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# The role of group interventions in building life competencies of pre-schoolers with special educational needs

O papel das intervenções grupais na construção de competências para a vida de crianças em idade pré-escolar com necessidades educacionais especiais

El papel de las intervenciones grupales en el desarrollo de las competencias vitales de los preescolares con necesidades educativas especiales

**Olha Vovchenko**
https://orcid.org/0000-0002-4399-0118
Doctoral Student at the Institute of Special Education and Psychology by N. Yarmachenko of the National Academy of Pedagogical sciences of Ukraine, Kyiv, Ukraine

**Kateryna Zelinska-Liubchenko**
https://orcid.org/0000-0002-9986-4989
Associate Professor at the Speech Therapy Department, Educational and Scientific Institute of Physical Culture, Sumy Makarenko State Pedagogical University, Sumy, Ukraine.

**Larysa Platash**
https://orcid.org/0000-0001-6491-4897
Associate Professor of Psychology, Interregional Academy of Personnel Management, Ukraine

**Inna Karuk**
https://orcid.org/0000-0001-9626-9589
Senior Lecturer of the Department of Preschool Education Vinnytsia Mykhailo Kotsiubynskyi State Pedagogical University, Vinnytsia, Ukraine

**Nadiia Kravets**
https://orcid.org/0000-0003-4334-1414
Associate Professor of the Department of Theory and Methods of Preschool and Special Education at Vasyl Stefanyk Precarpathian National University, Ivano-Frankivsk, Ukraine
nadiia.hope.p@gmail.com (correspondence)

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**ABSTRACT**

**Background:** Developing life competencies in preschoolers with special educational needs is essential for social and emotional integration. This study fills a gap in the development of effective methods of group interventions focused on developing social, communicative and cognitive skills. **Methods:** The study was based on a quasi-experimental design using the principles of constructivism and activity approach. Methods of sensory psychomotor stimulation (ATP), cognitive reflection (CR) and creative mutual learning (TVN) were applied. The results were evaluated through quantitative data analysis and qualitative assessment of behavioural changes. The study involved 60 children with OOP, divided into three experimental and one control group. **Results:** The results showed that ATP improved motor skills by 50%, social skills by 30%, emotional stability by 25% and cognitive skills by 19.35%. The CR method increased cognitive skills by 45.16%, motor skills by 26.67%, social skills by 16.67% and emotional stability by 15.63%. TVN was most effective for the development of social skills (43.33%), emotional stability (37.5%), motor (23.33%) and cognitive skills (29.03%). Compared to the control group, all experimental methods demonstrated statistically significant results. **Conclusions:** The results confirm the effectiveness of an integrated approach to developing life competencies in children with OOP. The theoretical contribution is to prove the specific influence of methods on various aspects of development. Practical recommendations include implementing ATP, KR and TVN programs in the educational process and systematically assessing the effectiveness of methods. Further research should focus on the long-term effects of interventions and creating inclusive programs for different age groups.

**Keywords:** group interventions, pre-schoolers, special educational needs, social adaptation, inclusive education.

**RESUMO**

**Contexto**: O desenvolvimento de competências de vida em pré-escolares com necessidades educacionais especiais é essencial para a integração social e emocional. Este estudo preenche uma lacuna no desenvolvimento de métodos eficazes de intervenções em grupo focadas no desenvolvimento de habilidades sociais, comunicativas e cognitivas. **Métodos**: O estudo foi baseado em um delineamento quase experimental usando os princípios do construtivismo e da abordagem da atividade. Métodos de estimulação psicomotora sensorial (ATP), reflexão cognitiva (CR) e aprendizagem mútua criativa (TVN) foram aplicados. Os resultados foram avaliados por meio de análise quantitativa de dados e avaliação qualitativa de mudanças comportamentais. O estudo envolveu 60 crianças com OOP, divididas em três grupos experimentais e um controle. **Resultados**: Os resultados mostraram que o ATP melhorou as habilidades motoras em 50%, as habilidades sociais em 30%, a estabilidade emocional em 25% e as habilidades cognitivas em 19,35%. O método CR aumentou as habilidades cognitivas em 45,16%, as habilidades motoras em 26,67%, as habilidades sociais em 16,67% e a estabilidade emocional em 15,63%. TVN foi mais eficaz para o desenvolvimento de habilidades sociais (43,33%), estabilidade emocional (37,5%), habilidades motoras (23,33%) e cognitivas (29,03%). Comparados ao grupo de controle, todos os métodos experimentais demonstraram resultados estatisticamente significativos. **Conclusões**: Os resultados confirmam a eficácia de uma abordagem integrada para desenvolver competências de vida em crianças com OOP. A contribuição teórica é provar a influência específica dos métodos em vários aspectos do desenvolvimento. Recomendações práticas incluem implementar programas ATP, KR e TVN no processo educacional e avaliar sistematicamente a eficácia dos métodos. Pesquisas futuras devem se concentrar nos efeitos de longo prazo das intervenções e na criação de programas inclusivos para diferentes faixas etárias.

