

# INCLUSION OF STUDENTS WITH DISABILITIES IN PHYSICAL EDUCATION CLASSES: TEACHERS' ATTITUDES IN REGULAR SCHOOLS<sup>1</sup>

## *INCLUSÃO DE ALUNOS COM DEFICIÊNCIA NAS AULAS DE EDUCAÇÃO FÍSICA: ATITUDES DE PROFESSORES NAS ESCOLAS REGULARES*

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**ABSTRACT:** The inclusion of students with disabilities in regular schools is still a challenge for teachers, especially because of the insecurity generated by undependable professional education and lack of support structure. The objective of this investigation was to analyze the attitudes of Physical Education teachers towards the inclusion of students with disabilities in regular classes, as well as the influence of gender, amount of professional experience and type of students' disability. To that end, 35 Physical Education teachers from 15 public schools in Londrina, state of Paraná, Brazil, individually answered the Teacher Inclusion Attitudes Questionnaire (TIAQ). The results showed that teachers are generally optimistic about the inclusion of students with disabilities in their classrooms, although the lack of support received by the school is highlighted as an important barrier in the process. The amount of teacher's experience and gender, as well as the type of student's disability, were influential factors in their attitudes, reinforcing that women with less experience, especially with intellectually deficient students in their classes, present more negative attitudes towards inclusion.

**KEYWORDS:** Physical Education. Inclusive education. Teacher's attitude.

**RESUMO:** a inclusão de alunos com deficiência nas escolas regulares ainda é um desafio para professores, especialmente pela insegurança gerada pela precária formação profissional e falta de estrutura de apoio. O objetivo desta investigação foi analisar as atitudes dos professores de Educação Física em relação à inclusão de alunos com deficiência no ensino regular, bem como a influência do sexo, tempo de experiência profissional e tipo de deficiência dos alunos. Para tanto, 35 professores de Educação Física de 15 escolas públicas de Londrina, Paraná, responderam individualmente ao *Teacher Inclusion Attitudes Questionnaire (TIAQ)* - Questionário de Atitudes dos Professores com relação à Inclusão. Os resultados mostraram que, de um modo geral, os professores são otimistas com relação à inclusão de alunos com deficiência em suas aulas, embora seja destacada a falta de apoio recebido pela escola como uma barreira importante no processo. O tempo de experiência e sexo do professor, bem como o tipo de deficiência do aluno, foram fatores de influência nas atitudes, reforçando que mulheres com menor tempo de experiência, especialmente com alunos com deficiência intelectual em suas turmas, apresentam atitudes mais negativas no sentido da inclusão.

**PALAVRAS-CHAVE:** Educação Física. Educação Inclusiva. Atitude do Professor.

## 1 INTRODUCTION

Current topic in the discussions about the challenges and new directions of school, the inclusion of students with disabilities divides opinions of educators and school managers. On the one hand, the benefits that this process can bring to all involved are highlighted, much

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more than just for the students who are included; on the other hand, inclusion still raises doubts and desires throughout the school community. In the area of Physical Education in school, the discourse is not different, and it is observed that many teachers still find themselves surrounded by questions due to the challenge of planning activities and the knowledge required to consider students with different possibilities and specific conditions.

The United Nations Educational, Scientific and Cultural Organization (UNESCO) World Conference on Special Educational Needs, held in 1994, resulted in the preparation of the Salamanca Declaration, which stressed that the signatory countries should commit themselves to making real movement of school inclusion (Silva, Llerenna Júnior, & Cardoso, 2002). In this sense, changes in the legislative scope and in the school organization have arisen in Brazil since then with the aim of improving professional education and ensuring that all students have a broad access to the common school. However, although advances have been observed, teacher education is still a challenge, since the mere provision of compulsory disciplines in undergraduate courses is not able to guarantee quality in teaching performance (Baumel, & Castro, 2002).

