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**ABSTRACT**

The inclusion of students with Special Educational Needs (SEN) in physical education (EF) is crucial for physical, cognitive, and social development. However, persistent challenges, from teachers' attitudes to cultural differences, hinder inclusion. The importance of inclusive EF programs that enhance both the cognitive development and social integration of students with SEN is clear. Supporting social integration through physical activity is important, as is promoting a positive and motivating climate for inclusion. The goal of this research is to integrate motor, cognitive, social, and emotional aspects into program design to create an inclusive learning environment.

L'inclusione degli studenti con Bisogni Educativi Speciali (BES) nella nell'educazione fisica (EF) è cruciale per lo sviluppo fisico, cognitivo, sociale. Tuttavia, sfide persistenti, dall'attitudine degli insegnanti alle differenze culturali, ostacolano l'inclusione. L'importanza di programmi di EF inclusivi che migliorino sia lo sviluppo cognitivo che l'integrazione sociale degli studenti con BES è netta. Il supporto all'integrazione sociale attraverso un'attività motoria è importante, così come la promozione di un clima positivo e motivante per l'inclusione. L'obiettivo di questo articolo è integrare gli aspetti motori, cognitivi, sociali ed emotivi nella progettazione dei programmi per creare un ambiente di apprendimento inclusivo.

**KEYWORDS**

Inclusion, Physical Education, Special Education Needs, Physical Activity, School  
Inclusione, Educazione Fisica, Bisogni Educativi Speciali, Attività Fisica, Scuola

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## Introduction

The topic of Special Educational Needs and Disabilities (SEND) and school inclusion has become a central point of discussion, both nationally and internationally, especially in the field of education and pedagogy. In Italy, the journey towards school inclusion has gone through various phases: the exclusion of educational interventions, to separation in special schools. From the 1970 the current perspective of inclusion, where educational attention is focused on the growing and diverse needs (Basaglia, 1968).

Law 104/92 (L. February 5, 1992 n. 104; Heim, 2020) initiated the process of school integration over thirty years ago, but today's schools, characterized by increasing diversity and complexity among students, require new teaching methods and educational approaches that take into account the variety within the classroom. Law 170/2010 (Sartori, 2021; L. February 5, 1992 n. 104) marked a significant turning point, encouraging schools to reflect on methodologies to support all students and enhance their potential based on their individual characteristics.

The ministerial directive of 2012 (Direttiva Ministeriale, 2012) further expanded the concept of SEND, including learning difficulties that cannot be certified but significantly affect the educational and existential paths of students. This broader approach recognizes that in every classroom, there are students who require special attention for various reasons: economic, social and cultural disadvantage, specific learning and developmental disorders, difficulties related to knowledge of Italian culture and language.

The directive also emphasizes the importance of developing individualized pathways through the creation of Personalized Didactic Plans (PDP) for each student with SEND, with the goal of documenting intervention strategies and involving families. To fully achieve school inclusion, the directive establishes a territorial support network composed of Territorial Support Centers and schools that work together to promote inclusion.

Furthermore, from 2010, other regulations were accepted to support other categories of pupils through Individualized Educational Plans: first those with specific learning disabilities and later those with other SEN (Ianes et al., 2020).

Ministry of Education (MIUR) in 2013 (Ianes & Cramerotti, 2013) highlights the need for an educational-didactic project for all students with SEN, including those with cultural, personal, or social disadvantages. The expansion of the SEN appears to have a dual meaning. On one hand, this choice seems to provide accommodations

to all students who need them on an equitable basis (Ianes, 2005), however, on the other hand, it may restrict the focus on differences in the classroom solely to students with SEN and runs the risk of labeling them, as extensively debated in the discourse on labeling and special education (Algraigay and Boyle, 2017).

In summary, school inclusion has become an urgent and necessary challenge, requiring a broader perspective on SEND to consider the educational needs of each individual and develop personalized responses. Schools must adapt to the complexity of current social reality, involving the entire educational community in reshaping training models that put the individual at the center of attention.

