

CREATING AN EDUCATIONAL PACKAGE FOR PHYSICAL EDUCATION TEACHERS THROUGH INTERNATIONAL COLLABORATIVE APPROACH: P.E.RFECT PROJECT

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(Original scientific paper)

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Abstract

Successfully supporting students with autism in mainstream schools requires specialized strategies. With the emphasis on inclusion, many educators work to meet the needs of the growing number of students on the spectrum. Although some teachers have received specific training, further education is still necessary. This is especially important for physical and health education teachers, who face challenges in effectively including neurodiverse students in inclusive classrooms within mainstream schools. The Perfect project was developed in partnership with the Erasmus + program, involving seven countries: N.Macedonia, Cyprus, Poland, Ireland, Czech Republic, Bulgaria, and Spain. It aimed to create an educational package comprising appropriate teaching and learning support materials for physical educators working in inclusive settings with children with autism. The educational package was not just a product of research but a testament to the power of collaboration. A diverse group of participants, all with a shared vision and goals, came together to develop this package. They communicated openly, exchanged ideas, and demonstrated mutual respect, equality, and resource sharing. This collaborative approach helped us achieve our goals and fostered a sense of belonging and shared responsibility. The collaborative approach, which leveraged the strengths of diverse project participants, facilitated the creation of an innovative educational package that consists of a toolkit, Lesson Plans, a Guidebook, an Assessment Tool, and a Goal Bank. Educational materials will be available on an e-learning platform at the end of the project. Additionally, training for trainers will be held in Spain, with further disseminated training for physical education teachers in each partner country. International cooperation between different stakeholders, including schools, universities, companies, and non-governmental organizations, is an excellent example of intersectoral collaboration in developing a novel educational training package for supporting practitioners working with students with autism spectrum disorders in mainstream schools.

Key Words: *autism, physical education, training*

Introduction

Autism Spectrum Disorder (ASD) is a complex neurodevelopmental disorder typically manifested in the first three years of life. It stems from a neurological condition that disrupts normal brain function, affecting the development of social interaction and communication (Wang L, 2023). Individuals with autism encounter challenges in social interactions, communication, and sensory processing. Numerous therapies are aimed at enhancing the communication, cognitive, and motor skills of children with autism. One potential form of intervention for children with autism is participation in sports (Huseyin, 2019).

Encouraging children to participate in games can introduce them to new life experiences and improve their motor, communication, and coordination skills. The value of sports and physical activities in maintaining fitness and wellness, boosting self-esteem, fostering social skills, and enhancing mental health and overall well-being is widely recognized. However, it's essential to realize that children with autism may exhibit motor skills, fitness levels, participation behaviors, and intellectual functions below the expected range for their age group (Busti Ceccarelli S, 2020). This underscores the importance of equipping physical

education (P.E.) teachers with the necessary tools and knowledge to effectively instruct children with autism (Zhang & Friffin, 2007) and integrate them into the general physical education (GPE) curriculum.

It's essential to recognize that physical education classes often consist of students with diverse abilities and skills. Research shows that children with autism may experience delays in physical development, loss of movement skills, motor clumsiness, and poor fitness scores (Beach, Reid, & Collier, 2017). Unfortunately, children with autism are frequently excluded from fully participating in group activities and team sports (Bandini LG, 2013). Managing inappropriate student behavior is a challenge for all teachers, but those teaching physical education to students with disabilities face even more significant difficulties, as these students often exhibit behaviors that are hard to manage (Cheng & Toran, 2022). For example, students with disabilities may display challenging behaviors such as aggression, defiance, speaking out of turn, or being off task. Additionally, motivating these students to participate can be difficult. Moreover, physical education teachers often require more training in behavior management.

Preliminary research conducted by the consortium found that only 9% of physical education teachers felt adequately prepared to teach students with autism spectrum disorder (ASD), and only 12% believed their training in behavior management was sufficient (Kingsdorf, Panocha, Ivanova, Faka, & Troshanska, 2024). Furthermore, research studies have yet to examine the current state of these practices in the E.U.

Effectively supporting students with autism in mainstream schools requires specialized strategies. With the focus on inclusion, many educators are working to meet the needs of the increasing number of students on the spectrum. While some teachers have received specific training, further education is still necessary, particularly for physical and health education teachers who encounter challenges in effectively including neurodiverse students in mainstream school-inclusive classrooms.

Methodology -The P.E.rfect project

The international P.E.rfect project, also known as An Autism and Behaviour Management training for P.E. school teachers, was established to address the specific needs of physical and health education teachers. This two-year initiative, funded by the European Commission's Erasmus Plus Programme, involved diverse participants from N.Macedonia, Cyprus, Poland, Ireland, Czech Republic, Bulgaria, and Spain. The collaboration, which included schools, universities, companies, and non-government organizations coordinated by InsideEu from Ireland, aimed to develop materials and training packages for primary school P.E. teachers. The project's primary goal was to empower physical education teachers to effectively support the inclusion of children with autism in education by equipping them with the necessary skills, knowledge, practical strategies, and locally relevant training. Throughout the project, valuable insights were gained from the current practices within partner countries. By harnessing the strengths of the diverse project participants, the collaborative approach led to creating an innovative educational package comprising a toolkit, Lesson Plans, a Guidebook, an Assessment Tool, and a Goal Bank. After the project, these educational materials will be accessible on an e-learning platform. Furthermore, Spain will host training for trainers, with subsequent dissemination of training for physical education teachers in each partner country.