Over time, the way school-based Physical Education teachers perceive work with students with disabilities has changed profoundly. Just over two decades ago, working with physical activities for these students was seen as the sole task of physical therapists or occupational therapists. Even Physical Education courses in Higher Education only started to include specific knowledge about people with disabilities in the early 1980s (Pedrinelli, & Verenguer, 2013).

According to Rodrigues (2003), Physical Education has been on the sidelines of discussions regarding the inclusion movement, dominant in our country since the 1990s. Although many disabled children may even have access to regular school, in some cases they are dismissed from Physical Education classes, usually due to insecurity on the part of the teacher. According to the author, Physical Education in school must be secured as a right of the student and not placed as an option to be discarded. Thus, no student can be exempted from the discipline, even from its theoretical aspect. It is also worth mentioning the education of Physical Education professionals who will work in school, as they often do not obtain information about the disabilities presented in inclusive education, constituting a privileged field of experimentation, by the students, as well as their real limitations and possibilities. In this sense, Beyer (2003) emphasizes that the appreciation of school Physical Education, with continuous education and support of the multidisciplinary team, can contribute to making it a strategic area of innovation and improvement of pedagogical quality in school.

To Doulkeridou, Evaggelinou, Mouratidou, Koidou, & Kudlacek (2011), a change of attitudes on the part of teachers is fundamental so that they can develop more favorable behaviors towards the inclusion of students with disabilities. According to the authors, attitude indicates the predisposition to adhere to or avoid some situations. Thus, positive attitudes on the part of teachers can strongly influence a positive approach to school inclusion, making the process more beneficial and enriching. Greguol and Rose Junior (2009) point out that some variables could interfere with the attitude of Physical Education teachers towards students with disabilities, such as academic preparation and previous experience in working with them. In

addition, female and younger teachers would generally exhibit more positive attitudes towards the inclusion process (Hutzler, 2003; Greguol, Gobbi, & Carraro, 2013).

When analyzing the concepts of Physical Education teachers in relation to the inclusion of students with disabilities, Fiorini and Mazini (2015) found difficulties in adapting teaching strategies, and, in many cases, there was a greater predominance of individual activities with these students in relation to the collective ones. The greatest difficulties were the lack of support materials, assistants to help in classes and insufficient experience in working with students with disabilities.

The characteristics of the students' disability can also be interpreted as factors that generate negative attitudes on the part of the teacher. In general, the greater the severity of the condition, the more negative and pessimistic the teacher's perception about the possibility of inclusion of the student in Physical Education classes (Fiorini, & Manzini, 2015, 2016; Hodge, Haegele, Gutierrez Filho, & Lopes, 2017). In addition, more severe cases of intellectual disability and autism (Hodge et al, 2017) or cerebral palsy (An, & Meaney, 2015; Hutzler, & Barak, 2017) tend to be viewed more negatively by the teacher, due to the lack of pedagogical support materials, professional assistance or accessible physical spaces, or due to the lack of knowledge of the condition presented.

Although there is generally an optimistic tendency of teachers regarding the benefits of school inclusion, some personal difficulties (lack of knowledge and experience), administrative difficulties (poor access to reports and information about the student's disability, lack of materials and professional support), structural difficulties (physical spaces with precarious accessibility) and others related to the student (type and severity of the disability, high absenteeism in class and lack of motivation to participate in activities) are reported as factors that may hinder or even make the process of school inclusion unfeasible (Fiorini, & Manzini, 2014; Hodge et al., 2017; Hutzler, & Barak, 2017). However, it is also recognized that changes in the organization of initial and continuing education, as well as a better school administrative structure, can be factors that may contribute to the development of teachers' more positive attitudes, thus favoring the creation of a truly inclusive environment (Taliaferro, Hammond, & Wyant, 2015; Salerno, & Araújo, 2016). Therefore, and in view of the relevance of the theme, the objective of this research was to analyze the attitudes of Physical Education teachers in relation to the inclusion of students with disabilities in regular education, as well as the influence of gender, amount of professional experience and type of students' disabilities.

