



EXPLORING THE ROLE OF FAMILY INVOLVEMENT IN SUPPORTING PHYSICAL ACTIVITY AMONG CHILDREN WITH DISABILITIES: EARLY RESULTS

ULOGA PORODIČNE UKLJUČENOSTI U POTICANJU TJELESNE AKTIVNOSTI KOD DJECE S INVALIDITETOM: RANI NALAZI ISTRAŽIVANJA

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ABSTRACT

Train4family is a European initiative co-funded by the Erasmus+ Programme, designed to promote physical activity among children with disabilities aged 6 to 18, by involving family members in sport education and organized activities. This article presents an overview of the project, its objectives, methodology, and preliminary findings based on a Likert-scale survey conducted after five months of implementation across seven partner countries. Results show significant improvements in physical coordination, water confidence, social interaction, and parental engagement, underscoring the importance of a holistic, family-centered approach to physical development and inclusion. There is limited research on structured physical activity programs, especially swimming, where children with disabilities train together with their parents. This study contributes to filling that gap.

Key words: physical activity, inclusive education, family engagement, children with disabilities, swimming.

SAŽETAK

Train4family je evropska inicijativa sufinansirana iz Erasmus+ programa, osmišljena da promoviše fizičku aktivnost kod djece s invaliditetom uzrasta od 6 do 18 godina, kroz uključivanje članova porodice u obrazovanje i organizirane aktivnosti na području sporta. Ovaj članak prikazuje pregled projekta, njegove ciljeve, metodologiju i preliminarne nalaze na osnovu istraživanja provedenog Likertovom skalom nakon pet mjeseci implementacije u sedam partnerskih zemalja. Rezultati pokazuju značajna poboljšanja u fizičkoj koordinaciji,

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samopouzdanju u vodi, socijalnoj interakciji i angažmanu roditelja, naglašavajući važnost holističkog, porodicom usmjerenog pristupa fizičkom razvoju i inkluziji. Postoji ograničen broj istraživanja o strukturiranim programima fizičke aktivnosti, posebno plivanja, u kojima djeca s invaliditetom treniraju zajedno s roditeljima. Ova studija doprinosi popunjavanju te praznine.

Ključne riječi: Fizička aktivnost, inkluzivno obrazovanje, uključenost porodice, djeca s invaliditetom, plivanje.

INTRODUCTION

Physical inactivity in children is a growing concern across Europe, contributing to various health and developmental issues, including obesity, cardiovascular problems, and reduced social interaction. According to the World Health Organization (WHO, 2020), children and adolescents aged 5–17 should engage in at least an average of 60 minutes per day of moderate-to-vigorous intensity, mostly aerobic, physical activity. However, statistics show that the majority of children in Europe do not meet these recommendations (European Commission, 2018).

Children with disabilities face additional barriers to participation in sport, including lack of accessible programs, trained staff, and social stigma. Addressing these barriers requires targeted strategies that consider individual capabilities, family contexts, and broader societal attitudes.

Project *Train4Family* (n.d.), responds to this challenge by developing and implementing a model that integrates family members into structured, accessible, and age-appropriate physical activity programs. The initiative is driven by the belief that physical education must be inclusive, context-sensitive, and supported by broader community engagement to create sustainable change.

Swimming is recognized as one of the most beneficial physical activities for children with disabilities due to its low-impact nature and opportunities for sensory integration, motor skill development, and emotional regulation. Programs such as *iCan Shine* (2019) have demonstrated that even short-duration swimming interventions (five days) can lead to notable skill gains in children with disabilities.

Scarborough (2024) found that an inclusive, small-group adapted aquatics program may improve VO₂max in children with ASD, supported by regular MVPA, participant motivation, and parental involvement, though limited by sample size and health-related interruptions.

Study has shown that swimming appears to be especially beneficial for children with disabilities, as children with autism spectrum disorder reported significantly higher enjoyment of swimming compared to their typically developing peers. (Eversole et al., 2016). However, very few interventions have actively integrated parents into the training process alongside their children. This represents a major gap in inclusive education research that Train4Inclusive seeks to address.

Objectives

The project focuses on:

- Raising awareness of the importance of physical activity among children and their families.
- Increasing physical activity levels in children.
- Promoting the European principle of #Healthy Lifestyle 4All.
- Enhancing parental involvement in children's sport routines.
- Supporting inclusion of children with disabilities through tailored physical activities.
- Combining sport education with ecology and nutrition awareness.

MATERIAL AND METHODS

The program was delivered through a structured training model that included a combination of group and individual activities. Each training session began with a warm-up, followed by playful, game-based learning activities aimed at engaging children. Children were then grouped into two cohorts: (1) non-swimmers or weak swimmers who trained individually with the help of their parents and instructors, and (2) children with better swimming skills who focused on refining their swimming techniques. This approach ensured inclusivity while allowing skill-appropriate progress.

This phase of the project included 20 participants, all of whom were children with disabilities—including autism spectrum disorder (ASD), attention-deficit/hyperactivity disorder (ADHD), and moderate intellectual disabilities—ranging in age from 6 to 18 years, with 9 identifying as female.. Activities were adapted to their individual needs, and family members were closely involved in training. This enabled more effective communication and emotional support, fostering both skill development and social inclusion.

