

**INCLUSION**

Maria João Carvalheiro Campos

# **ON THE WAY TO INCLUSION - HOW POWERFUL IS PHYSICAL EDUCATION?**

Quantitative and qualitative study about teachers and students'  
attitudes toward inclusion in Physical Education

Tese de doutoramento em Ciências do Desporto e Educação Física na especialidade de Ciências da Educação Física apresentada à  
Faculdade de Ciências do Desporto e Educação Física

Setembro de 2013



UNIVERSIDADE DE COIMBRA



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Orientador: Professor Doutor José Pedro Leitão Ferreira



Campos, M. J. (2013). *On the way to inclusion – How powerful is Physical Education? Quantitative and qualitative study about teachers and students' attitudes toward inclusion in Physical Education*. Doctoral Dissertation in Sport Sciences and Physical Education, in the field of Physical Education Sciences presented to the Faculty of Sport Science and Physical Education, University of Coimbra.



## ACKNOWLEDGEMENTS

*We are like dwarfs on the shoulders of giants, so that we can see more than they, and things at a greater distance, not by virtue of any sharpness on sight on our part, or any physical distinction, but because we are carried high and raised up by their giant size.*

Bernard of Chartres

My giants were Professor José Pedro and Dr. Martin Block, as they show me the way and carried me through their giant heart, having always a positive word. It is unbelievable how they are so pleased to share their gigantic knowledge with me. I feel so blessed and honored!

I was blessed to have enjoyed the support of a tremendous number of people throughout these years of work – coworkers, family and friends without whom this dissertation would have been impossible. They have been the catalyzers of this journey that is about to end!

I would first like to give a big Thank You to my dissertation advisor, my professor and colleague José Pedro Ferreira, I owe you so much! Words cannot express the appreciation and admiration I have for you. You've been my friend, my mentor, my colleague, and a never-ending fount of moral and professional support. If I did take the academic pathway, it is because you gave me your hand and believe in my capabilities even when I had doubts about them! Your boundless optimism inspired me to continue and to believe in myself! Your unfailing interest, enthusiasm and patience have given me the support I needed to complete this research. I am so grateful to you!

I've been very lucky throughout most of my academic life, in that I've had the opportunity to meet one of the most amazing persons I will ever met, Dr.

Martin Block. I am very indebted of his generosity with his time, advice, expertise, and references, just to name a few of his contributions. Your comments and conversations were invaluable throughout my journey on and off campus, and the dedication you show for your students is so wonderful and admirable. The sparkle in your eyes and the way you teach is something unexplainable... When I grow up I want to be like you! You are a reference for me as professional, I learnt so much from you. Your encouragement and enthusiasm were important for the completion of this project. You can't imagine how I grew up and learn with my academic experience in the University of Virginia. "Good job"!

I've also been fortunate to have a great group of friends at UVA. I must also acknowledge the debt of gratitude I have to my "European colleagues" Melina, Elaine and Bart for our own American experience and to the best American friend anyone can have Sara Yeatman. You all make me feel so happy! Thank you for being part of my life!

This was due to the grant I had from the Fundação Calouste Gulbenkian funding program. I would particularly like to thank to the Faculty of Sport Science and Physical Education – University of Coimbra for supporting my journey to the University of Virginia.

I want to express my gratitude to my recent friend and colleague Mena for all the support during our amusing scientific meetings abroad! Thank you so much for your optimistic way of helping me even though my stresses! Your "last minute" assistance was of tremendous significance.

The undergraduate students with whom I was delighted to supervise also deserve my appreciation: Mafalda Cortez, Sara Silva, Sara Lemos, Joana Amaral, César Rodrigues, Godinho, Fabiana Gonçalves, Marco Nobre, Gonçalo Gomes, thank you so much for sharing the interest and being involved in this topic and helping me collecting data.



I must also acknowledge the gratitude to all the teachers and students who participated on this project. We had the opportunity to reach more than 1000 persons with our awareness programs.

Friends are the family we choose for ourselves and I am so fortunate to have the support of very important persons that have been with me in this journey. When I look back I see many friends that held my hand, some encouraging me, others just being there and make me smile and laugh, my best friends from Figueira da Foz and Coimbra thank you so much for all the days, sunsets and nights with me. Thank you so much for everything specially for just being there even when I forgot to call back!

A word to Puma, you were always there to keep me company for hours and hours, without asking anything in return, just sighing probably for love.

My Mother always told me that I have a little star watching me, and I know it's true... Thank you God for being alive, and for being so fortunate to have so many good people around me, and I believe that my guardian angel has been always with me and I feel the need to Thank You for watching me since day one...

Thank you!

Muito Obrigada!

## ABSTRACT

Evidence shows a wide collection of international research on the importance of teachers and pupils' attitudes towards inclusion of students with disabilities in Physical Education (PE) classes, since this perception may be crucial for a successful inclusion. However, these studies have not been carried out in Portugal. The present thesis aims to assess Portuguese teacher's and student's attitudes towards the inclusion of students with disabilities in PE and to explore the variables related to attitudes. In order to accomplish the purposes of the present research four studies were carried out: 1) analysing the psychometric properties of the *Physical Educators' Attitude Toward Teaching Individuals With Disabilities III* – PEATID III (Rizzo, 1993); 2) analysing the psychometric properties of the *Children's Attitudes Towards Integrated Physical Education-revised* - CAIPE-R (Block,1995); 3) ascertain the impact of an awareness program, the "Adapted Physical Education (APE) Week" on student's attitudes towards the inclusion of peers with disabilities in PE; 4) listen to PE teacher's voices about their perspectives of inclusive PE.

A multi-strategy research approach was used to assess perceptions of teachers and student's towards inclusion on students with disabilities in PE with a total of 1101 participants, attending Portuguese schools. Quantitative data was collected for 413 PE teachers (164 male and 90 female), ages between 21 and 58 years old ( $M=36.64$ ;  $SD=8.94$ ) and for 683 students without disabilities, (316 girls and 367 boys, between 11 and 17 years,  $M=13.31$ ;  $SD=1.10$ ). A pre and post-test was used for students, before and after the implementation of the awareness program (2 lessons of PE: 90' and 45'). The qualitative study was based on a semi-structured interview, conducted in a focus group, with five physical educators, ages between 25 and 32 years old ( $M=27.60$ ;  $SD=2.70$ ).

Results confirm CAIPE-R as a valid and reliable instrument while findings indicate that the PEATID-III is not a satisfactory self-reported measure to assess PE teacher's attitudes towards inclusion. Findings suggest that PE teachers advocate for inclusion, although they arise some challenges that can be an obstacle to its effectiveness, including the lack of specific training in APE

and type and level of the student disability. For students, significant statistical differences were found for gender and previous contact. We also found that the implementation of the awareness program in PE had a positive and significant influence on changing students' attitudes towards the inclusion of peers with disabilities.