### **1. Inclusion for SEND: What Barriers Do Teachers Face?**

SEND refer to the specific learning needs of some students, which may stem from physical or cognitive disabilities, medical conditions, behavioural challenges, or other factors that require additional or personalized support to enable these students to receive a quality education, i.e., prefer individual PA such as swim or dance (Morley et al., 2005); including SEND in a different range of PA within the class (Smith & Thomas, 2006); being part SEND pupils in PE as a means of socialization (Coates & Vickerman, 2010); make their own decisions concerning their participation in PE (Coates & Vickerman, 2010).

Attitudes and experiences of students and teachers are often mixed and sometimes contradictory. While attitudes are generally favorable toward inclusion, there is a discrepancy between these attitudes and actual inclusion practices. This gap could be attributed to implicit or tacit conceptions of what physical education (PE) truly is (Thomson, 2017). Inclusive norms appear to be closely tied to local cultures, requiring further discussion at macro-, meso-, and micro- levels.

At the macro-level, much research suggests that inclusive PE lessons are experienced in ways that negatively emphasize physical differences and the experience of "otherness" for students with disabilities. This can lead to a fragmented identity for students with disabilities who constantly confront the social image of the "normal" PE student (Fitzgerald & Stride, 2012).

At the meso-level, which refers to professional practice and the school context, a discrepancy arises where inclusive norms are recognized but often do not translate into perceptions of possibilities or effective inclusive practices. Teachers often seem to focus on sports skills or feel inadequate in adapting their teaching to the

diverse abilities of students (Morley et al., 2005). This can lead to feelings of injustice among students with disabilities when they are placed in traditional activities designed for students without disabilities. However, teachers often feel inadequate in organizing PE inclusively (Coates & Vickerman, 2010). For many teachers, this difficulty appears to stem from a lack of competence in adapting their teaching to meet the needs of a wide range of students with diverse abilities and disabilities (Qi & Ha, 2012). Additionally, the environmental dimension, such as class size, appears to influence teachers' perceptions of inclusion. Teachers in smaller classes seem to have a more favorable perception of inclusion than those teaching in larger classes (Hodge et al., 2009).

Finally, at the micro level, the literature suggests that within individual classes or groups of students with specific special needs, experiences of inclusion can vary significantly. This underscores the need for personalized attention to understand and support each student's needs (Seymour et al., 2009).

On the other hand, teachers and schools play a key role in the inclusion experience. Some teachers may demonstrate a greater understanding and support for students with special needs, while in other situations, teacher attention may be limited. This highlights the need for ongoing teacher training and the importance of creating inclusive environments at the school level.

However, the ability of actors at the micro level (students, teachers) to act autonomously and influence the inclusion experience is crucial. This "synergy" emphasizes that individual decisions and interactions can have a significant impact on inclusion and students' sense of belonging. Furthermore, face-to-face interactions in contexts play a crucial role in the inclusion experience (Fitzgerald & Stride, 2012). The lack of recognition by peers or teachers can have a negative impact on the self-esteem and well-being of students with special needs (Fitzgerald, 2005). This analysis of the literature from the macro to the micro level highlights the fundamental importance of creating an environment where each student is individually recognized and supported, and where teachers and schools have a deep understanding of the importance of inclusion. This requires efforts at both the teaching and awareness levels within schools to promote an inclusive culture.

## **2. SEND and Physical Education**

The inclusion of children and adolescents with SEND in PE is of paramount importance because physical activity (PA) has been shown to be beneficial for the

psychological, social, and physiological development of these individuals (Rekaa et al., 2019). However, data from Sport England indicate that children with disabilities participate less in PE classes compared to their peers without disabilities, mainly due to financial constraints, limited access to facilities, negative attitudes, and a lack of inclusive activity offerings (Vickerman & Blundell, 2012).

PE could be a virtuous example to include SEND pupils. PE and PA should help address challenges related to social inclusion, especially in terms of inequalities. The goal should be to make both areas more inclusive, promoting the participation of students from diverse social and cultural backgrounds, rather than perpetuating stereotypes and inequalities.