**Palavras-chave:** intervenções grupais, pré-escolares, necessidades educativas especiais, adaptação social, educação inclusiva.

**RESUMEN**

**Antecedentes**: El desarrollo de competencias para la vida en preescolares con necesidades educativas especiales es esencial para la integración social y emocional. Este estudio llena un vacío en el desarrollo de métodos efectivos de intervenciones grupales enfocadas en el desarrollo de habilidades sociales, comunicativas y cognitivas. **Métodos**: El estudio se basó en un diseño cuasiexperimental utilizando los principios del constructivismo y el enfoque de la actividad. Se aplicaron métodos de estimulación psicomotora sensorial (ATP), reflexión cognitiva (CR) y aprendizaje mutuo creativo (TVN). Los resultados se evaluaron mediante análisis de datos cuantitativos y evaluación cualitativa de los cambios de comportamiento. El estudio involucró a 60 niños con OOP, divididos en tres grupos experimentales y uno de control. **Resultados**: Los resultados mostraron que la ATP mejoró las habilidades motoras en un 50%, las habilidades sociales en un 30%, la estabilidad emocional en un 25% y las habilidades cognitivas en un 19,35%. El método CR aumentó las habilidades cognitivas en un 45,16%, las habilidades motoras en un 26,67%, las habilidades sociales en un 16,67% y la estabilidad emocional en un 15,63%. La TVN fue la más efectiva para el desarrollo de habilidades sociales (43,33%), estabilidad emocional (37,5%), habilidades motoras (23,33%) y cognitivas (29,03%). En comparación con el grupo control, todos los métodos experimentales mostraron resultados estadísticamente significativos. **Conclusiones**: Los resultados confirman la efectividad de un enfoque integrado para el desarrollo de competencias para la vida en niños con OOP. La contribución teórica consiste en demostrar la influencia específica de los métodos en diversos aspectos del desarrollo. Las recomendaciones prácticas incluyen la implementación de programas de ATP, KR y TVN en el proceso educativo y la evaluación sistemática de la efectividad de los métodos. La investigación futura debe centrarse en los efectos a largo plazo de las intervenciones y en la creación de programas inclusivos para diferentes grupos de edad.

**Palabras clave**: intervenciones grupales, preescolares, necesidades educativas especiales, adaptación social, educación inclusiva.

## INTRODUCTION

It is important to ensure equal educational opportunities for children with SEN, especially at the preschool stage of competence development. Preschool age is a critical period for the development of social interaction, communication, self-expression, and self-regulation skills. The foundations for further adaptation and integration into society are laid during this period. Children with SEN need special approaches and support for successful development. Interest in inclusive education is growing because of the society's desire for integration of all members. Inclusive education is based on respect for diversity, promoting children's acceptance of peers with SEN.

An important element is methods that help children with SEN to learn more effectively. Group interventions for the development of competencies create conditions for active interaction, teamwork, and emotional stability. Group intervention methods include sensory psychomotor stimulation, cognitive exercises, and creative tasks. They develop basic skills and adapt learning to the characteristics of each child. Group classes promote the ability to work in a team, control emotions, and build relationships. Interventions increase the quality of educational services for children with SEN and effective social adaptation. This research on group interventions is an important step towards the development of inclusive education.

**Objective:** determine the effectiveness of group interventions in building life competencies of preschoolers with SEN.

**Empirical objectives:**

Assess the impact of sensory psychomotor stimulation on the development of children's motor skills and social interaction.

Determine the effectiveness of the cognitive approach in the formation of attention, memory, and self-control in preschoolers.

