</i> .....	10
<b>RESEARCH FINDINGS</b> .....	10
<b>SUMMARY</b> .....	12
<b>LITERATURE USED IN THE THESIS BOOKLET</b> .....	14
(WITHOUT OWN PUBLICATIONS).....	14
<b>OWN PUBLICATIONS RELATED TO THE THESIS</b> .....	17

## **THE TOPIC AND STRUCTURE OF THE THESIS**

The topic of the thesis is the investigation and the development of subtypes of prosocial behavior with a story-based program among preschool children. Over the past decades, studies have highlighted the importance of children's altruistic reactions in different problematic situations. These responses appear in different types of prosocial behavior (helping, sharing, comforting).

In Hungary, there are only a few research which investigate the emergence of prosocial behavior among preschool children, however, many international researches engage in investigating this field. The aim of the dissertation is to explore the theory of prosocial behavior, to present its age-specific features and research directions and to present the structure and the results of my empirical research.

In the theoretical chapters first I outline the terminological basis of prosocial behavior, its components, and main motives relying mainly on international studies and research reviews. I'm also going to focus on the developmental process of prosocial behavior, on presenting the most typical behavioral elements of preschool-aged children. In this context, I'm going to summarize those methods and programs which partly or fully focus on developing prosocial behavioral elements which connect as samples to my research.

In the next chapters of the dissertation, I'm going to present my research and its results. First, I'm going to present the developmental process of the instruments for measuring three-four-year olds' behavioral elements (Chapter 3), and the first steps and the participants of the developmental research (Chapter 4). Following these, I'm going to summarize the main results of the pretests (Chapter 5), the developmental process and the execution of the intervention (Chapter 6). The final chapter (Chapter 7) includes the presentation of the impact of the program. Finally, I'm going to finish the dissertation by introducing some methodological problems and further research ideas.

## THEORETICAL FRAMEWORK OF THE TESIS' RESEARCH

Numerous Hungarian and international researchers tried to define prosocial behavior but they haven't accepted any definition yet. Most researcher agree that prosocial behaviors are voluntary actions intended to benefit or improve the well-being of another individual, without any prior promise of external reward (pl. Eisenberg, 1982; Eisenberg és Fabes, 1991; Bierhoff, 2007; Hasting és mtsai, 2007; Thompson és Newton, 2013). There are different types of prosocial behaviors, for example helping, sharing, cooperating, informing, supporting, concerning, worrying, protecting, comforting, compensating, compassion or compliance (Bar-Tal, 1982; Caprara és mtsai, 2000; Eisenberg, 1982; Eisenberg és Fabes, 1991; Fülöp, 1991; Grusec és Sherman, 2011; Schroeder és mtsai, 1995; Warneken és Tomasello, 2009).

In case of a problematic situation children can react differently according to their actual age characteristics, they try to moderate the other person's negative affective state by intervene verbally (e.g. verbal comforting) or physically (e.g. hugging or instrumental helping). Researches suggest that young children begin to help others soon after their first birthday (pl. Warneken & Tomasello, 2009), toddlers will assist to adults voluntarily to achieve their goal. The number and the quality of prosocial behaviors significantly develop with age and it is fundamental for the development of social competence (Bar-Tal, 1982).

Children respond to others' negative affective state in the first year of life (Roth-Hanania, Davidov & Zahn-Waxler, 2011), they interpret the other's goals, desires and needs by 10 months of age (Vaish, Carpenter & Tomasello, 2009). At 12 months of age children spontaneously share information with others (Liszkowski, Carpenter & Tomasello, 2008), they help instrumentally by 14-18 months of age (Warneken & Tomasello, 2006; Dunfield, Kuhlmeier, O'Connell & Kelley, 2011), voluntarily share their food or toys by 18-24 months of age (Brownell, Svetlova & Nichols, 2009; Brownell et al., 2013), and from 30 months of age they help empathically to affective problems (Svetlova, Nichols & Brownell, 2010). At the age of three children become more sensitive in the case of other's distress, they are able to recognize the affective state and sadness, which disposes them to produce comforting behavior (Hepach és mtsai, 2013). In conclusion, in the first three years of life motives of prosocial behaviors continuously develop as a result of social experiences, growing social and cognitive skills and other developmental processes (Brownell, 2013).

Several motivational factors determine the realization of prosocial behavior, the most important of these is empathy. During the emotionally significant events, individuals become more sensitive to other person's needs which evoke prosocial behaviors. The individuals will be able to recognize the situations, emotions and needs of other's and to intervene appropriately by reducing negative affective states and by helping to achieve their goal (Hoffman, 1983; Zahn-Waxler & Radke-Yarrow, 1982; Davis, 1983; Lábadi, 2012; Buchanan & Preston, 2014; Miller, 2018).

Prosocial behavior in preschool ages is a less complex process. In these years, according to Dunfield and Kuhlmeier (2013) the realization of prosocial behavior is determined by three main need: instrumental need, emotional distress and material desire. Children are able to recognize these needs and they also motivated to respond by prosocial intervention: helping, comforting and sharing. These needs generate different behavioral responses: the individual

respond to the other's instrumental need by helping behavior, emotional distress raises comforting and sharing behavior appear in the case of a material desire.

Usually programs for developing children's social competence focus not only on improving acceptable social behaviors and appropriate interpersonal skills but on decreasing aversive and negative behaviors (aggression and other antisocial behaviors). However these programs should focus on reinforcing positive behavioral experiences from the beginning. In many cases children's social developmental problems stay hidden until the beginning of attendance in institutional education where they meet other person (peers, teachers). Experiencing the new habits and interactions, they learn that social interactions operate according to specific rules (Fabes et al., 2006; Campbell és mtsai, 2016).