## **2 METHOD**

### **2.1 PARTICIPANTS**

To carry out the study, 35 Physical Education teachers from 15 public schools in the city of Londrina, state of Paraná, Brazil, were randomly selected. The teachers, 13 females and 22 males, had at least six months of experience in Physical Education at school and had an average age of 36.3 (+ 8.6) years old. All participants had at least one student with some kind of sensory, motor, intellectual, or multiple disability and administered their classes to students from 7th to 9th grade of High School. For participation in the study, all school principals and teachers signed a Free and Informed Consent Form. The study was approved by

the Committee of Ethics in Research with Human Beings of the State University of Londrina, with an Opinion No. 93680/2014.

## 2.2 INSTRUMENT AND PROCEDURES

At a previously scheduled time, each teacher individually responded to the Teacher Inclusion Attitudes Questionnaire (TIAQ), validated by Sideridis and Chandler (1997). The questionnaire is a Likert scale type with 12 statements, where there are four possible levels of response: 1 - I totally agree; 2 - I partially agree; 3 - I partially disagree; and 4 - I totally disagree. The aim of the instrument is to verify how teachers perceive the inclusion of students with disabilities in regular school Physical Education classes. Only for the eighth statement, the scoring system was inverted, ranging from: 1 - I totally disagree; 2 - I partially disagree; 3 - I partially agree; and 4 - I totally agree. The information in the questionnaire was as follows:

1. I feel I have the expertise to handle the educational needs of students with disabilities.
2. I feel that children with disabilities will benefit from the interaction resulting from their placement in a regular classroom.
3. I feel that children without disabilities will benefit from integration with students with disabilities in the regular classroom.
4. I feel that children with disabilities are socially accepted by their non-disabled peers.
5. I feel that I am able to ameliorate the learning deficits of children with disabilities.
6. I feel that I am able to manage the behavior of children with disabilities.
7. I like having students with disabilities in my classroom.
8. I feel that children with disabilities suffer considerable humiliation from their non-disabled peers in the regular classroom.
9. I feel that the appropriate educational materials are available so that I can teach children with disabilities.
10. I feel that support services such as reading support, speech therapy, tutoring, psychology, diagnostics and nursing are readily available to me.
11. I feel I have sufficient financial resources to purchase the materials to plan my classes and work with children with disabilities.
12. I intend to attend additional courses to broaden my knowledge about the education of students with disabilities.

After completing the scale, the answers were evaluated in four categories:

- Skills: how the teacher perceived his/her condition to deal with the differentiated conditions of his/her students with disabilities and their behavior during the class - minimum of four and maximum of 16 points.

- **Benefit:** how the teacher perceived the benefits of inclusion for students with and without disabilities - minimum of two and maximum of eight points.
- **Acceptance:** how the teacher perceived the social acceptance or rejection of students with disabilities - minimum of three and maximum of 12 points.
- **Support:** how the teacher understood the support received by the school for working with students with disabilities, including financial, human and material resources, multidisciplinary team and accessibility. In this item, the intention of the teacher to participate in refresher courses in the area of Physical Education for people with disabilities was also analysed - minimum of three and maximum of 12 points.

In addition to this instrument, teachers completed an anamnesis with general data on gender, age, length of teaching experience and whether they had already taken any extracurricular courses in the field of Physical Education for people with disabilities.

### 2.3 STATISTICAL ANALYSIS

Data was initially presented through descriptive statistics, detailing the frequencies of responses for categorical variables and average values and variability for continuous variables. In order to compare the results of each category of the scale among teachers of both genders, different age groups, with different amounts of experience, who had students with different types of disability and who did or did not take extracurricular courses, t-student test for independent samples and analysis of variance were used. The  $p < 0.05$  significance was adopted. The data was processed in the statistical program SPSS 20.0.