Analyse the results of creative interventions regarding emotional self-expression and social interaction of preschoolers.

**Literature Review**

The development of life competencies in children with SEN in an inclusive environment was studied from different perspectives. The research by Bolourian et al. (2022) emphasize the importance of group interaction to improve social skills and self-control in children with autism, noting the positive impact of an inclusive environment that promotes their emotional stability. The study by Rapp and Corral-Granados (2021) also confirm the importance of joint activities for the development of empathy and self-regulation, which increases the level of social adaptation of children with SEN. At the same time, Page, Anderson, and Charteris (2021) emphasize the need for a differentiated approach to each child. This makes it possible to adapt the inclusive process to individual needs, especially for children with different developmental characteristics. Bolourian et al. (2022) emphasize the overall positive impact of inclusion, while Page and Anderson emphasize the adaptation of methods to the needs of each child.

Koliadenko, Zhyvago, and Bursa (2022) emphasized that modern technologies create conditions for providing high-quality remote care, but this requires significant efforts to adapt resources to the needs of specific groups of patients. This idea can be applied to the educational sphere as well: adapting distance learning to the needs of children with developmental disabilities is necessary to ensure equal opportunities and effective social integration.

Chaidi, and Drigas (2020) believe that parental involvement is an important factor in the success of interventions for children with autism. It reduces the level of anxiety and increases the confidence of children. Supporting this position, Nilufar (2023) and Finlay et al. (2023) note the positive effects of family involvement on the social skills and adjustment of children with SEN. Although our study did not involve parents, it supports the effectiveness of group activities in improving children's social and cognitive skills. This testifies to the effectiveness of specialized interventions even without active family support.

The effectiveness of multisensory techniques for children with intellectual disabilities was confirmed in the studies [8], which emphasize the importance of adaptive techniques for emotional regulation and social interaction. Similar to these findings, Alanazi et al. (2023) and Thompson-Hodgetts et al. (2024) emphasize the importance of a multisensory approach. It positively affects social skills and confidence in children with SEN. Our use of sensory psychomotor stimulation also confirmed these results, particularly its effect on children's motor and communication skills.

Regarding cognitive development, the studies Ledford et al. (2023) and Yarmola et al. (2020) indicate the effectiveness of game techniques for the development of attention and memory in children with SEN. Our study confirmed these findings. Gordon-Gould, and Hornby (2023) also emphasize the development of responsibility in children in an inclusive environment. This supports the importance of game techniques and creative approaches for the development of life competencies.

## METHODS

### Preparatory stage

The preparatory stage of the study involved the selection of participants and the analysis of academic literature on the issue under research. The participants were selected based on predefined criteria, which provided for the participation of preschoolers with SEN attending kindergarten. This ensured the representativeness of the sample and its compliance with the research objectives. In addition, an analysis of recent academic publications on the effectiveness of group interventions in the development of life competencies of children with SEN was conducted. The study of the theoretical base made it possible to formulate hypotheses and choose adequate intervention methods for further experiment.

### Main procedure

The main procedure included the implementation of three intervention methods aimed at developing life competencies in pre-schoolers. A separate group was selected for each method, which provided the possibility of comparing their effectiveness. The selected intervention methods included:

- Sensory psychomotor stimulation (SPS) — for the development of motor and sensory skills by playing with tactile and movement stimulators.

- Cognitive Reflection (CR) — to improve attention, memory and self-control, implemented through board games and tasks.

- Creative peer instruction (CPI) — for the development of teamwork and emotional stability implemented through joint creative activity.

The study lasted three months. The participants attended intervention classes twice a week, which were held in the usual kindergarten settings, which contributed to the natural children's interaction and facilitated the process of adaptation to the experiment. Each group worked according to one of the selected intervention methods, while the control group (CG) did not attend special classes.

### Data collection

The data were collected using several standardized tools that provided a comprehensive assessment of pre-schoolers' life competencies. In particular:

- Social Skills Test — assessed communication and social skills based on a five-point scale. This test was completed by teachers who observed the development of children during classes.

- The Emotion Regulation Inventory (ERI) — recorded children's reactions to stressful situations and changes in activities to assess the level of emotional stability and adaptability.

- The Cognitive Development Test — contained attention and memory tasks adapted to the participants' age and was also completed by preschool teachers after each session.