The present research is a contribution to understand attitudes towards inclusion of students with disabilities in PE in Portuguese schools and brings strategies and forms of action among specialists and PE teachers in order to show how powerful PE can be in inclusive education.

**KEY-WORDS:** ATTITUDES; INCLUSION; PHYSICAL EDUCATION; TEACHERS; STUDENTS WITH AND WITHOUT DISABILITIES; AWARENESS PROGRAM

## RESUMO

A literatura revela uma panóplia de investigações internacionais sobre a relevância das atitudes dos professores e dos alunos face à inclusão de alunos com deficiência nas aulas de Educação Física (EF), uma vez que essa percepção pode ser crucial para uma inclusão bem-sucedida. No entanto, esses estudos não foram realizados em Portugal. A presente tese tem como finalidade avaliar as atitudes dos professores e dos alunos face à inclusão de alunos com deficiência nas aulas de EF e explorar as variáveis relacionadas com as atitudes. De forma a atingir os objetivos do presente trabalho, foram realizados quatro estudos: 1) analisar as propriedades psicométricas do *Physical Educators' Attitude Toward Teaching Individuals With Disabilities III - PEATID III* (Rizzo, 1993), 2) analisar as propriedades psicométricas do *Children's Attitudes Towards Integrated Physical Education-revised - CAIPE -R* (Block, 1995); 3) verificar o impacto de um programa de sensibilização, a "Semana da Educação Física Adaptada (EFA)" nas atitudes dos alunos em relação à inclusão de colegas com deficiência nas aulas de EF e 4) ouvir as vozes dos professores sobre as suas perspectivas de EF inclusiva.

Foi utilizada uma investigação com abordagem mista para avaliar as percepções dos professores e alunos face à inclusão de alunos com deficiência na aula de EF com um total de 1101 participantes de escolas portuguesas. Os dados quantitativos foram recolhidos a 413 professores de EF (164 do género masculino e 90 do género feminino), com idades entre 21 e 58 anos ( $M=36.64$ ;  $DP=8.94$ ) e a 683 estudantes sem deficiência (248 raparigas e 283 rapazes, dos 11 aos 17 anos,  $M=13.30$ ;  $DP=1.14$ ). Foi utilizado pré e pós- teste para os alunos, antes e depois da implementação do programa de sensibilização (2 aulas de EF: 90' e 45'). Para o estudo qualitativo realizou-se uma entrevista semiestruturada, em grupo de foco, com 5 professores de EF, com idades compreendidas entre os 25 e 32 anos ( $M=27,60$ ;  $DP=2.70$ ).

Os resultados confirmam o CAIPE-R como um instrumento válido e fiável, no entanto o PEATID-III não é um instrumento satisfatório para avaliar as atitudes de professores de EF face a inclusão de alunos com deficiência. Os

resultados sugerem que os professores defendem a inclusão, apesar de poderem surgir alguns desafios que podem ser um obstáculo à sua implementação, entre eles a falta de formação específica em EFA e o tipo e grau de deficiência do aluno. Relativamente aos estudantes, foram encontradas diferenças estatisticamente significativas para o género e o contato prévio. Concluiu-se também que a incorporação do programa de sensibilização nas aulas de EF teve uma influência positiva e significativa na mudança de atitudes dos alunos face à inclusão de colegas com deficiência.

A presente pesquisa pretende ser uma contribuição para uma melhor compreensão das atitudes face à inclusão de alunos com deficiência nas aulas de EF e apresentar estratégias e formas de ação entre os especialistas e professores, demonstrando o quão poderosa pode ser a disciplina de EF na educação inclusiva.

**PALAVRAS-CHAVE:** ATITUDES; INCLUSÃO; EDUCAÇÃO FÍSICA; PROFESSORES; ALUNOS COM E SEM DEFICIÊNCIA; PROGRAMA DE SENSIBILIZAÇÃO

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## **LIST OF ABBREVIATIONS**

CAIPE-R - Children's Attitudes Towards Integrated Physical Education-revised

CFA – Confirmatory Factor Analysis

CFI – Comparative Fit Index

EFA – Exploratory Factor Analysis

GPE – General Physical Education

M – Mean

PE – Physical Education

PEATID III - Physical Educators' Attitude Toward Teaching Individuals With Disabilities III

PL – Public Law

RMSEA – root mean squared error of approximation

SD – standard deviation

SEN – Special Needs Education

SRMR – Standardized Root Mean Square Residual

UNESCO – United Nations Educational, Scientific and Cultural Organization

UNICEF – United Nations Children's Fund



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## **CHAPTER I – INTRODUCTION**



## **CHAPTER I – INTRODUCTION**

In this first chapter the current state of art in the area of teachers and students' attitudes towards inclusion of students with disabilities in Physical Education classes is described, referring to the relevance and purposes of the study and main research questions. Firstly, is presented a preamble on my own motivation for the present study.

### **PREAMBLE**

As Physical Educator I taught in different schools. In all of them I had classes with students with different levels of performance and abilities. Since then I came upon a reality that did not meet my expectations and my ideals as a teacher. Soon I found that some students were relegated to the background, to whom opportunities for educational equity were often denied. This really made me want to investigate what makes school community deny one of the basic principles of human rights: that "education is for everyone." And I thought: 'What can I do as a Physical Education (PE) teacher?' Gradually I began to see I could really do something to change attitudes and behaviours in a given class or school. With baby steps, I started to introduce certain activities in PE classes and in schools and I also started adapted PE classes for students with disabilities, as well as implemented the sport's celebrations of the international day of people with disabilities, activities very well received and acclaimed by the school community. Day by day, I started to verify how powerful can be PE, and I noticed that teachers and students more easily accept difference as something natural when confronted with the possibilities of difference. Now, being a university lecturer, I believe deeply that is fundamental to change the way future teachers think about inclusion of students with disabilities in PE classes. It has been crucial for this goal to have heard their expectations and feelings towards this topic. Also, at the initial PE teacher training level, I was very fortunate to have students who did their undergraduate addition, with 10/15 years of experience who served as motivators to pursue my interest. Their voices and

concerns led me to believe that my intentions were on the right track and that PE may be the way forward in terms of the much acclaimed inclusive education.