At the beginning of the project, parents were surveyed with the question: Does your child participate in organized physical activity? 75% responded yes.

When asked, “How much time per week do you spend in physical activities with your child?”, 12.5% answered none, 12.5% reported 1–2 hours, 25% reported 3–4 hours, and 50% reported spending 5 or more hours.

For those not participating or rarely participating, the primary reasons cited were: 17% lack of time, 17% child's lack of interest, and 66% due to the absence of appropriate programs.

Following the initial implementation phase, a Likert-scale survey (1 = strongly disagree, 5 = strongly agree) was distributed to parents in Slovenia to assess perceived outcomes of the program. The survey targeted improvements in physical, social, and behavioral dimensions of children's development and was developed in consultation with experts in physical education and child psychology.

In addition to the survey, several interviews were conducted with participating parents. Feedback from these interviews revealed a high level of satisfaction, particularly regarding their active involvement in the training sessions. Parents noted that this level of engagement was not common practice in traditional programs. Many reported learning valuable skills and techniques, which they felt empowered them to continue supporting their children's physical development beyond the structured sessions.

RESULTS AND DISCUSSION

A total of 13 parents responded to the survey. Below are the mean values and standard deviations (SD) for each statement.

Table 1. Survey

Statement	M	SD
Child is more confident moving in water	4,77	0,43
Parent feels more confident supporting child's development	4,62	0.87
Child calmer and more relaxed during program	4,54	0,65
Better mood after swimming	4,54	0,78
Joint participation improved relationship	4,66	0.88
Improved swimming skills	4.38	0.88
Better understanding of child's behavior	4.23	0.83
Improved physical coordination	4.08	0.87
More open to interacting with peers	4.08	1.19
Improved balance and strength	4.00	1.00
Better at following adult instructions	4.00	1.08
Seeks contact with peers more frequently	3.69	1.38
More interest in group activities outside swimming	3.85	1.45

The highest mean scores were observed in items related to emotional well-being, including children's motivation and enjoyment in swimming activities ($M = 4.77$, $SD = 0.43$), as well as improved emotional calmness ($M = 4.54$, $SD = 0.66$). These results suggest that the program provides substantial psychological benefits, promoting not only engagement but also emotional regulation. Additionally, parents consistently reported mood improvements in their children following participation, reinforcing the program's positive impact on day-to-day emotional states.

Joint participation in training sessions was positively rated ($M = 4.46$, $SD = 0.88$), indicating that the shared experience contributed to enhancing the quality of parent-child relationships. This outcome is particularly significant for families of children with developmental challenges, as it supports bonding through structured and inclusive physical activity.

Parental confidence in supporting their child's development was also notably high ($M = 4.62$, $SD = 0.87$). This finding highlights the dual benefit of the program empowering caregivers with practical tools and strategies while simultaneously promoting child development.

Participants demonstrated positive physical outcomes, with improved swimming skills ($M = 4.38$, $SD = 0.88$), coordination ($M = 4.08$, $SD = 0.87$), and balance/strength ($M = 4.00$, $SD = 1.00$). These findings confirm the program's efficacy in supporting gross motor development in children with disabilities.

Lower mean scores were reported for social behaviors, particularly in seeking contact with peers ($M = 3.69$, $SD = 1.38$) and interest in group activities outside swimming ($M = 3.85$, $SD = 1.45$). While still above the neutral midpoint, these results indicate that improvements in

peer engagement may require a longer intervention period or more targeted social skills components.

The ability to follow adult instructions received one of the lower ratings ($M = 4.00$, $SD = 1.08$). This may reflect a need for more structured environments or individualized instructional approaches to optimize engagement and learning among participants with varying developmental needs.

The standard deviation values provide further insight into the consistency of parent responses. The lowest $SD (\pm 0.43)$ was found for the statement “Child is more motivated and joyful about swimming,” suggesting a high level of agreement and consistency among participants. Similarly low SDs were observed for confidence in water and parent confidence (± 0.87 – 0.88), indicating consistent perceptions of improvement in physical and emotional support. In contrast, higher SDs (e.g., 1.19 for “more open to interacting with peers” and 1.45 for “more interest in group activities outside swimming”) suggest greater variability in social outcomes. This may reflect differing starting points, social comfort levels, or additional needs among children, pointing to the necessity of continued individualized support in social skill development.

These preliminary results align with existing literature suggesting that parental support is a crucial determinant of children's physical activity (Edwardson & Gorely, 2010). Improvements in coordination, social behavior, and emotional regulation indicate that the Train4Inclusive approach fosters not only physical development but also psychosocial well-being.

Importantly, the program supported children with disabilities in building social confidence and improving peer interaction. Parents noted that their children began communicating more frequently and positively with peers, contributing to broader goals of inclusion and participation. These changes reflect the critical role of inclusive environments where children can thrive both physically and socially.

CONCLUSION

The Train4family project demonstrates that collaborative efforts involving families can significantly enhance children's physical and emotional development. The focus on children with disabilities has shown promising results in fostering inclusion, communication, and emotional well-being. Continued monitoring and expanded data collection across partner countries will provide a broader understanding of the program's long-term impact. These initial findings support further investment in inclusive, family-centered physical education initiatives across Europe. In future cycles of the project, including more children from the regular population will help reinforce mutual understanding and stronger inclusion, supporting a more integrated approach to diversity in physical education.

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