

School physical education classes for students with autism spectrum disorder: A literature review

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ABSTRACT

This is a literature review with the objective of investigating the contributions of the physical education teacher in the inclusion and development of children with Autism Spectrum Disorder (ASD) in school, identifying the benefits of the inclusion of physical education for individuals diagnosed with ASD, describing the role of the physical education teacher in the process of inclusion in classes. A total of 6 articles were selected and, in order to summarize the findings, a table was prepared with the chronological order of publication with the information from each study. It is possible to affirm that the studies show the importance of the inclusion of children with ASD, as well as the role that the family and physical education teachers play in the development of children with ASD.

Keywords: Autism, Physical education, Inclusion.

INTRODUCTION

According to ICD 11 (International Classification of Diseases) conducted by the WHO (World Health Organization), ASD (autism spectrum disorder) is considered a pervasive developmental disorder. This disorder is becoming more and more present, significantly increasing its population number. It is estimated that 1% of the world's population has autism spectrum disorder, being more frequent in males and its clinical manifestation is common in the first three years of life (WHO, 2018).

ASD is characterized by a neurodevelopmental disorder responsible for altering behavioral patterns, which can cause difficulty in communication and interaction, and can also stimulate repetitive, restricted, and stereotyped behavior patterns. Some criteria are considered to conclude the diagnosis, such as difficulty in dialoguing, following social rules, establishing eye contact and play, motor and vocal stereotypies, discomfort with changing routines, aggressiveness with others and propensity to self-injury, anxiety and depression (AMERICAN PSYCHIATRIC ASSOCIATION, 2013).

These changes caused by autism make it difficult for the environment and the individual to understand, develop, and interact. In order to treat and provide quality of life for patients with autism spectrum disorder, some interventions are necessary, one of which is the implementation of physical activity, since the motor function of this individual is impaired. It is known that physical activity generates a sense of well-being, improving quality of life in various aspects, such as neuromuscular, metabolic,

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psychological, anthropometric, reducing stress, anxiety and depression. It is believed that physical activity is an important ally for autistic people, for the development of motor and cognitive skills, improvement of interaction with other people and the environment, in addition to promoting autonomy (BASSETTE, et al., 2018). The inclusion of an individual is a process that begins in childhood, so it is at school that the process of socialization of an individual begins, becoming the teacher's responsibility to adopt an educational plan that values and respects diversity and contributes to the construction of a inclusive society (PIEKARZ, et al., 2017).

Just like Portuguese, mathematics and other subjects, physical education is part of the basic curriculum of a school, so it is a right for all children. In order for everyone to have fair access, it is necessary to develop practices that allow all students to participate during the learning process (PIEKARZ, et al., 2017).

OBJECTIVE

To investigate the contributions of the physical education teacher in the inclusion and development of children with Autism Spectrum Disorder (ASD) in school, to identify the benefits of the inclusion of physical education for individuals diagnosed with ASD, to describe the role of the physical education teacher in the process of inclusion in classes.

METHODOLOGY

This narrative review aimed to critically analyze the existing literature on the relationship between Autism Spectrum Disorder (ASD) and School Physical Education. The benefits of adapted physical activity for individuals with ASD were explored, as well as the inclusion strategies adopted in the Physical Education classes, as well as the specific interventions developed to meet the needs of these students.

To perform this review, the Google Scholar database was used due to its wide coverage of scientific literature. Only articles written in Portuguese were considered to ensure the inclusion of studies relevant to the Brazilian context. Google Scholar is a valuable tool for academic research, providing access to a wide range of scientific publications (LIMA and TORRES, 2018).

The descriptors used in the search were "Autism Spectrum Disorder", "School Physical Education" and its variations, such as "Adapted Physical Activity" and "School Inclusion". The combination of these terms will be performed using Boolean operators (AND, OR). According to Santos and Alves (2020), the choice of search descriptors is essential to ensure the scope and relevance of the results obtained in a literature review. Broad and systematic searches were carried out using the defined descriptors. Example search strategy: ("Autism Spectrum Disorder" OR Autism) AND ("School Physical Education" OR "Adapted Physical Activity"). According to Silva et al. (2019), it is important to conduct comprehensive

searches to ensure that all relevant studies from 2019 to 2024 are included in the review.

The articles obtained were initially screened based on titles and abstracts, and those that were relevant to the scope of the review were selected. Then, the selected articles were read in full and evaluated for their contribution to the understanding of the relationship between ASD and School Physical Education. As highlighted by Souza and Oliveira (2017), the careful selection of articles is essential to ensure the quality and reliability of the review.

The selected articles were submitted to a critical analysis, identifying the main findings, knowledge gaps and trends in the literature. The information will be organized and synthesized in order to highlight the relevant points related to the relationship between ASD and School Physical Education.

The results were presented in a table with information on authors, title/theme, objective, type of study, and conclusion. Next, the descriptions of the selected texts were presented and subsequent discussion with other authors.

Initially, 18,200 articles were found, by title, 10,000 studies were excluded, from this sample, works with a year of publication prior to 2019 were still excluded, after reading the abstract of 20 studies, the sample was reduced to 15 articles, of these, only 10 articles were selected for reading in full, after reducing the sample, 6 articles were selected and to summarize the findings, a table was prepared with a chronological order of publication with the information of each study (Table 1).

Table 01 - Summary of the articles selected for the research.