In Portugal, there is a major concern in implementing inclusion in the educational system. The existence of legislation in inclusive philosophies is not in itself sufficient to ensure the implementation of these plans in schools legislation. Particularly in PE class, why is it that legislation overlooked? The present work seeks to demonstrate scientifically what I testified during the few years of my teaching experience in schools: Despite of the initial resistance and the general lack of knowledge, if we focus on the perceptions of different stakeholders in education, we can move towards inclusive education. And I believe that some of the steps in this direction are to implement and include, in the PE and school curriculum, Paralympic and other adapted activities to prepare teachers and students to the diversity found in schools and society in general. It is here that we believe comes the power and strength of physical education, serving as a catalyst for educational and social inclusion.

### **1.1. Rationale for the study**

There has been a cultural and a social change that emphasizes inclusion of all children with disabilities into general education settings and policies of inclusion all over the world as a major requirement for implementing an inclusive philosophy in regular schools. The principle of inclusive education was adopted at the Salamanca World Conference on Special Needs Education (UNESCO, 1994). Inclusive education seeks educational equity, i.e. the guarantee of equality, both in its access and outcomes. Thus, the inclusive school requires individualization of educational strategies, as a method to promote universal competences enabling autonomy and access to conduct full citizenship by all (O'Brien, Kudláček & Howe 2009). According to Stubbs (2008), the concept of inclusive education is part of a cultural change and tries to respond appropriately and with quality, not only to disability but to all forms of difference, giving to the school and society as a whole the collective

responsibility of enabling the person with special needs to develop and exercise their citizenship rights. After the Salamanca Statement and the Framework for action on Special Needs Education (UNESCO, 1994), it became a guideline for policies in education and social services in several countries that signed it, including Portugal. There have been direct and indirect efforts made to move towards an inclusive society but many barriers still need to be broken. While acknowledging that physical barriers are an important issue to consider, the most difficult barriers encountered by people with disabilities are attitudinal, in the achievement of these international demands on inclusive education (Stubbs, 2008). School is a privileged place to implement inclusion, as it is one of the principal means of education and social interaction. Indeed, inclusive education represents one of the most imperative issues of today's education and is concerned to all that are somehow connected to the educational phenomenon. The principal aim of this philosophy is to respond effectively to the needs of a growing number of students with the most diverse characteristics. Inclusive education applies "to each and every one" and promotes learning in mainstream schools, free of barriers and exclusion: "The fundamental principle of inclusive schools is that all children should learn together, wherever possible, regardless of the difficulties and differences they show. Schools should accommodate all children regardless of their physical, intellectual, social, emotional, linguistic or other "(UNESCO, 1994). Thus, due to a sequence of social, legislative and political measures that have emphasized equal participation and access of people with disabilities in the society, inclusion is not an option any more; it is an international and national demand.

Despite the existence of policies promoting inclusive philosophies, they are not sufficient to guarantee the implementation of these designs in regular schools. School is a privileged space for inclusion and should make every effort to promote equal opportunities in terms of educational success and as a mean of achieving an effective educational and social inclusion of children with SEN. However, the success of inclusive education is not dependent on a perfect formula, but on people's willingness to work with each other in order to identify and overcome barriers as they arise. This is why on-going participation is

necessary. If key stakeholders are not fully involved and feel they do not own the inclusive education program, they will not be motivated to act when problems arise. Ownership and attitudinal change go hand in hand – positive attitudes stimulate ownership and ownership can create positive attitudes (Stubbs, 2008). According to UNESCO (2003), one of the barriers that remains are the negative attitudes towards differences and the resulting discrimination and prejudice in the society that manifests itself as a serious barrier to learning.

Within this context, attitudes towards difference are of utmost importance, as they influence the inclusion of students with disabilities in the educational context. People's beliefs and values are deeply engrained and are resistant to change. One of the main obstacles stated in relation to inclusion is often 'negative attitudes', and an attitude is a combination of values and beliefs. Often negative attitudes change most effectively when people can observe positive role models, or inclusion working in practice. But it is also possible to help people to examine their underlying beliefs and values and to lead them to decide if they want to keep them. A sustainable inclusive education program needs to ensure that the values and beliefs of all stakeholders are clearly stated (Stubbs, 2008). According to Sherrill (2004), the key to changing behaviors toward people who are different is attitudes. For these reasons, the attitudes of PE teachers are very important and should be taken into consideration when making changes as they can have a direct impact on the success of the students' learning process (Meegan & MacPhail, 2006).

As a result of the international demands for this social paradigm changing, there has been a growing need for research concerning the effects of inclusion of students with disabilities in regular school settings and one of the most widespread studies discuss the role of Physical Education on inclusion (see the review of literature from Block & Obrusnikova, 2007). According to Sherrill (2004), the success of inclusion depends greatly on the quality of physical education programs and on the extent they meet individual differences. Block (2007) defines inclusion as the "philosophy of supporting the educational needs of students with disabilities in regular education classes, including these,



the PE classes." Thus, it is necessary to prepare PE teachers and students without disabilities for inclusive education and the understanding and acceptance that are needed in order for inclusion to work successfully and to its fullest extent (Frese, 2006).

Physical education (PE) as a fundamental subject of the school curriculum cannot remain outside this inclusive movement, as this subject can establish itself as a complement to the school to become more inclusive. According to Rodrigues (2003), the theme of inclusion in PE has been insufficiently treated in Portugal. Yet, here are several reasons why PE is likely to be a means for enduring education inclusive, in particular, because the intrinsic nature of the activities developed in this subject, allowing a wide participation of the students even those with difficulties. This can be evidenced by the presence of PE in all curricula developed for students with Special Education Needs, being understood that PE enables participation and a high degree of satisfaction of students with different levels of performance and needs. Rodrigues (2003) believes that PE may actually be a key area to make education more inclusive and may even be a privileged field of experimentation, innovation and teaching skills quality improvement in regular schools.

According to Frese and Yun (2007), PE is an effective academic area to promote abilities over disabilities and help students understanding one another and their capabilities, and a disability awareness unit could allow students with disabilities to show others that they are more alike than different in terms of their skills and interests in sports. Creating opportunities for students to recreate together is very important, as well as to enjoy each other during leisure, to depend on each other, to respect strengths and weaknesses, and to demystify differences, living experiences that effectively influence attitudes towards one another (Hamilton & Anderson, 1983; Sable, 1995).

Although research on this topic has increased worldwide in the past years, results are still inconclusive, as different methodologies had been used. Some point out that attitudinal barriers experienced in inclusive education can isolate children with disability and the impact on their feelings of social

acceptance and self-esteem. Blinde and McCalister (1998), Goodwin and Watkinson (2000), and Hutzler, Zach and Gafni (2005) found that children with disabilities were often isolated and excluded in PE. Social isolation has been linked to difficulty with future peer relations and lower academic and cognitive development. In order to increase social awareness, understanding, and acceptance toward children with disabilities by their non-disabled peers, disability awareness programs have been developed (Frese, 2006). PE has unique environments to teach disability awareness, because most students can relate to one another through common interest in recreational skills and sports.