Because of the acquirement of social behavioral rules, the development of the components of social competence in preschool and school programs typically integrated into everyday situations, in various interactions. The most common developmental method is direct intervention which includes direct instructions, exercises and reinforcement of relevant social skills, for example emotion understanding, problemsolving and strategies of play activities. Programs typically teach skills and strategies through a variety of techniques, including discussion, modelling, group activities and role-playing. Most of the programs do not require the participation of a psychologist, teachers also can implement the activities in institutional environment. However, there are programs for children with social disabilities which provide effective developmental strategies achieved by clinicians (Fabes et al., 2006).

Hungarian programs focus on the development of social and emotional skills and various social interactions (e.g. group cohesion, acceptance, problem management, self-knowledge), mostly through group activities (Göbel, 2012; Bagdi et al., 2017; Kasik et al., 2017). There are similar interventions in the international field (e.g. Han et al., 2001; Domitrovich, Cortes & Greenberg, 2007; Webster-Stratton, 2011). These programs include group activities with children and completed with other methods, such as puppets (Webster-Stratton, 2011; Strawhun, Hoff & Peterson, 2014; Gottberg, 2017) or stories (Opre et al., 2011; Grazzani et al., 2016) and activities out of the institutional environment (Acar & Torquati, 2015). As a result of technological advances, the newest developmental programs focus not only on the development of cognitive skills, but there are online interventions for developing social and emotional skills (Baron-Cohen et al., 2004; Porto Interactive Center, 2013; Bernardini, Porayska-Pomsta, & Smith, 2014; D'Amico, 2017, 2018).

## **RESEARCH AIMS AND HYPOTHESIS**

In Hungary more and more researches and programs have been developed that investigate (pl. Zsolnai, Lesznyák & Kasik, 2007; Zsolnai, Kasik & Lesznyák, 2008), or develop (pl. Kasik et al., 2017) children's prosocial behavior. However, these programs engage in the development of these behaviors as sub-domains, thus, we don't have enough information about the development of prosocial behavior. Because of this lack, making appropriate methods was the first aim of my research which can measure comprehensively the prosocial behavior of 3-4-old children. To achieve this goal I made measurement tools based on models that emphasize the goal-oriented elements of prosocial behavior (Aarts, Gollwutzer & Hassin, 2004; Paulus, 2014;

Michael, Sebanz & Knoblich, 2016). The second aim of my research was to develop and test an intervention program, which improve preschool children's different types of prosocial behavior. To achieve this, I have made a story-based developmental program, based on the work of Italian researchers (Grazzani et al., 2016).

In my research I analysed the emergence of different prosocial behaviors in preschool group activities or in face-to-face situations and I also investigated the effect of a story-based developmental program on preschool children's prosocial behavior.

My research questions and hypotheses were the following:

*I.) Research questions in relation to the methods of measuring prosocial behaviors (H<sub>1</sub>-H<sub>2</sub>):* Are the measurements and the category system acceptable for investigating prosocial behavioral elements? How are the methods related to the children's age characteristics? Are the methods acceptable for applying in Hungarian institutional environment?

Hypotheses:

*H<sub>1</sub>:* The methods are considered suitable for examining the prosocial behavioral elements of children and the psychometric indicators are appropriate. On the basis of prior findings (pl. Bar-Tal, Raviv & Goldberg, 1982; Stockdale, Hegland & Chiaromonte, 1989) I expect that the observational categories and the categories from the instrument of face-to-face situations (pl. Warneken & Tomasello, 2006; Brownell, Iesue, Nichols & Svetlova, 2013; Dunfield & Kuhlmeier, 2013; Wu & Su, 2014) are suitable for measuring children's prosocial behavior. My third method was a unique questionnaire for collecting data about those behavioral elements that haven't found in previous researches.

*H<sub>2</sub>:* Analysing the Hungarian educational practice, direct measurement of preschool children hasn't been carried out yet, but based on the prior international researches (Dunfield & Kuhlmeier, 2013; Wu & Su, 2014), I suppose, that the program will be effective in Hungarian institutional environment.

*II.) Research questions in relation to the pretests of investigating prosocial behaviors (H<sub>3</sub>-H<sub>6</sub>):*

- a) *Research questions related to observational research:* In what ratio emerge social interactions and non-social interactions in children's behavior? Social behaviors in what ratio include prosocial behaviors? During all social behaviors in what ratio emerge prosocial reactions?
- b) *Research questions related to face-to-face situations:* Which behavior (helping, sharing, comforting) emerge in the greatest ratio in a problematic situation? What are the differences between the background variables that can effect the impact of the developmental program? What is the observed reason for the lack of positive responses? What are the correlation between the main variables and the background variables during the pretests?
- c) *Research questions related to the questionnaire about the reactions on peer distress:* Which are the most typical reactions according to the parents and the teacher? What

are the differences between children's responses according to the background variables? Are there any differences between the opinion of parents and teachers related to the children's reactions?

Hypotheses:

*H<sub>3</sub>*: Previous researches (pl. Bar-Tal, Raviv & Goldberg, 1982; de Leon, del Mundo, Moneva & Navarrete, 2014) suggest that in group activities helping behaviors in problematic situations are likely to be highly emerged over sharing and comforting behavior among preschool children.

*H<sub>4</sub>*: Based on researches on social behaviors (Stockdale, Hegland & Chiaromonte, 1989) I suppose that real prosocial behaviors appear in lower ratio in the behavior of preschool children.

*H<sub>5</sub>*: In the face-to-face tasks sharing behavior is the most common along with the helping behavior. Based on previous researches (pl. Dunfield & Kuhlmeier, 2013) I suppose that children will be able to interpret the emergence of instrumental needs immediately, and accordingly they show high degree of helping behavior and they react well on material desires. However in the case of the emergence of emotional distress there is a lack of comforting behavior.