The preschool teachers regularly assessed changes in children's skills during the study, which allowed tracking the dynamics of each child's development. A final assessment was conducted for each group at the end of the three-month period.

### Processing of the results

The processing of the results included the analysis of the collected data using statistical methods. The average scores of each group were calculated for key indicators — motor skills, social skills, emotional stability, and cognitive skills. This made it possible to make comparisons between groups and evaluate the effectiveness of each intervention method.

Based on the obtained results, conclusions were drawn about the influence of sensory psychomotor stimulation, cognitive reflection, and creative peer instruction on the development of life competencies of preschoolers with SEN. Accordingly, recommendations were provided for the implementation of the most effective methods in the programme of inclusive kindergartens.

### Research methods

Sensory psychomotor stimulation (SPS) – a method for the development of motor and sensory skills of children, which contributes to their physical and social adaptation. The sessions included exercises with tactile, visual, and motor stimulators in the form of interactive games that activated the visual, auditory and tactile systems. Balls, mats with textures, balancing bars, and bright toys were used to stimulate the development of coordination, fine and gross motor skills. Children

worked in pairs to improve social skills and interaction. Each lesson had a clear structure: at first, simple motor tasks were performed, which gradually became more difficult and required coordination with a partner. Bamicha, V. & Drigas, A. (2022) used this method to investigate the socio-emotional and cognitive development of children with autism.

Cognitive reflection (CR) – the method for developing attention, memory, and self-control. The sessions were held in the form of games and exercises for logical thinking, memory, and following instructions. The children performed tasks that required planning and decision-making, such as putting together a picture or a puzzle, as well as exercises in memorizing and repeating a series of movements. The tasks became more difficult gradually: from simple memory exercises to more complex ones that combined several cognitive processes. Similar approaches are described in the works of Demchenko, Maksymchuk, Bilan, Maksymchuk, and Kalynovska (2021), which focus on preparing physical education teachers for inclusive education.

Creative peer instruction (CPI) – a method that encouraged active interaction in creative activities, promoting emotional stability, teamwork, and communication. Children worked together on creative projects, such as drawings, modelling or applications, in groups of 3-4 participants. For example, one activity involved building a collaborative structure where everyone was responsible for a specific element, which required coordination of effort. The sessions helped the children to consider the opinions of others, support each other, discuss their ideas and work in a team. Each subsequent project became more difficult, developing skills of cooperation and adaptation to group activities. The approach is based on studies by Montazeri Ghahjavarestani and others (2024) that examined the social and behavioural interactions of children with autism.

Sample. A total of 120 preschool children with SEN attending inclusive kindergartens were considered for the study. All children had different levels of social, emotional, and cognitive development. The initial selection was carried out through a comprehensive assessment of the individual characteristics of children conducted by kindergarten specialists, in particular, teachers and psychologists who work with pre-schoolers in an inclusive environment. Specialists assessed children's social interaction skills, cognitive development, and self-control, which made it possible to form a diverse sample.

Based on these assessments, 60 children who met the study criteria were selected. Children were divided into four groups of 15 people. This ensured representativeness, the possibility of comparative analysis and evaluation of the effectiveness of various approaches aimed at the development of life competencies: social skills, emotional self-regulation, and communication. Such a sample ensures representativeness and the possibility of statistical analysis. Four groups enable testing different methods and compare their results, taking into account the individual characteristics of children. The selection was carried out according to the recommendations of teachers and psychologists who evaluated the social interaction, cognitive development, and self-control of children. The children in the groups had different levels of development of social and cognitive skills. The analysis of the literature determined the most effective methods for the development of life skills in pre-schoolers with SEN, which made it possible to optimize interventions for the age and individual characteristics of children. Participants were selected according to individual educational needs, which encompass social, cognitive, and physical aspects of development.

**Instruments.**

Social Skills Test is designed to evaluate communication, cooperation, and social acceptance skills. The evaluation was carried out by teachers on a five-point scale to record progress in the communication skills and social adaptation of children.

Emotional Self-regulation Scale was used to assess emotional stability, in particular, children's reactions to conflict situations and changes in activities. The evaluation was carried out by teachers who recorded the behaviour of children during sessions that required emotional stability.