Research in this area is somewhat recent. In the review of literature conducted by Block and Vogler (1994), it was found that there are very few studies on the issue of inclusion of pupils with disabilities in PE classes. However, in the last twenty years there has been an increasing number of studies on the inclusion of pupils with disabilities in PE, according to some review studies (e.g. Block & Obrusnikova, 2007; Hutzler, 2003). The evidence is drawn from a wide collection of international research on teachers and pupils' attitudes towards inclusion of students with disabilities in PE, since this perception may be crucial for a successful inclusion. There has been great interest regarding attitudes of PE teachers and children without disabilities towards inclusion in PE worldwide (e.g. Hutzler & Levi, 2008; Panagiotou Evaggelinou, Doulkeridou, Mouratidou & Koidou, 2008; Block & Obrusnikova, 2007; Kudláček, 2007; Van Biesen, Busciglio & Vanlandewijck, 2006; Palla & Castro, 2004; Obrusnikova, Válková & Block, 2003; Slininger, Sherrill & Jankowski, 2000; Murata, Hodge & Little, 2000; Block & Vogler, 1994; Frese & Yun, 2007; Karlyvas & Reid, 2003; Loovis & Loovis, 1997; Block & Zeman, 1996; Tripp, French & Sherrill, 1995; Block & Rizzo, 1995).

As seen, over the past decades, educational researchers have increasingly expressed concerns about attitudes of the school community towards inclusion of students with disabilities in a PE context all over the world. Crucial to the measurement of attitudes is the availability of instruments that can validly assess those perceptions. Although the development of different

surveys, the *PEATID III* (Rizzo, 1993) and the *CAIPE-R* (Block, 1995) has been the most widely used tool to measure attitudes in Inclusive PE context and has been translated in different languages. Nevertheless, proper psychometric analyses have not been firmly established. And in spite of the growing body of studies about attitudes towards inclusion in PE, only a few studies were conducted to evaluate the effectiveness of disability awareness programs in attitudinal changes (e.g. Liu, Kudláček & Jesina, 2010; Panagiotou, Kudlacek & Evaggelinou, 2004; Panagiotou et al., 2008; Hutzler & Levi, 2008; Jesina, Lucas, Kudláček, Janecka, Machová, & Wittmannová, 2006; Van Biesen, Busciglio & Vanlandewijck, 2006). The *CAIPE-R* (Block, 1995) seemed to be the most used survey to measure the impact of an inclusive intervention in attitudes changing of students without disabilities towards inclusion in PE.

Up to date there has been limited research in Portugal on attitudes of physical educators and students without disabilities towards inclusion in PE. Therefore the study of their perceptions is of extreme importance, as it may become a relevant instrument for the development of future interventions, providing important information for a successful inclusion and some insight of teachers and pupils' attitudes towards the inclusion of students with disabilities in PE.

## **1.2. Statement of the problem**

Arising from the background of the problem, there is a gap of knowledge in ascertain attitudes of Portuguese PE teachers and students with valid instruments because no proper psychometric analyses have been established with translated surveys, being of utmost importance to evaluate the attitudes and possible attitude changes in different stakeholders towards inclusion in PE.

### **1.3. Purpose of the study**

This pioneer study brings together a mixed methodology that combine quantitative and qualitative methods to ascertain how powerful inclusion tool can PE be through understanding the attitudes of PE teachers and students towards inclusion of students with disabilities in PE, by 1) assessing teacher's and student's attitudes towards inclusion of students with disabilities in PE after analyzing the psychometric properties of the Portuguese versions of PEATID III and CAIPE-R and 2) evaluating the effect of an awareness PE program on student's attitudes towards inclusion of peers with disabilities in PE.

### **1.4 Significance of the Study**

As mentioned earlier, favorable attitudes of teachers and students are considered key factors for a successful inclusion (Conatser, Block & Lepore, 2000) and therefore are a variable of great interest. Block (2007) goes even further, defending that PE offers opportunities for social acceptance and interaction between students with and without disabilities because of its unique instructional setting. According to Block and Obrusnikova (2007), the key to achieve positive results in inclusion is not only placing pupils with special needs in PE, but also the attitude of teachers in promoting positive social interactions and develop non-competitive activities of cooperation, thus promoting positive attitudes of pupils without disabilities. Tripp and Sherrill (1998) emphasized that this type of research must become theory oriented and they affirm that attitude is probably the most distinctive and indispensable concept in contemporary American Social Psychology. Thus research on this topic has grown because of the belief that the teacher's attitude directly can have a direct impact on inclusion of students with disabilities into PE classes (Elliott, 2008; Hodge & Jansma, 2000; Rizzo & Vispoel, 1991). Based on this assumption and due to this importance, it is crucial to study the impact of attitudes in the educational context, particularly in PE classes, using reliable and valid instruments, particularly in Portugal where the published data are rare.

Fulfilling a gap in the available knowledge on PE teacher's attitudes toward inclusion, this study may be a relevant tool for the development of future interventions, providing critical information to the success of inclusion. Besides raising awareness about attitudes towards inclusion in PE, we also hope this study will incite further discussion on about disability matters in Portugal and highlight how environmental constraints and attitudes impact on society's views toward their members with a disability. Ultimately it can provide a forum that emphasizes the capabilities of all people with disability as suggested by Donaldson (1980), contributing to the discussion of how powerful can PE be.

The **original contribution of this study to the body knowledge in PE research** is a) the analysis of the psychometric properties of the surveys since it is crucial to use valid and reliable instruments; b) the access to teacher's voices in order to acknowledge their daily challenges and c) the analysis of the impact of the awareness programs. All of these contributions lead us to achieve a bigger research goal: the understanding and the dissemination of these types of intervention in such a way that helps overcoming potential attitudinal barriers towards inclusion in PE, overcoming the scarcity of information in Portugal.

Our results can be disseminated and discussed with key stakeholders as the Ministry of Education, schools and professionals by pulling examples of strategies aimed to implement inclusion in regular schools, as the national legislation demands, such as changing PE curricula and changing PE school books.

### **1.5 Research questions**

In order to find an answer to our problem, several research questions were posed:

1) Is the *Physical Educators' Attitude toward Teaching Individuals with Disabilities III – PEATID III* (Rizzo, 1993) a valid and reliable instrument?