*H<sub>6</sub>*: I hypothesized that parents and teachers mostly perceive preschool children's behavior in the same way, but their response suggest that parents' judge children's reactions in a problematic situation more positively than teachers'. I don't have information about any similar previous research.

*III.) Research questions related to the implementation and the impact of the developmental program (H<sub>7</sub>-H<sub>11</sub>):* Can the positive behaviors toward peers be developed through a story-based intervention? Are there any differences in the prosocial behavior and in the level of appearance between the experimental and the control group after the developmental program? What kind of changes occur in the behavior of children in the experimental and the control group?

Hypotheses:

*H<sub>7</sub>*: Prosocial behaviors in the experimental group are develop in greater ratio than in the control group. At the same time, active behaviors from the stories are presented in children's social behaviors. After the intervention, active and prosocial interventions will be more typical in children's behavior.

*H<sub>8</sub>*: According to previous research (Robinson, 2008) prosocial reaction appear in greater ratio in girls' behavior before the developmental program, but I hypothesize that this tendency will continue after participating in the program.

*H<sub>9</sub>*: Based on the findings of previous researches (e.g. Dunfield & Kuhlmeier, 2013) I supposed that prosocial behaviors will be more typical in older age group (41–45

months), with significant differences than in younger age groups (32–36 months és 37–40 months), especially with regard to sharing. However, as a result of the development, these behaviors also develop in a grater ratio in the youngest age group.

*H<sub>10</sub>*: Sibling can significantly influence the development of prosocial behaviors (Howe & Recchia, 2008), so I supposed that sibling and only-children will be on different level in presenting prosocial behaviors. However I also suppose that the development will result significant improvement in only-childs' behavior and their prosocial behavior will significantly emerge.

*H<sub>11</sub>*: Prosocial behaviors in children's behavior who attended in day-care centres emerge in greater ratio compared to children who were at home before their preschool years. However, participation in the program effects a significant increase in the ratio of prosocial behaviors in children's behavior who just started the preschool.

## RESEARCH METHODS

The complex research comprised four phases in which I conducted a pilot study to determine the suitability the previously selected methods for assessing prosocial behavioral characteristics of preschool children (January–February, 2016). Following this, I conducted the pretests (October–December, 2016) using multiple methods (observation, face-to-face situations, questionnaire), followed by a 15-week story-based intervention program between January and April 2017. Finally I evaluated the impact of the program by a repeated measurement between May and July 2017.

### *Sample*

A total of 189 preschool children ( $M_{age}=38.5$  months) participated in the research, the experimental group was from municipal preschools from Békéscsaba and the control group was also from municipal preschools from Szeged and Békéscsaba. Randomized selection of children who attended in my research was not possible because of the nature of the study, therefore the children were selected to the groups according to the permission of parents' and teachers'. Finally, 74 children from six preschool groups were included in the experimental group and 115 children from six preschool groups got in the control group and two preschool teachers from each group (in sum 24 teacher) participated in the research. The distribution by gender of children in the experimental and the control group is shown in the following table (Table 1).

*Table 1. Gender distribution of experimental and control group.*

	<b><i>Experimental group (6 preschool group)</i></b>	<b><i>Control group (6 preschool group)</i></b>	<b><i>All</i></b>
<i>Boys</i>	33	58	91
<i>Girls</i>	41	57	98
<i>All preschoolers</i>	74	115	189

## *Instruments*

The instruments of the research I have developed based on previous researches considering the the relevant theoretical models and results of the literature research. Based on these findings I adapted three measurement methods:

- a) Evaluating children's in-group behavior I applied the *observation* method, designed its categories from the findings of previous observational studies (Bar-Tal et al., 1982; Stockdale et al., 1989). The categories of the instrument included not only the realization of children's social behaviors (social interactions, prosocial behaviors, non-social behavior) but also the appearance of various prosocial behaviors (instrumental helping, sharing, comforting). All these were supplemented with categories of factors that influence prosocial behaviors (self-initiated, compliance with child, compliance with adult, imitation). After the pilot study the developed category system proved to be appropriate for recording the children's prosocial behaviors in different social situations, thus I used this method without further changes.
- b) The next instrument used in the research was *situational tasks* to measure children's response to different needs in face-to-face problematic situations. In this context, children were attended in simulated everyday situations in a separated room, where they had to respond to different needs: by helping in instrumental need, comforting in the case of emotional distress and sharing in the case of material desire. Based on previous researches (Brownell et al., 2013; Dunfield & Kuhlmeier, 2013; Warneken & Tomasello, 2007; Wu & Su, 2014) the instrument evaluate children's responses in two situations over five categories: (1) reaction when the problem occurs, (2) reaction after the first nonverbal signal, (3) reaction after the second nonverbal signal, (4) reaction after the expression of distress, (5) reaction after verbal signal. After the pilot study I added three additional categories to record the observed causes of the lack of positive responses: (6) perceive and observe, (7) perceive but no reaction, (8) no reaction because of own activity.
- c) Parents' and teachers' opinions were asked using a *questionnaire* to investigate their experiences about children's reaction on peer distress. The instrument was a self-developed questionnaire based on the categories of a previous observational study (Phinney, Feshbach, & Farver, 1989), which similarly recorded the responses of preschool children's reaction in the case of a peer's distress. Respondents had to evaluate children's behavior on a five-point Likert scale recalling the events of the previous few months in relation to a previously presented situation ("If your child sees another child crying, ..."). The content of parents' and teachers' questionnaire were the same. The reliability-indices (Cronbach- $\alpha$ ) were good, the values of the parents' (0,85) and teachers' (0,88) questionnaire were appropriate.