Cognitive Development Test included tasks aimed at developing attention, memory and self-control, adapted for pre-schoolers. The children completed the task of planning actions and following instructions, which allowed to assess cognitive changes.

## RESULTS AND DISCUSSION

Table 1 presents the results of the influence of various intervention methods on the development of life competencies of pre-schoolers with SEN. It contains a comparative analysis of four key indicators — motor skills, social skills, emotional stability, and cognitive skills — in four studied groups: sensory psychomotor stimulation (SPS), cognitive reflection (CR), creative peer instruction (CPI), and a control group. The given data make it possible to evaluate the effectiveness of each intervention method and compare the obtained results to determine the most effective strategy for the development of life competencies in this category of children.

**Table 1**: The results of the influence of various methods of intervention on the development of life competencies

| Group | Motor skills | Social skills | Emotional stability | Cognitive skills |
|---|---|---|---|---|
| Sensory Psychomotor Stimulation (SPS) | 4.5 | 3.9 | 4.0 | 3.7 |
| Cognitive Reflection (CR) | 3.8 | 3.5 | 3.7 | 4.5 |
| Creative Peer Instruction (CPI) | 3.7 | 4.3 | 4.4 | 4.0 |
| CG | 3.0 | 3.0 | 3.2 | 3.1 |

**Source**: Developed by the authors

The participants were scored on a five-point scale for each competency, as shown in the table. The figures given represent the mean scores for each group.

**Motor skills.** The SPS group showed the highest mean score (4.5), indicating a significant improvement in sensorimotor skills after the interventions. This emphasizes the effectiveness of SPS for the development of motor skills, as the method includes exercises that stimulate sensory and psychomotor coordination. The CG had a significantly lower score (3.0).

**Social skills.** The greatest improvement in social skills was observed in the CPI group (4.3), which confirms the effectiveness of creative peer instruction. Joint creative tasks contributed to the development of communication skills and cooperation. Compared to other methods, the CPI performed best in this competency, while the CG averaged 3.0.

**Emotional stability.** The CPI group also had the greatest increase in emotional stability (4.4). Collaborative creativity helped participants to develop skills to regulate emotions and interact in stressful situations, which increased their confidence and adaptability.

**Cognitive skills.** The CR group showed the highest scores (4.5), confirming that this method effectively develops memory, attention and self-control. Logical thinking and memory exercises significantly improved children's cognitive skills, underscoring CR's focus on developing intellectual abilities. For each group (except the CG), the increase compared to the CG is calculated using the formula:

$$\text{Increase} = \frac{\text{Cep}Mean\ value\ in\ the\ experimental\ group - Mean\ value\ in\ the\ control\ group}{Mean\ value\ in\ the\ control\ group} * 100\%$$

The results of calculations based on the obtained data are given in Table 2.

**Table 2**: Results of calculations based on the obtained data

| Group | Motor skills (increase, %) | Social skills (increase, %) | Emotional stability (increase, %) | Cognitive skills (increase, %) |
|---|---|---|---|---|
| Sensory psychomotor stimulation (SPS) | $\frac{4.5-3.0}{3.0}$ *100% = 50% | $\frac{3.9-3.0}{3.0}$ *100% = 30% | $\frac{4.0-3.2}{3.2}$ *100% = 25% | $\frac{3.7-3.1}{3.1}$ *100% = 19.35% |
| Cognitive reflection (CR) | $\frac{3.8-3.0}{3.0}$ *100% = 26.67% | $\frac{3.5-3.0}{3.0}$ *100% = 16.67% | $\frac{3.7-3.2}{3.2}$ *100% = 15.63% | $\frac{4.5-3.1}{3.1}$ *100% = 45.16% |
| Creative Peer Learning (CPI) | $\frac{3.7-3.0}{3.0}$ *100% = 23.33% | $\frac{4.3-3.0}{3.0}$ *100% = 43.33% | $\frac{4.4-3.2}{3.2}$ *100% = 37.5% | $\frac{4.0-3.1}{3.1}$ *100% = 29.03% |

**Source**: Developed by the authors

**Motor skills:** The largest increase is observed in the SPS group (50%), which confirms the high effectiveness of sensory psychomotor stimulation for the development of motor skills.

**Social skills:** The CPI method showed the largest increase (43.33%), which indicates the effectiveness of creative peer instruction for the development of social skills.