- 2) Is the *Children's Attitudes Towards Integrated Physical Education-revised - CAIPE-R* (Block, 1995) a valid and reliable instrument?
- 3) Which variables are most related to teacher's and student's attitudes towards inclusion of students with disabilities in PE?
- 4) What is the effect of an awareness program in students' attitudes towards inclusion of peers with disabilities in PE?

## 1.6 Thesis Outline

This doctoral thesis was based on the Scandinavian model, and consists of a set of publications in press or submitted for publication that give body to the research questions supporting the thesis. It develops following a logical sequence according to the thesis rationale. Therefore, the dissertation is arranged as follows:

**Chapter 1** provides motivation and background information of the thesis. It also states key findings of this dissertation, and poses major questions that the research intends to answer.

**Chapter 2** presents the state of the art review with the main aim to enhance the researcher's understanding of the area to provide a conceptual framework for the present doctoral thesis.

**Chapter 3** will discuss in detail the methodological choice, explaining why a mixed methods design is appropriate for the present study and which potential benefits derive from this choice. Moreover, it will outline the research questions and research design.

**Chapter 4** presents the psychometric properties of the PEATID-III, submitted as an article and accepted in the *Annals of Research in Sport and Physical Activity: Analysing the structure, validity and reliability of the Physical Educators' Attitude toward Teaching Individuals with Disabilities III – PEATID III*

**Chapter 5** covers the psychometric properties of the CAIPE-R, accepted for publication in the European Journal of Adapted Physical Education, entitled *An analysis into the structure, validity and reliability of the Children's Attitudes Towards Integrated Physical Education-revised (CAIPE-R)*

**Chapter 6** presents an intervention study, compiled in a paper submitted to the Psychological Reports entitled: *Changing attitudes through Physical Education: Influence of an awareness program on student's perceptions toward peers with disabilities.*

**Chapter 7** describes the teacher's voices towards inclusion, gathered by a qualitative analysis of interviews to PE teacher's perception regarding inclusion of students with disabilities in PE classes – *A contribution for understanding physical educators voices: How Portuguese PE teachers do feel about inclusion of students with disabilities?* submitted to the International Journal of Disability, Development and Education

**Chapter 8** summarizes the research key findings and provides a discussion on its policy implications and the contribution of this thesis to the literature and knowledge in PE studies. In addition, it will outline the strengths and limitations of this study, and offer suggestions for future research.

**Chapter 9** presents the list of references used on chapters I, II, III and VIII of the thesis.





## **CHAPTER II – REVIEW OF LITERATURE**



## **CHAPTER II – REVIEW OF LITERATURE**

The present chapter aims to collect a review of literature on inclusive education at international level and particularly in Portugal and to expose the theoretical framework about attitudes and the state of art on attitudes towards inclusion of students with disabilities in PE classes.

### **2.1. On the way to inclusive education**

The education for students with disabilities has been subjected to many changes over time and inclusion is one of the main school reform movements of the past years in many countries. There has been cultural and social changes that emphasize inclusion of all children with disabilities into general education settings and policies of inclusion all over the world are regarded as a major requirement for implementing this cultural and social change in regular schools. The principle of inclusive education was adopted at the Salamanca World Conference on Special Needs Education (UNESCO, 1994). Inclusive education seeks the educational equity, i.e. the guarantee of equality, both in access and results. Thus, the inclusive school requires individualization of educational strategies, as a method of attaining the objective of promoting universal competences enabling autonomy and access to conduct full citizenship by all (O'Brien et al., 2009). According to Stubbs (2008) the concept of inclusive education is part of a cultural change and tries to respond appropriately and with quality, not only to disability but to all forms of difference, giving to the school and the society as a whole the collective responsibility of enabling the person with special needs to develop and exercise their rights of citizenship. After the Salamanca Statement and the Framework for Action on Special Needs Education (UNESCO, 1994), it becomes a guideline for policies in education and social services in several signatory countries, including Portugal.

Since the Universal Declaration of Human Rights (United Nations, 1948) until nowadays many cultural shifts have accrued towards the movement of

inclusive education and international policies are making efforts to achieve universal primary education. The United Nations (UN) Convention on the Rights of Persons with Disabilities (2006) breaks new ground as the first international legally binding instrument to specifically promote inclusive education as a right and established inclusive education as a legal right, however earlier documents paved the way: the World Programme of Action (UN, 1982) and the Standard Rules on Equalisation of Opportunities for Persons with Disabilities (UN, 1993) (Stubbs, 2008). Also the Salamanca Statement and its Framework for Action (UNESCO, 1994) has been pointed out as the most important international document in the field of inclusive education, claiming that “regular schools with an inclusive orientation are the most effective means of combating discriminatory attitudes, creating welcoming communities, building an inclusive society, and achieving an educational for all”.

*“Inclusion is seen as a process of addressing and responding to the diversity of needs of all learners through increasing participation in learning, cultures and communities, and reducing exclusion within and from education. It involves changes and modifications in content, approaches, structures and strategies, with a common vision which covers all children of the appropriate age range and a conviction that it is the responsibility of the regular system to educate all children.”*

UNESCO (2005b)

Although the plethora of definitions, the underpinning idea is that inclusive education is a statement of everyone’s fundamental right to access education and not be excluded. Include people living in poverty, remote rural environments, slums, and conflict and refugee situations; girls and women; indigenous peoples; migrants; people from minority language groups; working and street children; those affected by HIV/AIDS and other health conditions; people with disabilities – of all ages. Inclusive education is about responding to diversity in all its forms and creating an education system to accommodate all human beings. However, inclusive education has been, and still is, widely associated with the inclusion of people with disabilities, and with the concept of

'special educational needs'. It can be argued that people with disabilities are the most universally excluded from education (Stubbs, 2008). For the purpose of our thesis we will only refer to inclusion regarding students with disabilities.

As shown, trend toward inclusion is taking a strong foothold around the world and there are several international demands reinforcing that the governments must eliminate legislative and constitutional barriers to inclusive education and must ensure that one school system is responsible for the education of all children. These concerns have become subject of increased attention and focus from researchers all over the world. European countries are taking into account those recommendations and Portugal doesn't remain aside of those educational paradigms shifts. In the public Law 46/1986, the Portuguese government refers that the aim of the special education was to recover and integrate individuals with special educational needs. We can observe the emphasis on the medical model at this time. However the movement towards inclusive education was clearly stated with the PL 319/1991 creating the conditions for everyone to have access to the regular education system. After the Salamanca Statement (UNESCO, 1994) the Portuguese Public Order 105/97 (reedited on the 10856/2005) regulated and set out the principles of a democratic and quality school and normalized the proper educational support for the educational success of all students with the special education teacher, one year later, the Public Order 7520/98 defined the specific support for students with hearing impairments. Recently the PL 3/2008 advocate the equality of opportunity and encourages improvements in the teaching quality, promoting and encouraging democratization school inclusion of all children and young people, although Correia (2008) points out some negatives aspects as it only includes children with permanent special educational needs, deviating from the guidelines of the Salamanca Statement (UNESCO, 1994).