### *Developmental program*

To improve preschool children's prosocial behaviors I developed a story-based program, in which the children in the experimental group attended in group activities where they heard stories 2-3 times each week for 15 weeks wherein the protagonists encountered a problematic situation that was solved by helping, sharing or comforting at the end of the story. After listening the stories the children discussed the plot together in group activities guided by the teacher.

To process the stories, I gave the teachers a compilation of questions which include two main groups: questions about the current story (*What did Samu, the hedgehog, do when he saw sad Vince?*) and the children's own experiences related to the story (*What do you do when your peer is sad?*). Discussing and processing these together can help children to deal appropriately and effectively with their own life-situation. In order to facilitate the desired answers, teachers received the suggested answers I could expect from the children related to the current story. These answer options provided the opportunity to discuss the desired elements, thus helping the multiple emergence of prosocial behavioral elements.

The group activities also included tasks that allowed children to present some behavioral responses from the story. For example: „*Show us how to comfort the other. Carefully stroke the arm of your peer sitting next to you!*” In this task, not only the discussion reinforced the heard reactions, but the prosocial behavior related to the current problematic situation can deepen by practicing it.

During the processing of the stories the children had the opportunity to show and observe each other's emotion expression. In this regard, one of the tasks included the presentation of emotions emerged in the story: „*What kind of face do you make when you are happy?*”, „*What kind of face do you make when you are sad?*” Hence, children were able to practice their own emotion expression and could observe its individual differences on their peers.

## **RESEARCH FINDINGS**

The multi-phase research focused on three main field which results are summarized below:

1. The first group of research questions were related to the conformance of the instruments in assessing preschool children's social behaviors in institutional environment. During the testing of the measuring tools I found that the developed category systems appropriately covered the situations and reactions that occur in this age group, thus they are suitable for conducting assessments of various elements of prosocial behavior ( $H_1$ ). However, the hypotheses related to the face-to-face measurement of children were only partially verified because the instrument, based on international researches, was not complete so it required a revision. In addition, further methodological issues emerged during the implementation of the assessments which solution provide an opportunity to design instruments that can be effectively applied for direct measurements of children's prosocial behaviors ( $H_2$ ).

2. The next block of the research aimed the ratio and the form of the emergence of prosocial behaviors in social interactions of children. The results from the pretests verified that

in group interactions real prosocial behaviors emerge in low level within the total social situations. Out of the three examined behaviors helping was the most common in children's interactions while sharing emerged in less cases but still in relatively higher degree than comforting. In group situations comforting was the least appeared behavior in children's social interactions ( $H_3$ - $H_4$ ). The results are consistent with international researches in many cases (de Leon et al., 2014; Bar-Tal, Raviv & Goldberg, 1982), in which helping behaviors were recorded in the highest level among the children from the same age group. Regarding the factors influencing the development of helping behaviors, I also found similar results to the international researches which found that children mostly behave voluntarily but the request of an adult also effect their behavior.

In face-to-face situations children were sensitive to problems, most of them noticed the negative situations, however situations related to emotional expressions and material desire were difficult to interpret ( $H_5$ ). Helping behaviors emerged in large number and in most cases this response was the most typical in children's behavior. This result is parallel with the theories that claim that children's prosocial behavior is effected by the other person's goal, which leads the child to take up that goal as their own, thus it will be also important for the child to execute the activity successfully and achieve the goal (e.g. Aarts et al., 2004). At the same time, in the case of material desire I got opposite results than I expected, because the children shared thing in their possession only in one situation. The cause of this result according to the international researches (e.g. Hay, 2006) is that in this period the concept of possession is evolving in children's thinking, thus giving an object to another person may be difficult for them. The lack of comforting behavior was the expected. By the reason of the current developmental status of emotional understanding, preschool children typically did not respond to situations, or they just observed the presented negative affective states. At this age these skills still developing and children are less able to interpret the affective state of another person. Children typically estimate the situation but in the absence of confirmation or previous experience, reactions to these are negligible.

Questionnaires filled by the parents and teachers showed detailed results about children's prosocial behaviors and the manifestation of these activities for the respondents ( $H_6$ ). Parents think their children are involved in problematic situations as passive observers or outsiders and sometimes they don't care the current situation, they simply leave. However, parents experienced that the children in some cases try to help their peers with comforting. Experiences of the teachers, in contrast, presented different behaviors. Prosocial behaviors materialize mostly through the transmission of information or involvement of a third person which are typically the expected behavior from children in institutional environment.

3. In the third phase of the research I tried to find the answer on how to improve preschool children's prosocial behaviors with a story-based program ( $H_7$ ). Changes in the behavior of the experimental group can verify the impact of the developmental program because in children's behavior emerged those behaviors what they heard and practiced in the group sessions after the stories.

Observational data indicate that positive changes occurred over the four months of the developmental program, however, in the control group appeared stagnation. Data from the face-to-face situations also confirm the development of the experimental group. Prosocial behaviors

in the helping and sharing situations emerged in significantly higher ratio than in the control group, positive reactions significantly increased and negative responses decreased. Questionnaire surveys provided additional information about the experiences of parents' and teachers' related to children's behavior in those cases which were less common in prior research phases. In the experimental group active interventions emerged in significantly higher ratio. Compared to the conditions before the participation in the program, children mostly tried to solve the problematic situations by comforting or interested in the other's state. However, in the control group increased the use of the help of a third person and the self-initiated problemsolving was less. With this result I further verified my hypothesis that the developmental program will effect the higher appearance of prosocial behaviors. For the experimental group, the result is considered to be an improvement due to the nature of the responses because the children involved in the development, mainly produced active and self-initiated behavioral solutions in problematic situations. These solutions also appeared in the stories used in the development. In contrast the evolving trend in the control group manifested in behaviors where the children tried to solve the problematic situations indirectly, with the help of a third person, typically a teacher. This significant difference between the subsamples suggests that participation in the program contributed significantly to the emergence of different types of behavioral responses.