According to Bailey (2005), although there is a close relationship between PE and PA, these two concepts are not synonymous. In this broader perspective, PA refers to a range of activities, while PE is part of the school curriculum and focuses on PA and skill development.

PE, in particular, has often been criticized for its role in reinforcing hegemonic discourses that privilege a narrow group of students (e.g., middle class, physically able, males, etc.) (Penney et al., 2018). This suggests that PE can reflect and perpetuate social inequalities rather than promote inclusion.

Indeed, numerous studies have highlighted that a significant amount of PE teachers feel inadequate in addressing the requirements of students with SEND (Hersman & Hodge, 2010; Sato et al., 2007; Simons & Kalogeropoulos, 2005). Consequently, many perceive the concept of inclusive PE as a departure from their core responsibilities. Inclusion is often viewed as a disruptive element within the PE class, posing a challenge to the professional identity of these educators (Rekaa et al., 2019).

In light of all this, it is essential to ensure the inclusion of individuals with SEND in PE to promote physical and mental development and encourage a healthy lifestyle. Despite efforts to remove barriers to participation, significant challenges remain, such as bullying, limited access, and a lack of differentiation by the didactic of teachers (Smith & Thomas, 2006). In particular, general findings have shown consistent associations between PA and mental health, with positive and consistent associations with psychological well-being. Especially, Yang et al (2021) suggesting i) schools could create targeted programs that incorporate PA as an integral part of education for students with SEN; ii) PA have shown positive associations with mental health. Schools might promote a wide range of PA to support the mental well-being of students with SEN; iii) different types of PA may impact mental health

differently. Adapting and diversifying activities based on the specific needs of students with SEN can be beneficial. Further, iv) collaboration with families and communities is crucial to support PA outside the school setting and enhance the overall mental health of students with SEN; v) factors such as body composition, gender, and age can influence the relationship between PA and mental health. Accounting these variables could guide the implementation of more tailored strategies to support the mental well-being of students with SEN.

Further, is important highlighting that teaching styles can make PE a significant experience by encouraging motor learning if supported and oriented. In fact, learning styles were as crucial as the choice of teaching proposals, that allowed not only to stimulated in the student various modes of learning but also to respected the individual ways and times to acquire motor skills and knowledge or rework those already owned. Indeed, the learning methods of students are activated through systematic opportunities for structured motor experiences (stimulus-situations), supported by the choice and variation of teaching styles (Colella, 2019). This highlights a close link between the object teaching-motor learning and the teaching style used, the modalities of the educational relationship, the presentation of the task and the motor response required to the students, the environment in which it takes place. With particular reference to the relations between teacher and students, the choice to use and vary teaching styles (Colella, 2018), takes on particular meanings for the learning processes. In particular, Colella (2016) suggested that, in order to promote inclusion, a number of options should be designed to enable activities to be started for all pupils; respect individual differences; choose the level of difficulty to be exercised; perform motor tasks according to different levels of difficulty; encourage continuous participation and increase the time of activity; encourage and develop the process of self-assessment. These results emphasize the importance of promoting inclusive and accessible PA for children with SEND, contributing to the goal of inclusive education and better mental health for all children (Yang et al., 2021).

### **3. A different approach: Executive Function in SEND**

In the context of SEND, the intersection between PE and executive functions (EF) holds significant importance, particularly evident in studies involving children with attention deficit hyperactivity disorder (ADHD) and dyslexia. Researchers, such as Ziareis and Jansen (2016), explored a sample of 50 children diagnosed with ADHD, uncovering a profound correlation between cognitive abilities and motor skills.