### 3 RESULTS AND DISCUSSION

This research aimed to analyze the attitudes of Physical Education teachers towards the inclusion of students with disabilities in regular classes. According to Doulkeridou, Evaggelinou, Mouratidou, Koidou, & Kudlacek (2011), it is attitude that indicates the predisposition to adhere to or avoid various situations, which would be formed from personal experiences, observation of other people and emotional processes (Rae, & McKenzie, 2010). A change of attitude on the part of the teachers is fundamental so that they can have more favorable behaviors towards the inclusion of students with disabilities. Thus, positive attitudes may strongly influence a positive approach to inclusion, making the process more beneficial and enriching. However, it is essential to valorize teacher education, improve on working conditions, as well as multidisciplinary support staff, material resources and wages, given the political and social role that these professionals play (Greguol, Gobbi, & Carraro, 2013). Moreover, more positive attitudes on the part of the teacher can affect the whole school environment, reaching other students and the community involved.

The general characteristics of the teachers who participated in the study are summarized in Table 1.

<b>Gender</b>	<b>% (n=35)</b>
Male	62,9 (22)
Female	37,1 (13)
<b>Age</b>	
Up to 35 years old	42,9 (15)
Above 35 years old	57,1 (20)
<b>Extracurricular courses</b>	
Yes	71,4 (25)
No	28,6 (10)
<b>Experience in teaching</b>	
Up to 2 years	20 (7)
From 2 to 10 years	37,1 (13) (13)
More than 10 years	42,9 (15)

**Table 1.** Characterization of study participants

Source: Elaborated by the authors.

It is possible to verify the predominance of male teachers, with more than 35 years of age and more than 10 years of teaching experience. In addition, the prevalence of those who took extracurricular courses on Physical Education for people with disabilities was also verified among participants. In Table 2, the general data regarding the categories of the questionnaire are detailed, considering all the teachers participating in the study. Regarding the disabilities present among the students, 17 indicated intellectual disability; 15 motor disability; 15 multiple disabilities; and three visual impairment (some teachers reported having more than one disabled student in their class).

	<b>Average</b>	<b>Standard deviation</b>	<b>Minimum</b>	<b>Maximum</b>
Skills (4 to 16 points)	10,60	2,73	6	16
Benefit (2 to 8 points)	5,49	1,64	3	8
Acceptance (3 to 12 points)	8,66	1,12	5	12
Support (3 to 12 points)	7,16	2,24	3	10

**Table 2.** General descriptive analysis of TIAQ<sup>5</sup>

Source: Elaborated by the authors.

The results showed that teachers are generally optimistic about the inclusion of students with disabilities in their classrooms. The item reported with lower optimism was the perceived Support. In this item, which deals with how teachers perceive the support received from the school, the presence of a multidisciplinary support team and material resources, no participant indicated the maximum score (12 points) and two indicated the minimum score (three points), revealing dissatisfaction with this item. On the other items, no participating teacher scored a minimum score, and at least one on each item scored the maximum score,

<sup>5</sup> TIAQ - Teacher Inclusion Attitudes Questionnaire.

which indicates an optimistic general view of the study participants about their own professional skills, the benefits of inclusion and acceptance of the students included.

In the Skills category, which deals with how the teacher perceives his/her ability to deal with the inclusion of students with disabilities, some studies have reported that teachers are more optimistic in this sense when the condition presented is less serious and allows independent movement and good understanding on the part of the student (Taliaferro et al., 2015; Hutzler, & Barak, 2017). Regarding the Benefits of inclusion, although this item is generally well-received by Physical Education teachers, it may be negatively influenced by lack of experience and lack of an adequate school structure (An, & Meaney, 2015).

The Acceptance item was the one that proportionally received the highest score on the part of the teachers researched, emphasizing that they perceive the students with disability are well accepted by the other classmates. Doulkeridou et al. (2011) emphasizes that the good acceptance of students with disabilities by non-disabled peers can be a reflection of positive attitudes of teachers, expressed in favorable reception behaviors during classes.

When dealing specifically with the Support received by the school, which involves the availability of human, material and financial resources to work with students with disabilities, Fiorini and Manzini (2014) highlight in their study with public school Physical Education teachers that the lack of pedagogical resources and the inappropriate spaces for the classes constituted in difficulties for the process of inclusion. Other negative points presented by the authors refer to the difficulty of teachers in obtaining access to information about the disabilities of the students and the lack of a support professional to collaborate in the classes, especially in the case of more severe disabilities.