Based on the data from the questionnaires I identified other developmental processes. In the teachers' opinion, more empathic responses (e.g. crying or sadness) may indicate children's social development (Bar-Tal, 1982; Zahn-Waxler, 2010; Brownell, 2013). This points to the fact that egoistic reactions in children's behavior decreased significantly during the research, however, more attention to the other emerged.

The program has no significant effects on the background variables (gender, age, siblings, daycare) in the development of children's prosocial behaviors ( $H_8-H_{11}$ ). There was a small improvement in the sharing and comforting behavior of children without siblings, though not a significant change, however it can be assumed that their greater appearance is due to the impact of the developmental program because in the pretests these two behaviors were typically missed in children's behavior who has no siblings.

According to the results summarized above, some of my hypotheses can be considered as verified, but in many cases my hypotheses were verified partially or had no verification.

## SUMMARY

In my research I investigated that self-developed instruments and story-based program can be applied successfully in institutional environment for the assessment and development of 3-4-year-old children's prosocial behavior. The majority of researchers believe that the development of social behaviors in interactions can be achieved by modeling the appropriate behavior. However, despite these behaviors, to develop prosocial elements, I chose to apply a method that has already been successfully applied in international researches but in Hungarian researches it is still in the background.

International researches have used stories for development programs but my research is different because while they focused on the development of emotional skills, different social

behaviors appeared as minor elements, however, in my research I focused on developing and strengthening mainly behavioral elements. The group activities during the intervention also served this purpose where children had the opportunity to try the activities from the stories according to their age characteristics. In conclusion, the developmental program and the developed methods have proved effective, however, it is important to keep in mind that there are still many open questions about developing social behaviors and significant changes are needed. It is worth considering to include some affective elements (e.g. emotion expression, emotion recognition) in the research process similar to international patterns, which can help to examine complexly the factors contributing to social activities in preschool children's behavior.

My research contributes to the expansion of programs focusing on the development of social behavior of preschool children. Despite of developmental activities in educational context, researchers and practitioners are increasingly declaring that children find it difficult to handle a variety of problematic situations. Therefore, there is a growing need to implement those programs that directly develop those behaviors that occur during various interactions. This intervention can help children to gain experiences that can be easily applied in later problematic situations.

In international field, complex developmental programs of prosocial behaviors have already been implemented and their number is growing. In Hungarian context, there are only a few developmental programs available specifically to develop these behaviors from early ages, so we have to pay attention to the priority development of these areas. My own developmental program also serves this purpose, and it appears as a method that explicitly develops various prosocial behaviors based on international researches. This allows the practitioners to „teach” new dimensions of different social behaviors.

## LITERATURE USED IN THE THESIS BOOKLET (WITHOUT OWN PUBLICATIONS)

- Aarts, H., Gollwitzer, P. M., & Hassin, R. R. (2004). Goal Contagion: Perceiving Is for Pursuing. *Journal of Personality and Social Psychology*, 87(1), 23-37.
- Acar, I. H. & Torquati, J. (2015). The Power of Nature: Developing Prosocial Behavior Toward Nature and Peers Through Nature-Based Activities. *Young Children*, 11, 62-71.
- Bagdi, B., Bagdy, E., & Tabajdi, É. (2017). *Boldogságóra: kézikönyv pedagógusoknak és szülőknek: 3-6 éveseknek. Személyiségfejlesztő foglalkozások a pozitív pszichológia eszközeivel*. Budapest: Mental Focus.
- Bar-Tal, D. (1982). Sequential development of helping behavior: A cognitive-learning approach. *Developmental Review*, 2, 101–124.
- Bar-Tal, D., Raviv, A. & Goldberg, M. (1982): Helping Behavior among Preschool Children: An Observational Study. *Child Development*, 53(2), 396-402.
- Baron-Cohen, S., Golan, O., Wheelwright, S., & Hill, J. (2004). *Mindreading: the interactive guide to emotions*. London: Jessica Kingsley Limited.
- Bernardini, S., Porayska-Pomsta, K., & Smith, T. J. (2014). ECHOES: An intelligent serious game for fostering social communication in children with autism. *Information Sciences*, 26(4) 41–60.
- Bierhoff, H. W. (2007). Proszociális viselkedés. In M. Hewstone & W. Stroebe (Eds.), *Szociálpszichológia* (pp. 253–279). Budapest: Akadémiai Kiadó.
- Blair, K. A., Denham, S. A., Kochanoff, A. & Whipple, B. (2004). Playing it cool: Temperament, emotion regulation, and social behavior in preschoolers. *Journal of School Psychology*, 42(6), 419–443.
- Brownell, C. A. (2013). Early development of prosocial behavior: Current perspectives. *Infancy*, 18(1), 1–9.
- Brownell, C. A., Svetlova, M., & Nichols, S. (2009). To share or not to share: When do toddlers respond to another's needs? *Infancy*, 14(1), 117–130.
- Brownell, C. A., Iesue, S. S., Nichols, S. R., & Svetlova, M. (2013). Mine or Yours? Development of Sharing in Toddlers in Relation to Ownership Understanding. *Child Development*, 84(3), 906-920.
- Campbell, S. B., Denham, S. A., Howarth, G. Z., Jones, S. M., Whittaker, J. V., Williford, A. P., Willoughby, M. T., Yudron, M. & Darling-Churchill, K. (2016). Commentary on the review of measures of early childhood social and emotional development: Conceptualization, critique, and recommendations. *Journal of Applied Developmental Psychology*, 45, 19–41.
- Caprara, G. V., Barbaranelli, C., Pastorelli, C., Bandura, A., & Zimbardo, P. G. (2000). Prosocial foundations of children's academic achievement. *Psychological Science*, 11(4), 302–306.
- D'Amico, A. (2017). Measuring and empowering Meta-Emotional Intelligence in adolescents. In Kimber, B., Skoog, T. & Olafsson, S. (szerk.). *6th ENSEC Conference (European Network for Social and Emotional Competence): Diversity*. Örebro University, Stockholm, Sweden. pp. 31.
- D'Amico, A. (2018). The Use of Technology in the promotion of Children's Emotional Intelligence: The Multimedia Program "Developing Emotional Intelligence". *International Journal of Emotional Education*, 10(1), 47-67.
- de Leon, M. P. E., del Mundo, M. D. S., Moneva, L. V., & Navarrete, A. M. L. (2014). Manifestations of Helping Behavior among Preschool Children in a Laboratory School in the Philippines. *Asia-Pacific Journal of Research in Early Childhood Education*, 8(3), 1-20.
- Domitrovich, C. E., Cortes, R. C., & Greenberg, M. T. (2007). Improving young children's social and emotional competence: A randomized trial of the preschool „PATHS” curriculum. *The Journal of Primary Prevention*, 28(2), 67–91.