The main objectives of this project were as follows:

- To identify current best practices and areas requiring further development in providing physical education classes for children with autism in mainstream schools across partner countries.
- To create a comprehensive training program and educational materials for physical education teachers who instruct students with autism in mainstream school settings.
- To train the trainers responsible for educating physical education teachers.
- To pilot the professional development/training program for physical education teachers, utilizing the developed materials.
- To produce a handbook tailored to the needs of physical education teachers working with students with autism.
- To establish an e-learning platform.
- To develop a toolkit for physical education teachers.
- To evaluate the appropriateness and effectiveness of the materials and the impact of the training using both quantitative and qualitative data collection and analysis.
- To share the program, tools, and materials with stakeholders and to provide recommendations to national policymakers in the partner countries and more broadly across Europe.

Results

Our project's collaborative approach has led to significant progress across various activities supported by the grant. We began with a comprehensive mapping survey of physical education teachers, which provided valuable insights into current practices and areas requiring development concerning the inclusion of autistic children in our partner countries. Research indicated that most physical education teachers across all seven countries need additional training and resources to effectively incorporate inclusive strategies and meet the needs of students on the autism spectrum. (Kingsdorf, Panocha, Ivanova, Faka, & Troshanska, 2024) As a result, the project's outcomes aim to enhance the competencies and self-efficacy of physical educators, ultimately improving the school experiences of the students they serve.

Subsequently, we developed a handbook, assessment tool, goal bank, and lesson plans specifically for physical education teachers working with students with autism in mainstream schools. This program will undergo rigorous testing during targeted training sessions in July 2024 in Spain as part of a training of trainers teaching and training mobility event. This testing will ensure that the materials are practical and effective. They will be followed by local training events held in each partner country later in the year. All training sessions will focus on evidence-based teaching approaches, such as applied behavior analysis (ABA), Treatment and Education of Autistic and Related Communication Handicapped Children (TEACCH), and sensory integration, to support integrating autistic children into mainstream classrooms.

Two transnational meetings have provided a valuable platform for partner countries to exchange ideas and best practices, and the third mobility is scheduled to take place at an integrative school in Poland in September 2024 to further make community-driven modifications to the materials based on feedback from locally held training events. These experiences have greatly enriched the developmental process, ensuring the training program is culturally and contextually appropriate.

Additionally, six multiplier events are set to be organized to disseminate the findings and materials to a broader audience, promoting greater awareness and adoption of the developed strategies. An extensive evaluation process, utilizing both quantitative and qualitative methods, has been employed to assess the appropriateness and effectiveness of the materials and training program, demonstrating significant improvements in the skills and knowledge of physical education teachers.

Furthermore, the project has created an e-learning platform to support ongoing professional development, housing all the produced materials and video tutorials. The collaborative approach has culminated in disseminating the program, tools, and materials to stakeholders, with recommendations made to national policymakers in partner countries and across Europe. This project has empowered physical education teachers with the skills, knowledge, and strategies required to include children with autism in mainstream education settings effectively.

Discussion

The P.E.rfect project was initiated in response to the data and feedback gathered from previous initiatives involving project partners. Previous projects had mainly targeted mainstream school teachers and parents, overlooking the specific needs of physical education (P.E.) teachers. It's worth noting that the P.E.rfect project marks the first cross-European partnership aimed at improving the skills of P.E. teachers in Central and Eastern Europe and the Balkans, particularly in supporting the inclusion of children with autism in education. International collaboration within the framework of this project was pivotal, enabling partners to provide parents of children with autism with a comprehensive mindfulness training program to help them cope with stress and anxiety, ultimately enhancing their mental health and well-being. The international platform ensured the program's positive impact extended to diverse communities.

Extensive research conducted across various educational and regional settings has produced tangible outcomes regarding the needs of physical education (P.E.) teachers at the European Union level. This thorough analysis has provided a critical and definitive framework to address the needs of a broader audience, transcending national boundaries. It has significantly enhanced the professional development of adult education trainers both nationally and across the E.U., as partners have harnessed their European networks to amplify the project's impact.

The project's website will offer educational materials in multiple European languages, fostering the exchange of knowledge and expertise among universities, schools, and professionals engaged in autism and sports. The valuable feedback obtained from pilot testing with P.E. teachers from seven countries has informed modifications and improvements, considering their diverse professional backgrounds.

A significant outcome will be cultivating a pool of sports professionals and P.E. teachers equipped to share knowledge across Europe. Furthermore, the project aims to facilitate the establishment of a peer support network for P.E. teachers from different partner countries, enabling them to share experiences, ideas, thoughts, and concerns related to their daily challenges with students with autism.

The platform and website have been fully developed, and the first article has already been published. This webpage will serve as a foundation for future training and the ongoing development of materials, even after the project's conclusion.

Conclusions

Drawing from initial theoretical research and the insights of partner organizations, it is clear that physical and health education teachers, as well as sports coaches, need comprehensive practical training. They require expertise in behavior management and methodological approaches to engage students on the autism spectrum effectively.

The P.E.rfect project has established a solid groundwork for enhancing the capabilities of physical education teachers in supporting the inclusion of children with autism in physical education classes. However, ensuring the ongoing impact and sustainability of the project's outcomes is of utmost importance.

In summary, the P.E.rfect project has made significant progress in addressing the educational requirements of P.E. teachers working with children with autism. The Sustainability and Exploitation Plan will guarantee that the project's achievements continue to benefit educators, students, and communities across Europe and elsewhere. Sustaining and expanding the resources, networks, and knowledge developed through this project can cultivate a more inclusive and supportive environment for all students.

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