In a literature review on inclusive education, Qi and Ha (2012) emphasize that when there is adequate support and infrastructure, both disabled and non-disabled students can benefit from the inclusion process. The authors identified possible facilitating factors: the professional qualification, the competence perceived by the teachers, the professional experience and the support available in the school. Contrary to this, the negative aspects of the process would be the lack of adequate teacher education, insufficient support and the severity of the disability, with the more severe conditions generating greater difficulties.

### 3.1 COMPARATIVE ANALYZES

When comparing the results obtained in each category among teachers of both genders, the only significant difference was found in the Skill category ( $p = 0.03$ ), since the men showed a more optimistic perception about their condition and preparation to deal with students with disabilities (11.36 points) than women (9.31 points). The age factor showed influence in the Skill ( $p = 0.00$ ) and Benefit ( $p = 0.00$ ) categories, as older teachers were more optimistic about their preparedness to deal with students with disabilities than the younger ones (11.75 of the oldest versus 9.07 of the youngest), and more optimism about the possible benefits of inclusion (5.95 of the oldest versus 3.40 of the youngest).

The result of the comparative analysis by gender differs from other studies that found that woman teachers presented more positive attitudes regarding inclusion than their male



counterparts (Greguol, & Rose Jr., 2009; Hutzler, 2003). Perhaps these differences may be due to the fact that the male teachers who participated in the present study had more professional experience than the women, which may have influenced the observed result.

In the comparison between teachers with different experiences in teaching, differences were seen in the Skill ( $p = 0.00$ ), Benefit ( $p = 0.01$ ) and Support ( $p = 0.03$ ) categories. It was found that more experienced teachers were more optimistic about their readiness to deal with students with disabilities and more optimistic about benefits from inclusion. In contrast to this, teachers with less experience had a more pessimistic view about the support received by the school for the inclusion of students with disabilities in their classes.

Hwang and Evans (2011), when analyzing the attitudes of 29 South Korean teachers on the inclusion of students with disabilities in regular education, found that most of them (55.2%) were reluctant to do so, although the majority (58.6%) believed in the benefits of this practice. Another relevant fact in the research is that, in the same way as in our study, many teachers (75.8%) perceived a lack of school support and adequate resources for the inclusion of students. In addition, teachers with more experience were more pessimistic about inclusion, probably because of the lack of support received and the frustrating experiences they experienced during attempts to include pupils with disabilities in their classrooms. In the same way, in India, Das, Kuyini and Desai (2013) observed teachers' negative perceptions regarding inclusion, with 70% of respondents reporting that they did not have any education or professional experience on disability and 87% reported not receiving any support from the school.

In the present study, the amount of professional experience showed influence in the attitudes of the teachers, with greater optimism manifested among those with more experience. However, the literature points to controversial results in this regard. Haegele, Hodge, Gutierrez Filho, & Rezende (2018), when analyzing 90 Brazilian Physical Education teachers, verified that the participants' attitudes were considerably impacted by the experiences during the lessons. Goodwin and Rossow-Kimball (2012) point out that successful experiences of Physical Education teachers with students with disabilities can positively reinforce self-efficacy, that is, how teachers perceive their competence to adequately deal with the various situations during class.

By contrast, Malinen, Savolainen and Xu (2012) emphasize that the teacher's simple exposure to an inclusive classroom does not improve his/her level of experience. Support must be provided for the experience to be positive and, consequently, to improve its self-efficacy. Negative and frustrating experiences with students with disabilities may lead to a reduction in self-efficacy, which may be a major hindrance to the inclusion process, since people tend to avoid situations in which they do not feel competent (Bandura, 2006). Thus, recent studies have shown that the competence perceived by the teacher, much more than the amount of experience or other personal characteristics, is a key factor of influence in the attitudes manifested in the direction of the intervention (Block, Hutzler, Barak, & Klavina, 2013; Jeong, & Block, 2011; Tant, & Watelain, 2016).