In Portugal, new public policies require all students with disabilities to be included in regular school settings. In 1997, 75% of the Portuguese students with special education needs (SEN) already received their education in regular

schools according to Costa and Rodrigues (1999). In 2001, the percentage of pupils with SEN attending regular school was 93% (Ministry of Education, 2001). Recent data (Rodrigues & Nogueira, 2010) indicates that the percentage of pupils with special educational needs attending regular school is now more than 98%. These figures put Portugal in the group of European countries with highest rate of inclusion education of students with disabilities. While legal mandates declare that children with disabilities must be included in regular school settings, these mandates don't ensure that they will be accepted or treated fairly by their teachers or peers (Marks, 1997). Inclusion should increase children's learning opportunities and it needs to focus not only on current barriers to inclusion but also on issues such as attitudes, ethos and curricula. The changes that take place as school moves to inclusive setting also involve overcoming some potential obstacles such as existing attitudes and values, lack of understanding, lack of necessary skills, limited resources, and inappropriate organization (Winter & O'Raw, 2010). School is in fact a privileged space for inclusion however the existence of policies promoting inclusive philosophies is not by itself sufficient to guarantee the implementation of these policies in regular schools. Researchers, educators and others educational professionals' stakeholders suggest that attitudes have a significant influence on inclusion of students with disabilities in regular school settings. For this reason there is a growing support of literature on attitudes towards inclusion of people with disabilities in regular schools. The present theoretical framework will focus on perceptions of teachers and students towards inclusion, in a specific setting such as PE. Although the wide range of the special education needs in inclusive education, for the present thesis we will only take into consideration students with disabilities.

## **2.2. The role of attitudes**

The attitude construct is indispensable to social psychology, and is an essential variable in understanding human behavior (Fazio & Olson, 2003).

Attitudes are the greatest barrier, or the greatest asset, to the development of inclusive education (Vayrynen, 2000). This topic seeks to identify the role of attitudes in changing behaviors as well as to present two widely used attitude theories in relation to inclusive PE.

### **2.2.1. Defining attitude**

Attitude is probably the most distinctive and indispensable concept in contemporary social psychology (Tripp & Sherrill, 1991). One of the earliest conceptions refers that an attitude is not behavior, but the precondition of it, is the mental or neural state of readiness, organized through experience, exerting a directive or dynamic influence upon the individual's response to all objects and situations with which it is related (Allport, 1935). Attitude can be defined as readiness to respond to a psychological object with some degree of favorableness. Fishbein and Ajzen (1975) stated that attitude is a learned predisposition to respond in a consistently favorable or unfavorable manner with respect to a given object and almost twenty years after Eagly and Chaiken (1993) defined attitude as a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor.

There are a plethora of definitions but we can say that attitude is an evaluation of a psychological object. Historically, the most prominent framework for the study of attitudes has been the *Tripartite Model of Attitude* (Rosenberg & Hovland, 1960) attitude is an unobservable psychological construct which manifest in relevant beliefs, feelings and behavioral components (Eagly & Chaiken, 1993) and all three components must be present for an evaluation tendency to exist. Attitudes can form as a result of any one or combination of the three components and later conceptualizations advance the possibility that attitudes can form in multiple ways. The three key means of attitude formation involve cognitive, affective or behavioral processes. The cognitive component was defined as the beliefs and ideas a person has about some attitude object. The affective component was conceptualized as the emotional feelings one has

about the attitude object or one's like or dislike for the object. The behavioral component of an attitude was defined as one's action tendencies in regard to the object (Tripp & Sherrill, 1991). Those three components are interrelated because positive and complimentary beliefs are accompanied by liking and positive feelings, while uncomplimentary and negative beliefs are accompanied by dislike and negative feelings. These beliefs and feelings, in turn, represent a tendency to act.

According to Yuker (1976) most people will have acquired a set of beliefs based on things they have heard and upon specific experiences they have had with persons with disabilities and almost any beliefs are theoretically possible. Some persons may have many specific ideas about people with disabilities, others might have only a few general ideas, and some might have no beliefs at all. Beliefs, feelings, and action tendencies are learned. They result from a combination of what an individual learns from people who are important to him (such as parents, friends, and teachers), and what he learns from his own experiences. A person who has few contacts with people with disabilities will probably adopt the attitudes of the people he knows, likes, and respects. If a person has interacted with people with disabilities, the reactions to these interactions will modify the beliefs stemming from the teachings of significant others. Some kinds of interaction lead to positive beliefs, other kinds to negative beliefs.

Tripp and Sherrill (1991) described nine attitude theories of relevance to adapted PE. In the next topic two of them will be briefly describe since they are in the basis of the present thesis: the Theory of reasoned action (Ajzen & Fishbein, 1980) and the contact theory (Allport, 1954).

### **2.2.2. The Theory of reasoned action**

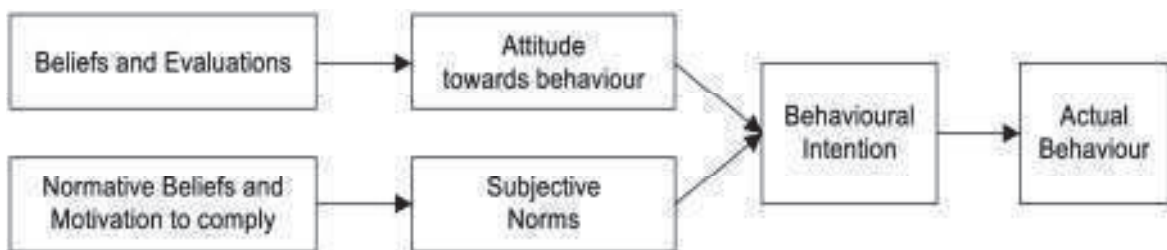
The TRA provides the framework to study attitudes toward behaviors, because it attempts to explain the determinants of an individual's decision to



enact a particular behavior (Ajzen, 1991). The present framework is cited by Ajzen in his site (<http://people.umass.edu/aizen/tpb.html>). The TRA is a special case of the TPB, the only difference between the two theories is that the TPB includes perceived behavioral control as an additional determinant of intentions and behavior, In the development of the TRA it was assumed that people have volitional control over the behavior of interest (and that they realize that they are capable of performing the behavior if they so desire). Under these conditions, perceived behavioral control becomes irrelevant and the theory of planned behavior reduces to the theory of reasoned action.