Author, Year	Theme	Objective	Method / type of study / sample	Results
BARBOSA, 2023	Functional psychomotricity in physical education classes as a tool for improving the motor skills of students with autism spectrum disorder.	To analyze the principles and benefits of functional psychomotricity in physical education classes for students with ASD.	Narrative literature review.	Functional psychomotricity when adapted in an individualized way and incorporated into an inclusive approach plays a vital role in the education of children with ASD, offering an integrated approach to motor, cognitive and social development, so the physical education teacher can contribute to the progress and improvement of the quality of life of children with ASD.
CHAGAS, 2023	Inclusive education for students with autism spectrum disorder: a vision of school physical education.	Analyze the importance of inclusive education for students with ASD from the point of view of school physical education.	Bibliographical research with a qualitative approach.	The importance of school physical education in the development of autistic children was evident, but the traditional view of some physical education teachers still hinders the inclusion of these students, which creates difficulties in the teacher-student relationship.

DIAS, ANTUNES, BORGSMANN, 2023.	Teaching physical education to students with autism spectrum disorders (ASD): inclusion on the agenda.	To analyze the process of teacher training regarding the inclusion of students with ASD in school physical education classes.	Qualitative descriptive research.	The study showed that the physical education teacher plays an important role in the development of children with ASD. It also showed that most teachers are not prepared to deal with inclusion.
CAETANO, 2020.	Interaction and communication of children with autism spectrum disorder (ASD) in children's physical education classes.	To analyze the possibilities and difficulties of playful interventions in preschool physical education classes that facilitate the interaction and communication of children with ASD.	Qualitative research carried out with 65 children between the ages of five and six, with at least one child with ASD in each classroom.	Some difficulties were encountered in terms of inclusion, such as the lack of specific actions already in place at the school in question, but the research also showed that when playful practices are developed that can include all the children in the class, the result of the interaction is positive.
GAROZZI, 2020.	Inclusion of children with autism in school physical education.	Understanding the process of including a child with ASD in school Physical Education classes.	This was a qualitative, ethnographic study. The sample was a Physical Education teacher and 25 students, of both sexes, aged between seven and eight, one of whom had autism.	The study showed that planning is fundamental for building strategies to promote the child's interest in teaching and learning situations that take into account the child's particularities.
ARAÚJO, 2019.	Relational aspects of children with autism in play situations.	To analyze the relationship of a child with ASD when interacting with adults during playtime in a university playroom.	Qualitative case study research. The study was carried out with 17 children aged between three and six (ten non-disabled children), seven with ASD.	The study showed that children with ASD need a bond with a person in order for interaction to be possible, and consequently for development to take place. The study showed that when children don't have a bond, they only take part in activities that interest them. Establishing a bond requires a partnership between the school and family members.

Source: Own elaboration (2024)

The studies analyzed show that the physical education teacher is a fundamental tool to promote activities that can develop motor, cognitive, social and coordination skills and can contribute to the improvement of quality of life, these data corroborate the study by Macedo et al., (2017) where the importance of the teacher as a mediator in the process of inclusion of students with ASD is evidenced.

For Capraro and Tosim (2021), the physical education teacher is able to contribute to psychomotor development during classes, generating benefits to health, mood, quality of life, and also promote inclusion during the proposed activities.

Although physical education teachers play an important role in the development of students with



ASD, many professionals face great challenges, as well as, shows the study carried out by Oliveira (2017) where the teachers interviewed stated that to include students with ASD they find difficulties, because it is necessary to create a teaching method, develop activities considering the individualities and interest of each child. Thus, it would be necessary to have continuing education or even support from the entire school team in order to provide an inclusive pedagogical adaptation.

Another study carried out by Caetano (2020), where the pedagogical practices used during physical education classes were analyzed, showed that those teachers with a traditional teaching methodology have difficulties in creating didactic strategies that can contribute to the inclusion of students. Salles (2018) used playful activities from a university toy library to promote the inclusion, guidance, and self-regulation of students with ASD.

Araújo (2019) points out that when children with ASD create a bond with adults, their actions become more collective, that is, even with adapted activities, it is necessary to create a bond with the child to enable him to be interested in the proposed practices, as shown in the research developed by Garozzi (2020), which shows that for the student to arouse interest there are some aspects, such as, communication, verbal instruction of activities and demonstration, bonding and activities that consider the characteristics of the study according to individuality.

On the other hand, Barbuio (2021) points out that social relationships such as bullying and lack of communication between students and teachers can make it difficult for children with ASD to participate in the proposed activities.

Therefore, it should be emphasized that socio-emotional aspects should be considered, influencing participation in activities for students with ASD. Falcão (2017) showed that 76% of the sample of the study was bullied, reinforcing the students' lack of interest in the activities.

A research carried out by Pereira (2021) showed that the strategies should be as varied as possible in order to diversify the students' experiences, which can be games, games, playful activities and dance, the author showed that there were significant advances in communication and interaction. These data are corroborated by the research prepared by Pessoa (2019) where the proposal was to thematize hip hop in Physical Education classes, with the purpose of promoting a humanized environment.

Thus, it is possible to affirm that the teacher can indeed play a great role in inclusion, but it is necessary to seek knowledge to develop strategies to facilitate the inclusion process.

FINAL THOUGHTS

It is possible to affirm that the studies show the importance of the inclusion of children with ASD, as well as the role that the family and physical education teachers play in the development of children with ASD.



It is concluded that teachers find it difficult to propose adapted activities that may include students with ASD and that professionals need continuing education and even support from the entire school team, in the midst of difficulties, there are some aspects that can contribute to arouse the student's interest and facilitate the participation of the proposed activity.

In general, it is essential that teachers and family members participate and develop strategies to include children with ASD in daily activities in order to improve their quality of life. It is worth emphasizing the need for further studies to expand the database as well as the language researched, since the number of children diagnosed with ASD increases every day, so with new studies it would be possible to promote the training and training of teachers, enabling teachers to have access to information so that they can adapt their classes.



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