**Emotional stability:** The highest increase in the CPI group (37.5%), which indicates a positive effect of creative peer instruction on emotional stability.

**Cognitive skills:** The CR method showed the largest increase (45.16%), which confirms its effectiveness for the development of cognitive skills.

**Key results.** Children's social skills increased by an average of 43.33% after the interventions in the CPI group. Such an increase indicates a significant improvement in the ability to communicate, cooperate, and support social interactions that contribute to social integration.

Participants who completed the CPI programme demonstrated an increase in the level of emotional stability by 37.5%. This indicates the growth of children's confidence in the social environment and their ability to cope with emotional challenges.

The participants who completed the CPI programme demonstrated an increase in the level of emotional stability by 37.5%. This indicates the growth of children's confidence in the social environment and their ability to cope with emotional challenges.

In the cognitive reflection (CR) group, cognitive skills such as memory, attention, and self-control increased by an average of 45.16%. This result shows the effectiveness of the method for developing cognitive competencies that are critical for learning.

The participants in the Sensory Psychomotor Stimulation (SPS) programme showed the greatest improvement in motor skills with a 50% increase. This confirms that sensory psychomotor exercises significantly contribute to the development of physical coordination and motor skills. Figure 1 clearly illustrates features of changes in life skills before and after group interventions.

**Figure 1.** Changes in life competencies before and after group interventions


**Source**: Developed by the authors

The study conducted by American researchers [14] studied the effectiveness of various methods of social interventions for preschool children with disabilities. The goal was to find optimal methods for supporting the social integration of such children in inclusive groups. The participants of the study were pre-schoolers, divided into four groups: three experimental and one control, which did not undergo special interventions.

**Interventions used.** *Environmental Arrangements (EA).* Teachers created mixed playgroups with children with and without SEN, which improved the perception of children with disabilities among peers and contributed to their adaptation to the social environment.

*Child Specific (CS)*. This method involved teaching social skills such as initiating and maintaining interaction. Although the children acquired specific social skills, the method did not always improve their perception in the group due to the tangible pedagogical focus.

*Peer Mediated (PM).* Peers were instructed to support interactions with children with disabilities, resulting in sustained improvements in social skills and integration of children with SEN.

Interventions similar to EA, CS, and PM are widely used in Canada, Great Britain, and the Scandinavian countries. In particular, in Sweden, inclusion is a mandatory element of the educational system, which provides an opportunity for children with special needs to study in regular classes and develop social and emotional competences (Table 3).

**Table 3**: Mean OIS scores and rank scores at different stages for each intervention condition

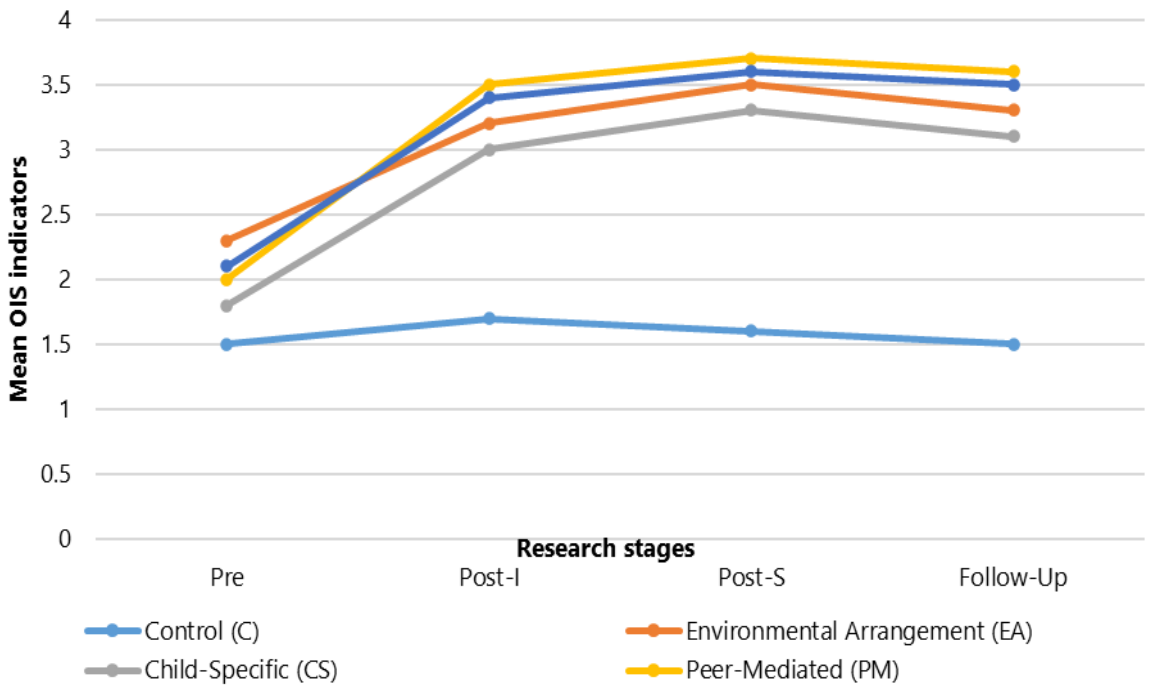
| Intervention conditions | Pre | Post-I | Post-S | Follow-Up |
|---|---|---|---|---|
| C (Control) | 1.5 | 1.7 | 1.6 | 1.5 |
| EA (Environmental Arrangement) | 2.3 | 3.2 | 3.5 | 3.3 |
| CS (Child-Specific) | 1.8 | 3.0 | 3.3 | 3.1 |
| PM (Peer-Mediated) | 2.0 | 3.5 | 3.7 | 3.6 |
| CM (Combined Model) | 2.1 | 3.4 | 3.6 | 3.5 |