- Dunfield, K. A., & Kuhlmeier, V. A. (2013). Classifying prosocial behavior: Children's responses to instrumental need, emotional distress, and material desire. *Child Development, 84*(5), 1766–1776.
- Dunfield, K., Kuhlmeier, V. A., O'Connell, L. & Kelley, E. (2011). Examining the Diversity of Prosocial Behavior: Helping, Sharing, and Comforting in Infancy. *Infancy, 16*(3), 227–247.
- Eisenberg, N. (Ed., 1982). *The development of prosocial behavior*. London: Academic Press.
- Eisenberg, N., & Fabes, R. A. (1991). Prosocial behavior and empathy. A multimethod developmental perspective. In M. S. Clark (Ed.), *Prosocial behavior* (pp. 34–61). London: Sage Publications.
- Fabes, R. A., Gaertner, B. M., & Popp, T. K. (2006). Getting along with others: Social competence in early childhood. In K. McCartney & D. Phillips (Eds.), *Handbook of early childhood development*. Malden, MA: Blackwell. pp. 297–316
- Fülöp, M. (1991). A szociális készségek fejlesztésének elméletéről és gyakorlatáról. *Látókör, 41*(3), 49–58.
- Gottberg, M. (2017). Make friends with your feelings. In Kimber, B., Skoog, T. & Olafsson, S. (szerk.). *6th ENSEC Conference (European Network for Social and Emotional Competence): Diversity*. Örebro University, Stockholm, Sweden. pp. 80.
- Göbel, O. (2012). *Csupa szépeket tudok varázsolni...avagy hogyan játszunk a varázsjátékokat?* Budapest: L'Harmattan Kiadó – Könyvpont Kiadó.
- Grazzani, I., Ornaghi, V., Agliati, A. & Brazzelli, E. (2016). How to Foster Toddlers' Mental-State Talk, Emotion Understanding, and Prosocial Behavior: A Conversation-Based Intervention at Nursery School. *Infancy, 1*–29.
- Grusec, J. E., & Sherman, A. (2011). Prosocial behavior. In M. K. Underwood & L. H. Rosen (Eds.), *Social development* (pp. 263–286). London: The Guilford Press.
- Han, S. S., Catron, T., Weiss, B., & Marciel, K. K. (2001). A teacher-consultation approach to social skills training for pre-kindergarten children: Treatment model and short-term outcome effects. *Journal of abnormal child psychology, 33*(6), 681–693.
- Hastings, P. D., Utendale, W. T., & Sullivan, C. (2007). The socialization of prosocial development. In J. E. Grusec & P. D. Hastings (Eds.), *Handbook of socialization: Theory and research* (pp. 638–664). New York: Guilford Publications.
- Hay, D. F. (2006). Yours and mine: Toddlers' talk about possessions with familiar peers. *British Journal of Developmental Psychology, 24*(1), 39-52.
- Hepach, R., Vaish, A., & Tomasello, M. (2013a). A new look at children's prosocial motivation. *Infancy, 18*(1), 67–90.
- Kasik, L., Gál, Z., Havlikné, R. A., Özvegy, J., Pozsár, É., Szabó, É. & Zsolnai, A. (2017). *Társas problémák és megoldásuk 3-7 évesek körében*. Szeged: Mozaik Kiadó.
- Liszkowski, U., Carpenter, M., Striano, T. & Tomasello, M. (2006). 12- and 18-Month-Olds Point to Provide Information for Others. *Journal of Cognition and Development, 7*(2), 173-187.
- Michael, J., Sebanz, N., & Knoblich, K. (2016). The sense of commitment: A minimal approach. *Frontiers in Psychology, 6*(1968).
- Opre, A., Buzgar, R., Ghimbulut, O., & Calbaza-Ormenisan, M. (2011). SELF KIT Program: Strategies for improving children's socio-emotional competencies. *Procedia – Social and Behavioral Sciences, 29*, 678–683.
- Paulus, M. (2014). The Emergence of Prosocial Behavior: Why Do Infants and Toddlers Help, Comfort, and Share? *Child Development Perspectives, 8*(2), 77–81.
- Phinney, J. S., Feshbach, N. D. & Farver, J. (1986). Preschool Children's Response to Peer Crying. *Early Childhood Research Quarterly, 1*(3), 207-219.
- Porto Interactive Center (2013). *LIFEisGAME – a game about emotions*. Retrieved from <http://www.portointeractivecenter.org/lifeisgame/>