Ajzen and Fishbein (1980) theory defines the links between beliefs, attitudes, norms, intentions, and behaviors of individuals. According to this model, a person’s behavior is determined by its behavioral intention to perform it. This intention is itself determined by the person’s attitudes and his subjective norms towards the behavior, i.e. human action is guided by two different sources: beliefs about the likely outcomes of the behavior and the evaluations of these outcomes (behavioral beliefs), beliefs about the normative expectations of others and motivation to comply with these expectations (normative beliefs). Behavioral beliefs produce a favorable or unfavorable attitude toward the behavior; normative beliefs result in perceived social pressure or subjective norm. In combination, attitude toward the behavior and subjective norm lead to the formation of a behavioral intention. As a general rule, the more favorable the attitude and subjective norm, the stronger should be the person’s intention to perform the behavior in question. Intention is thus assumed to be the immediate antecedent of behavior. The following figure is a schematic representation of the TRA.

Figure 1 – Theory of reasoned action (Ajzen & Fishbein, 1980)



The theoretical constructs shown in the above diagram are hypothetical or latent variables. They cannot be directly observed but must instead be inferred from observable responses. This is as true of actual behavior as it is of the other constructs. The TRA suggests that a person's behavior is determined by his/her intention to perform the behavior and that this intention is, in turn, a function of his/her attitude toward the behavior and his/her subjective norm. An attitude toward a behavior is the degree to which performance of the behavior is positively or negatively valued and it is influenced by a combination of two related factors: the beliefs about the outcome of the behavior and the evaluation of the potential outcome.

The best predictor of behavior is intention. Intention is an indication of a person's readiness to perform a given behavior, and it is considered to be the immediate antecedent of behavior. According to TRA, behavior (e.g., including students with disabilities) is predicted by intention. Behavior is the manifest, observable response in a given situation with respect to a given target. Single behavioral observations can be aggregated across contexts and times to produce a more broadly representative measure of behavior.

The TRA posits that behavioral beliefs and normative beliefs are predictors of one's intention to perform specific behavior. The most frequently studied component of both theories is behavioral beliefs, because this component is used to infer attitudes toward the intention to perform a specific behavior, being considered the most important factor of a person's behavior in this theory (Ajzen & Fishbein, 1977).

In sum, the aim of TRA is to explain volitional behaviors. Behavior is preceded by intention and both attitudes and norms predict intention. Depending on the behavior, attitudes or norms may have more influence on intention, for instance if it is personally or socially relevant behavior or a highly observable or not visible behavior. The TRA predicts that a person will adopt, maintain or change a behavior if they believe a) the behavior will benefit them; b) the behavior is socially desirable; c) there is social pressure to conform to the behavior and d) the opinion of significant others matters to them.

The PEATID-III used in the present thesis is driven by this theoretical foundation as said earlier. This survey is the first in adapted physical activity to use a theory for construction and use (Folsom-Meek & Rizzo, 2002). With the PEATID III, attitude toward the behavior is inferred from the respondent's agreement with 12 belief statements about the behavior (teaching students with disabilities in the regular PE class).

### **2.2.2. The Contact Theory**

Contact theory or intergroup contact theory (Allport, 1954) is an interactionist sociological theory on how to minimize stereotyping and discrimination. It posits that if people of different races, or ethnicities, or religion interact with one another on an equal level then less stereotyping occurs among them. For this matter prejudice and discrimination toward a minority group will be reduced when contact between individuals is designed and executed so that four conditions are met: (a) parties involved must share equal status; (b) the community must support and sanction the change; (c) individuals must be in pursuit of common objectives; and (d) the association must be deep, genuine, and intimate (Allport, 1954). He also identified that the nature of the contact will have differing effects, with a complex array of variables that will influence the impact of the contact.

Yuker (1976) specified seven characteristics of the contact situation that appear to account for most of the specific effects that result from the interaction, thus the most positive attitudes result from contact between individuals with and without disabilities with the following contact variables (a) frequency of the contact, (b) equal status basis, (c) type of interaction - friendly, cooperative, and aimed at a common (d) intimacy - direct and personal, (e) societal and institutional norms – when laws and regulations view integration of disabled persons with favor has positive effects, (f) setting – influence the norms that prevail, the type of interaction that occurs, and the amount of intimacy that

occurs, and (g) perceived normality - emphasizes the normality of the person with disabilities.

It should also be borne in mind that contact between a minority group member and a majority group member may not automatically be positive and to reduce stereotypes and, therefore, prejudice and discrimination, Allport (1954) recommended that contact and acquaintance programs should "lead to a sense of equality in social status, should occur in ordinary purposeful pursuits, avoid artificiality, and if possible enjoy the sanction of the community in which they occur" (p. 489). To heighten the intimacy of contacts, Allport strongly recommended the use of intercultural education and cultural pluralism approaches. He believed that structured direct experience should be supplemented with information designed to correct stereotypes and facilitate the formation of positive beliefs (Slininger, Sherrill, & Jankowski, 2000).

Sherrill (2004) believes that contact theory should stand alone as an independent intervention category rather than be grouped into some presumably broader social psychology intervention category, now stands as a general social psychological theory and not as a theory designed simply for the special case of racial and ethnic contact. This is the theory behind most cooperative learning activities in schools (Pettigrew & Tropp, 2006).

Although contact between people with and without disability is one of the most commonly cited methods to elicit attitude change, Donaldson (1980) stresses that for positive shifts in attitude to take place, structured experiences rather than unstructured social situations are more likely to be effective and with participants to be of an equal status. Contact theory considers equal-status relationships as important and asserts that direct contact between individuals with differences creates positive attitudes when such interactions are frequent, pleasant, meaningful, and of long duration. The direction of attitude change depends mostly on the conditions under which contact has taken place; favorable conditions tend to create positive attitude shifts, while unfavorable

conditions tend to create negative attitude shifts. That is, conditions that help foster favorable attitudes provide structured contacts when (a) there is meaningful equal-status interaction, (b) the social environment encourages contact, (c) the contact is pleasant and rewarding (d) interactive experiences are encouraged and (e) contact is friendly, cooperative, and focuses on common goals. Johnson and Johnson (1986, In Tripp & Sherrill, 1991) reported that cooperative activities, rather than competitive ones, were effective in promoting positive interactions and good attitudes. These conditions represent contact theory structured contact variables. In contrast, contact theory posits that direct contact does not necessarily lead to favorable attitudes, which can be attributed to poor planning and an inadequately structured or nonstructured setting (Allport, 1954; Slininger et al., 2000).