Their findings suggested that improving motor skills through PE might offer a potential avenue for enhancing EFs in children with ADHD, a notion corroborated by subsequent studies (Benzing et al., 2018). Children with ADHD often encounter challenges in gross motor skills, echoing difficulties observed in those with dyslexia (Marchand-Krynski et al., 2017). This confluence between PA, the development of motor skills, and the enhancement of EFs stands as a crucial focal point in addressing the educational needs of children with specific learning challenges. In the light of this, children facing challenges in their development (i.e., intellectual disabilities or impaired mobility), can significantly impact their social integration (Anderson et al., 2013). Impaired motor cognition may limit social play-based experiences, hindering their ability to effectively interact and engage with peers. However, interventions focusing on early mobility training have shown promising benefits for socialization in children with mobility impairments, underlining the crucial role of enriched environments and quality PE programming in positively shaping the social integration of these children. The early motor experiences not only influence cognitive development (EFs) but also lay the groundwork for effective social integration (Chan et al., 2022; Lai et al., 2022). By acknowledging and addressing the impact of motor development on social cognition, early interventions through PE and enriched environments can significantly contribute to fostering social inclusion and interaction for children facing developmental challenges (Stodden et al., 2023). Based on the results of this research, PE should be planned on holistic model that accounting an inclusive nature of multiple domains of development and their reciprocal influence across childhood and adolescence, such as social-emotional, psychological, motor development, cognitive that lead to a positive social behavior. In this manner, children could growth with a harmonious development that embrace inclusion. Indeed, Zarrett et al., (2021) suggested that the inclusion could pass through play, suggesting that planning should involve PA and occasions that simplify positive social connections, support, and a sense of inclusion/belonging with a set of prosocial peers and supportive adults, with a positive social-motivational climate to promote positive physical development behaviors. Therefore, Stodden et al. (2023) suggested a Multi-tiered Systems of Support (MTSS), to create a comprehensive, engaging and inclusive learning environment that integrates motor, cognitive, social and emotional aspects to support the comprehensive development of students in schools. MTSS aims to provide personalized and targeted interventions to students at various levels, based on their needs. Indeed, the goal of MTSS was integrates a wide range of aspects of development, not limited to traditional social, emotional,

behavioral and academic environments. This structure also expands to include cognitive development, EF, self-esteem, and motor development.

## **Conclusions**

Inclusive education for students with Special Educational Needs (SEN) within the context of PE has seen remarkable progress marked by legislative milestones and scholarly insights. With the evolution from exclusion to inclusion, education has witnessed a paradigm shift, advocating personalized approaches and an understanding of the diverse needs within classrooms. The inclusion of pupils (children and adolescents) with SEN through PE holds profound implications, not only for their physical and cognitive development but also for their social inclusion. However, despite efforts to enhance inclusion, significant challenges persist, the research has shown that promoting accessible and inclusive PA positively impacts the mental health and well-being of children with SEN. Barriers to inclusion in PE extend from macro- to micro- levels, encompassing systemic, professional, and individual aspects. Attitudes and experiences among students and teachers sometimes contradict the principles of inclusion, highlighting a need for deeper awareness and training at all educational levels. Inclusive norms often seem tied to local cultures and require widespread discussions to ensure a comprehensive understanding of the concept of inclusion in PE. Effort to foster an inclusive culture within schools should emphasize the autonomy of teachers and individual interactions, recognizing the crucial impact of individual decisions on students' sense of belonging and inclusion. Creating environments where every student is recognized and supported on an individual level is essential. Further training and awareness programs within schools can promote a culture of inclusion that celebrates diversity and caters to the needs of students with SEN. Moreover, the crucial link between PE and EF in pupils with specific learning challenges underscores the importance of enriching PE programs to nurture both cognitive and social integration leading to MTSS to establish a learning environment that encompasses all aspects, including motor, cognitive, social, and emotional aspects. Addressing motor development within an inclusive and holistic framework is paramount, laying the groundwork for balanced growth that encapsulates inclusion across multiple domains of development.

### **Practical Applications:**

Efforts must be directed toward a holistic model of PE that acknowledges the interplay between various developmental domains across childhood and



adolescence, particularly in social-emotional, psychological, motor development, and cognitive aspects. The incorporation of inclusive play-based activities within PE planning is crucial, facilitating positive social connections, support, and a sense of belonging among peers and supportive adults. Establishing a positive social-motivational climate within PE programs will encourage positive physical development behaviours and promote a sense of inclusion and belonging among children with diverse needs. Integrating these principles into PE curricula can significantly contribute to fostering a more inclusive and supportive environment for children with SEN, thereby promoting their overall well-being and development.

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