**Source**: Developed by the authors

Numerical results of the study, including the Observed Interaction Scale (OIS) indicators, confirm the effectiveness of interventions to improve the social competence of children with disabilities in various settings. Assessments were conducted at several stages: before the interventions (Pre), after the first intervention (Post-I), after the second intervention (Post-S) and during the follow-up stage (Follow-Up). The results show a significant time effect for all intervention conditions, especially for CS (Child-Specific), PM (Peer-Mediated), and CM (Combined Model), where OIS scores increased significantly after the interventions. For example, in CS, there was a significant increase in rating scores at all post-stages (Post-I, Post-S, Follow-Up), with statistical significance of $p<.001$. This indicates a sustained positive impact of the intervention on children's social interaction. The average ratings for the EA (Environmental Arrangement) and CM (Combined Model) conditions testify to the effectiveness of the interventions, because the indicators at the Post and Follow-Up stages significantly exceeded the initial (Pre) ones. This improvement persisted even some time after the end of the interventions, confirming long-term positive changes in children's social competence (Figure 2).

The results of the study emphasize the importance of group interventions for the development of social competence and life skills in children with SEN. In particular, the PM method showed the most stable and long-lasting effect, confirming the importance of inclusive socialization and participation of children with different educational needs in joint activities with peers. The PM promotes natural interpersonal interaction, helps children to adapt in the social environment, and forms a positive attitude among peers, which is a necessary condition for their effective social integration.

**Figure 2.** Mean OIS scores at different stages for each intervention condition




**Source**: Developed by the authors

The EA method also proved to be effective in the formation of acceptance and understanding of children with SEN among peers. This creates favourable conditions for their adaptation and expands opportunities for participation in group activities. At the same time, the CS method, although it increased the level of social skills in children, revealed certain limitations in achieving a high level of social acceptance among other children. This result suggests that, despite the usefulness of CS in the development of social skills, additional measures are needed for full integration, which would include involvement in group activities and the development of interaction with peers.

**Discussion**

The results of our study show that group interventions for the development of life competencies are effective means. They promote the development of social, emotional, and cognitive skills in pre-schoolers with SEN (Slipetska et al., 2023; Iacono et al., 2024). These results are consistent with a study by Bolourian et al. (2022). They found that engaging children with autism in group activities reduces anxiety, increases self-control, and develops social skills. Our sample also demonstrated improvements in emotional stability and self-regulation. This was especially noted in the groups that participated in CPI methods. This confirms the value of group classes for children with SEN.

On the other hand, Page, Anderson, and Charteris (2021) emphasize the importance of a differentiated approach. It provides individual adjustment to the needs of each child. Our results also showed the effectiveness of differentiated interventions. Among them, the CR and SPS methods consider the individual characteristics of children. However, in contrast to Page and Anderson's findings, we believe that techniques should combine group work with elements of individual adaptation. This will help to avoid an excessive pedagogical orientation that limits the interaction between children (Adăscăliţei, 2020; Demchenko et al., 2021; Shirokova et al., 2023).