Regarding the type of disability presented, the only difference observed was for teachers who had students with intellectual disabilities in their classes, who reported significantly lower values in the item, Ability ( $p = 0.02$ ), showing less preparation than the others. No significant differences were found for the other disabilities. This fact shows that these teachers perceived



less competence to deal with situations involving the differentiated conditions of their students with intellectual disability.

Some recent studies diverge from these findings. They show that motor disability, especially cerebral palsy with greater severity, is pointed out by Physical Education teachers as the most complex for inclusion in activities during classes (Hodge et al., 2017; Hutzler, & Barak, 2017). The reason for such differences may lie in the severity of the condition, since the teachers participating in our study had students with motor impairments with lower degrees of impairment, while in the other studies cited, students presented greater loss of mobility, using, in many cases, a wheelchair as a means of mobility. In addition, the lack of specific classroom materials as well as inadequate architectural accessibility may lead to a greater tendency towards pessimism in the inclusion of students with motor disabilities. For the participants of the present study, the greater severity of the intellectual disability presented by the students, which generated deep difficulties of understanding and participation in the activities, may have been responsible for the results observed.

Other studies have also pointed out that the type and severity of pupil disability may interfere with teachers' attitudes towards school inclusion. In general, students with more severe conditions and involving behavioral disorders arouse more negative attitudes of rejection by teachers (Rae, & Mckenzie, 2010; Tant, & Watelain, 2016). Besides, the inclusion of students with disabilities in the initial grades generally arouses less rejection by teachers than in the more advanced grades (Tant, & Watelain, 2016). In the present study, since all teachers taught grades of very close proximity, such differences were not found.

Finally, when comparing the responses of teachers who did and did not take extracurricular courses on Physical Education for people with disabilities, significant differences were seen in the Skill ( $p = 0.00$ ) and Support ( $p = 0.00$ ) categories. In both situations, teachers who took extracurricular courses demonstrate more optimistic perceptions about their ability to deal with students with disabilities as well as the support received by the school for inclusion.

The lack of adequate professional education, both in undergraduate courses and continuing education, is seen as a major obstacle to the school inclusion process (Silveira, Enumo, & Rosa, 2012; Hodge et al., 2017). Moreover, extracurricular courses (in the form of extension or graduate courses) that deal with topics related to Special Education or adapted Physical Education may favor the improvement of the competence perceived by teachers to deal with the situations arising in the process (Taliaferro et al., 2015). Thus, education courses in the field of disability are seen as a fundamental part of continuing teacher education and can have a positive effect on how they perceive their competence to deal with students with disabilities in inclusive situations (Florian, 2012).

In summary, in the present study, the most positive attitudes were expressed by older male teachers, with more professional experience and who had done education courses for students with disabilities, both at the extension and *lato sensu* levels. However, some limitations can be raised, such as the reduced number of participants and the use of a quantitative tool to analyze teachers' attitudes. Nevertheless, the data collected here reveal relevant information about how Physical Education teachers perceive the inclusion of students with disabilities in the regular classes of Physical Education at school.

#### 4 CONCLUSION

From the data obtained, it can be observed that the attitudes of Physical Education teachers towards the inclusion of students with disabilities are often contradictory, on the one hand demonstrating clarity about the benefits of the process for all students, but on the other hand fear that they do not have the necessary competence for proper performance. The teacher's amount of experience and gender, as well as the type of student's disability, were factors influencing attitudes, reinforcing that women with less amount of experience, especially with students who have intellectual disabilities in their classes, present more negative attitudes of inclusion.

The growing number of students with disabilities who are currently enrolled in the regular school system poses an imminent challenge to the entire school community. Although Physical Education teachers in many situations show that they are more predisposed to inclusion than their peers in other areas, only adequate professional education and the implementation of new curricular approaches can improve the sense of competence of these professionals, helping to change their attitudes. What is expected as a consequence is that the differences come to be perceived not as an obstacle in the educational process, but as an essential condition for human development in any teaching-learning context.

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