- Roth-Hanania, R., Davidov, M., & Zahn-Waxler, C. (2011). Empathy development from 8 to 16 months: Early signs of concern for others. *Infant Behavior and Development, 34*(3), 447–458.
- Schroeder, D. A., Penner, L., Dovidio, J. F., & Piliavin, J. A. (1995). *The psychology of helping and altruism: Problems and puzzles*. New York: McGraw-Hill.
- Stockdale, D. F., Hegland, S. M. & Chiaromonte, T. (1989). Helping Behaviors: An Observational Study of Preschool Children. *Early Childhood Research Quarterly, 4*(4), 533-543.
- Strawhun, J., Hoff, N. & Peterson, R. L. (2014). *Second step, program brief. student engagement project*. Lincoln: University of Nebraska-Lincoln and the Nebraska Department of Education.
- Svetlova, M., Nichols, S. R., & Brownell, C. A. (2010). Toddlers' prosocial behavior: from instrumental to empathic to altruistic helping. *Child Development, 81*(6), 1814–1827. doi: 10.1111/j.1467-8624.2010.01512.x
- Thompson, R. A., & Newton, E. K. (2013). Baby altruists? Examining the complexity of prosocial motivation in young children. *Infancy, 18*(1), 120–133. doi: 10.1111/j.1532-7078.2012.00139.x
- Vaish, A., Carpenter, M., & Tomasello, M. (2009). Sympathy Through affective perspective taking and its relation to prosocial behavior in toddlers. *Developmental Psychology, 45*(2), 534–543. doi: 10.1037/a0014322
- Warneken, F., & Tomasello, M. (2006). Altruistic helping in human infants and young chimpanzees. *Science, 311*(5765), 1301–1303. doi: 10.1126/science.1121448
- Warneken, F., & Tomasello, M. (2007). Helping and cooperation at 14 months of age. *Infancy, 11*(3), 271–294. doi: 10.1111/j.1532-7078.2007.tb00227.x
- Warneken, F. & Tomasello, M. (2009): Varieties of altruism in children and chimpanzees. *Trends in Cognitive Sciences, 13*(9), 397-402.
- Webster-Stratton, C. (2011). *The incredible years. Parents, teachers, and children's training series. Program content, methods, research and dissemination 1980–2011*. Seattle: The Incredible Years Inc.
- Wu, Z., & Su, Y. (2013). Development of sharing in preschoolers in relation to theory of mind understanding. In M. Knauff, M. Pauen, N. Sebanz, & I. Wachsmuth (Eds.). *Proceedings of the 35th annual conference of the Cognitive Science Society* (pp. 3811–3816). Austin: Cognitive Science Society.
- Zahn-Waxler, C. (2010). Socialization of emotion: Who influences whom and how? *New Directions for Child and Adolescent Development, 2010*(128), 101–109.
- Zsolnai, A., Lesznyák, M., & Kasik, L. (2007). A szociális és az érzelmi kompetencia néhány készségének fejlettsége óvodás korban. *Magyar Pedagógia, 107*(3), 233-270.
- Zsolnai, A., Kasik, L., & Lesznyák, M. (2008). Az agresszív és a proszociális viselkedés alakulása óvodás korban. *Iskolakultúra, 18*(5-6), 40-49.