Bamicha and Drigas (2022) note that the parents' involvement in the process of group interventions increases their effectiveness. It also reduces anxiety levels in children with autism spectrum disorder (ASD) (Nilufar, 2023; Finlay et al., 2023; Yarmola et al., 2020). Although parents were not involved in our study, our results show that children showed progress even without active family involvement. They improved social and cognitive skills, especially during group and creative activities. This shows the high value of specialized interventions. At the same time, the research by Semenets-Orlova et al. (2022) emphasizes the importance of the development of analytical and cognitive activity (ACA) of children, which ensures the need for continuous development and contributes to successful integration into society. So, the experience of Chaidi, and Drigas (2020) confirms the potential benefits of active collaboration with parents. The approach to the development of analytical abilities and moral qualities in children should be considered in further studies.

Similar to our findings, Klang (2019) concluded that multisensory techniques are key to supporting social interaction. Adaptation of educational materials is also important for the development of emotional regulation in children with intellectual disabilities (Alanazi, 2023; Thompson-Hodgetts, 2024; Yarmola, 2021; Yarmola and Torop, 2020). Our use of SPS confirmed this trend. This method had a positive effect on children's motor skills, social skills, and confidence. Besides, like Klang (2019), we found that adapted sensory perception exercises increased children's communication skills.

Rapp and Corral-Granados (2021) emphasize the importance of the social environment for the development of empathy. It also supports self-regulation in children with SEN. In our study, we noted that children involved in joint activities demonstrated a higher level of social interaction (Montazeri Ghahjavarestani et al., 2024; Kolupayeva & Savchuk, 2021). This applies to groups where the CR and CPI methods were used. However, in contrast to the results of Rapp and Corral-Granados, our data show that interpersonal emotion recognition training is required for the development of stable empathy. Standard group classes are not always effective enough for the deep development of these competencies (Smokova et al., 2023).

Bochmann and Yu (2023) examined mindfulness techniques in pre-schoolers. It showed a positive effect on self-regulation and emotional stability of children. Our results also showed improvement in these aspects. However, unlike the mindfulness method, our approach focused on group interaction. This provided emotional support, which proved to be effective for preschool children (Kompanets, 2017; Nerubasska, & Maksymchuk, 2020).

Ledford (2023) found that the use of game techniques has a positive effect on the cognitive development of children with SEN. In our study, a similar effect was demonstrated by logical thinking tasks and puzzles. These elements were part of the cognitive mapping method (Kauffman, & Hornby, 2020; Zhylin et al., 2022; Benítez, & Martín, 2023). Our results confirm the importance of game techniques. However, we also note that their effectiveness increases under conditions of adaptation to age needs.

An important aspect is the development of responsibility in children in an inclusive environment. This issue was raised by Kauffman and Hornby (2020). This was also observed in our study, especially in CPI groups. This approach included joint projects. It contributed to the development of children's responsible attitude to their own responsibilities. This increased their confidence in their actions (Larios, & Zetlin, 2023).

**Recommendations**

Further studies should be conducted on a larger sample with longer interventions to better verify the results. It is also recommended to consider involving parents in the process to increase the level of emotional support for children.

## FINAL REMARKS

The study showed that group interventions aimed at developing life skills are an effective tool for social adaptation. They form basic skills in preschool children with SEN. In general, group interventions help to provide a supportive environment. This environment promotes the development of self-regulation, communication, and interaction skills. These skills are important for further learning and socialization.

The study expands knowledge about the use of complex group interventions. They contribute to the development of social and cognitive skills in children with SEN. This is especially relevant in the context of inclusive preschool education. For

the first time, the combination of the methods of sensory psychomotor stimulation, cognitive reflection, and creative peer instruction was considered. These methods were used as a single programme to support the development of life competencies.

The obtained results can be used in the practice of inclusive preschools. This will increase the effectiveness of educational programmes. The proposed methods can be adapted by teachers. Adaptation will contribute to the integration of children with SEN. This, in turn, will ensure their successful social adaptation and development of basic life skills.

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