## OWN PUBLICATIONS RELATED TO THE THESIS

1. Hegedűs Szilvia (2019). Szülők és pedagógusok vélekedése az óvodáskorú gyermekek problémás helyzetekre adott válaszreakcióiról. *Neveléstudomány folyóirat* (In press)
2. Hegedűs Szilvia (2019). Kiscsoportos óvodás gyermekek társas viselkedésének megfigyelése óvodai környezetben előforduló problémás helyzetekben. *Educatio folyóirat* (In press)
3. Hegedűs Szilvia (2019). Preschool children's reaction on peer distress: Perspectives from parents and teachers. In Anikó Zsolnai & Attila Rausch (szerk.). *7th ENSEC Conference (European Network for Social and Emotional Competence): Well-being and Social, Emotional Development*. Budapest, Magyarország.
4. Hegedűs Szilvia (2019). Fostering prosocial behavior with tale-based program in Hungarian kindergartens. In Anikó Zsolnai & Attila Rausch (szerk.). *7th ENSEC Conference (European Network for Social and Emotional Competence): Well-being and Social, Emotional Development*. Budapest, Magyarország.
5. Hegedűs Szilvia (2019). A szociális és az érzelmi kompetencia összetevőinek fejlesztésére irányuló néhány program a nemzetközi és a hazai gyakorlatban. *Iskolakultúra* (In press)
6. Hegedűs Szilvia (2019). A kiscsoportos óvodás gyermekek különböző proszociális viselkedéseiben tapasztalt változások a szülők és a pedagógusok véleménye alapján. In Molnár, Edit Katalin; Dancs, Katinka (szerk.). *XVII. Pedagógiai Értékelési Konferencia*. Szeged: Szegedi Tudományegyetem, p. 43.
7. Hegedűs Szilvia (2019). A proszociális viselkedés egyes altípusainak megjelenése kiscsoportos óvodás gyermekek viselkedésében. *Iskolakultúra: Pedagógusok szakmai-tudományos folyóirata*, 29(2-3) pp. 39-56.
8. Hegedűs Szilvia (2018). Óvodások érzelemszabályozása és problémamegoldása. In Fehérvári Anikó, Széll Krisztián & Misley Helga (szerk.). *Kutatási sokszínűség, oktatási gyakorlat és együttműködések: Absztrakt kötet: XVIII. Országos Neveléstudományi Konferencia*. Budapest: ELTE Pedagógiai és Pszichológiai Kar, MTA Pedagógiai Tudományos Bizottság, p. 43.
9. Hegedűs Szilvia (2018). Óvodás korú gyermekek distresszre adott válaszai a szülők és a pedagógusok véleménye alapján. In Vidákovich Tibor & Füz Nóra (szerk.). *PÉK 2018 [CEA 2018] XVI. Pedagógiai Értékelési Konferencia [16th Conference on Educational Assessment]: Program és összefoglalók [Programme and abstracts]*. Szeged: SZTE Neveléstudományi Doktori Iskola, p. 13.
10. Hegedűs Szilvia (2017). Kiscsoportos gyermekek segítő jellegű viselkedésének vizsgálata szituációs játékok segítségével. In Kerülő Judit, Jenei Teréz & Gyarmati Imre (szerk.). *XVII. Országos Neveléstudományi Konferencia: Program és absztrakt kötet*. Nyíregyháza: MTA Pedagógiai Tudományos Bizottság, Nyíregyházi Egyetem, p. 206.
11. Hegedűs Szilvia & Zsolnai Anikó (2017). Assessing 3-4-year-old children's prosocial behaviour with face-to-face method in Hungary. In Carmel Cefai, Helen Cowie, Kathy Evans, Carmen Huser, Renata Miljevic & Celeste Simões (szerk.). *6th ENSEC Conference (European Network for Social and Emotional Competence): Diversity*. Örebro, Svédország: Örebro Universitet, p. 61.
12. Hegedűs Szilvia & Zsolnai Anikó (2017). Observing 3-4 year old children's social behavior in problematic situations. In Carmel Cefai, Helen Cowie, Kathy Evans, Carmen Huser, Renata Miljevic & Celeste Simões (szerk.). *6th ENSEC Conference (European Network for Social and Emotional Competence): Diversity*. Örebro, Svédország: Örebro Universitet, p. 31.
13. Hegedűs Szilvia (2017). Reactions given to peer distress among 3 to 4-year-old children based on the opinion of parents and teachers. In D. Molnár Éva & Vigh Tibor (szerk.). *PÉK 2017 [CEA 2017] XV. Pedagógiai Értékelési Konferencia [15th Conference on Educational Assessment]: program és*

- absztraktkötet [program book and abstracts]*. Szeged: SZTE BTK Neveléstudományi Doktori Iskola, p. 31.
14. Hegedűs Szilvia (2016). A proszociális viselkedés fejlődése és fejlesztése kisgyermekkorban. *Magyar Pedagógia*, 116(2), pp. 197-218.
  15. Hegedűs Szilvia (2016). Óvodáskorú gyermekek proszociális viselkedésének vizsgálata közvetlen módszerrel. In Zsolnai Anikó & Kasik László (szerk.). *A tanulás és nevelés interdiszciplináris megközelítése: XVI. Országos Neveléstudományi Konferencia: Program és absztraktkötet*. Szeged: MTA Pedagógiai Bizottság, SZTE BTK Neveléstudományi Intézet, p. 123.
  16. Hegedűs Szilvia (2016). New tendencies and developmental opportunities of prosocial behavior in early childhood. In *EARLI JURE 2016: 20th Conference of the JUNior REsearchers of EARLI - Education in a dynamic world: Facing the future: Abstracts: Paper, Roundtable and Poster Presentations*. Helsinki, Finnország: University of Helsinki, p. 52.
  17. Hegedűs Szilvia (2016). Examining preschool children's prosocial behaviors. In Molnár Gyöngyvér & Bús Enikő (szerk.). *PÉK 2016. XIV. Pedagógiai Értékelési Konferencia - 14. Conference on Educational Assessment. Program; Előadás-összefoglalók - Program; Abstracts*. Szeged: SZTE BTK Neveléstudományi Doktori Iskola, p. 101.
  18. Hegedűs Szilvia (2015). Általános iskolai tanulók agresszív és proszociális viselkedésének vizsgálata csoportszerkezeti változók tükrében. *Új kép: Pedagógusok és szülők folyóirata*, 17(1-4) pp. 18-32.
  19. Hegedűs Szilvia (2015). A proszociális viselkedés megismerésének új irányzatai, fejlesztési lehetőségei. In Tóth Péter, Holik Ildikó & Tordai Zita (szerk.). *Pedagógusok, tanulók, iskolák - az értékformálás, az érték közvetítés és az értékteremtés világa: tartalmi összefoglalók: XV. Országos Neveléstudományi Konferencia*. Budapest: Óbudai Egyetem, pp. 234-234.
  20. Hegedűs Szilvia (2015). A szociális és érzelmi készségek fejlesztése online környezetben. In Csíkos Csaba & Gál Zita (szerk.). *PÉK 2015 = [CEA 2015]: XIII. Pedagógiai Értékelési Konferencia = [13th Conference on Educational Assessment]: Program; Előadás-összefoglalók = [Program; Abstracts]*. Szeged: SZTE BTK Neveléstudományi Doktori Iskola, p. 176.
  21. Hegedűs Szilvia (2014). Az agresszív és a proszociális viselkedés vizsgálata a kortárskapcsolatokban 5. és 8. osztályos tanulók körében. In Buda András (szerk.). *XIV. Országos Neveléstudományi Konferencia: Oktatás és nevelés – gyakorlat és tudomány: Tartalmi összefoglalók*. Debrecen: Debreceni Egyetem Neveléstudományok Intézete, pp. 322-322.