Findings from a meta-analysis study about the intergroup contact theory (Pettigrew & Tropp, 2006) irrefutably show that intergroup contact can promote reductions in intergroup prejudice and that the generalization of contact's effects appears to be far broader than what many past commentators have thought. Not only do attitudes become more favorable, but also do attitudes toward the entire outgroup, outgroup members in other situations, and even outgroups not involved in the contact. This result enhances the potential of intergroup contact to be a practical, applied means of improving intergroup relations. The meta-analysis also posits that Allport's conditions are not indispensable for intergroup contact to achieve positive outcomes and they should not be regarded as necessary for producing positive contact outcomes, as researchers have often assumed in the past. Rather, they can act as facilitating conditions that enhance the tendency for positive contact outcomes to arise (Pettigrew & Tropp, 2006). The contact theory research provides evidence that the environment and peer interaction are important factors to be considered in integrated physical activity settings and research is needed on the types of contact that occur during physical activity in order to determine conditions that contribute to positive attitudes toward individuals with disabling conditions (Tripp & Sherrill, 1991).

Through the regular school setting, teachers and students are increasingly having greater exposure to disability, and therefore the role of interactions between people with and without disability have received attention from researchers. The vital role of attitudes on inclusion is so evident that several international stakeholders have been written extensive literature review and forums underpinning the development of the inclusive education framework (e.g. European Agency for Development in Special Needs Education; Task Force on Inclusive Education, led by UNICEF and UNESCO; International Disability Alliance; UNESCO's Guidelines for Inclusion). Also in some countries such as Ireland, improving attitudes to people with disabilities is a key priority of the National Council for Special Education and National Disability Authority since inclusive education brings a great opportunity to change attitudes, cultures and open minds about the benefits of living in an inclusive society (UNICEF & International Disability Alliance, 2012).

The next topic aims to describe the literature in relation to attitudes toward inclusion in PE, with specific reference to physical educators and students' perceptions regarding the inclusion of students with disabilities in PE classes.

### **2.3. Attitudes toward inclusion in PE**

Attitudinal barriers to inclusion are arguably greater than barriers posed by material resources (Save the Children UK, 2008) and an area of international interest is being conducted over the past years, which links attitudes towards inclusion in PE. In relation to a practical subject as PE, researches in this field are intended to contribute to the consolidation of an inclusive process of success, identifying problems and assess the parameters that contribute to more positive attitudes. These studies are important tools for the development of future interventions in this area, providing important information about inclusion of students with disabilities in PE. Research highlights some key factors for a

successful inclusive education, among them are teacher's and student's attitudes towards peers with disabilities in PE.

### **2.3.1 PE Teachers attitudes towards inclusion**

According to UNESCO, a major factor towards the inclusion of students with disabilities in the education system is addressing the attitudes and skills of teachers (<http://www.iddc.org.uk/joomla/index.php/inclusive-education>) and the real key resource for successful inclusion lies inside the teacher's head. According to a literature review (Stubbs, 2008) inclusive education processes can help teachers to reach new understandings in inclusive education and teachers' attitudes towards students with disabilities have a significant impact on the educational settings. As international policies demand for new pedagogical approaches, schools must prepare themselves for the challenges of inclusion, being the teacher's responsibility to ensure that children with disabilities are accepted and challenged as learners (Marks, 1997). In the particular case of physical educators they should become proactive agents of change so that programs remain consistent with the intent of inclusion mandates (Kozub & Lienert, 2003). General PE (PE) is a subject where inclusion can take a vital role in the success of inclusion of children with disabilities. As a result, inclusion in PE has become an area of international interest (Block & Obrusnikova, 2007). Many professionals believe that students with disabilities must be included in all school curricula, including PE (e.g. Block, 1995; Duchane & French, 1998). The importance of attitude as a topic for research and training teachers in Adapted PE has been consistently emphasized. Social psychology and attitudes have been proposed as one of seven groups that comprise the knowledge base of Adapted PE (Tripp & Sherrill, 1991). The inclusion of students with disabilities in PE depends on many factors, but teachers' favorable attitudes is one of the key factors needed for successful inclusion (Conatser, Block, & Lepore, 2000; Downs & Williams, 1994; Hodge, Davis, Woodard, & Sherril, 2002; Palla & Mauerberg-deCastro, 2004, Patrick, 1987; Rizzo & Vispoel, 1991, 1992; Sherrill, 2004; Tripp &

Sherrill, 1991). Teachers are authority figures who hold the power to facilitate acceptance or support rejection of children with disabilities and they affect the acceptance of children by the attitudes they model in the classroom (Marks, 1997). Favorable attitudes of teachers and students are seen as key factors for a successful inclusion (Conatser, Block & Lepore, 2000) and therefore of great interest for research. According to Block and Obrusnikova (2007), the key to achieve positive results in inclusion is not only placing pupils with special needs in PE, but also teacher's attitude in promoting positive social interactions and developing non-competitive activities of cooperation, as well as promoting positive attitudes in pupils without disabilities.

There is widespread evidence that the inclusion of students with disabilities in PE depends on many factors, but teachers' favorable attitudes is one of the key factors needed for successful inclusion (Conatser, Block, & Lepore, 2000; Downs & Williams, 1994; Hodge et al ., 2002; Palla & Mauerberg-deCastro, 2004, Patrick, 1987; Rizzo, 1985; Vispoel & Rizzo, 1991; Sherrill, 2004; Tripp & Sherrill, 1991). The PE teacher is the main facilitator in the motor skills and sports teaching - learning process for students with and without disabilities, and in promoting successful learning for all students in their classes (Palla & Mauerberg-deCastro, 2004). It should also be the teacher, to transmit values, norms, ways of thinking and behavior patterns to live in society (Palla & Mauerberg-deCastro, 2004). As such, attitudes of PE teachers are critical to successful inclusion.

Schools can actively engage in challenging negative societal attitudes to disability, and teachers' attitudes towards students with disabilities have a significant impact on their educational experience (Stubbs, 2008). Several factors can affect teacher's attitudes toward teaching of students with disabilities in regular school, such as beliefs, intentions, feelings, fears, prejudices and tendencies to act on behalf of past experiences (Fishbein, 1967). According to Theodorakis, Bagiatis and Goudas (1995), the greater the number of requirements that a teacher has, and the fewer obstacles or



impediments they foresee, the better their perceived competence. Thus, the better the capability of PE teachers to work with students with disabilities the more positive their attitudes and self-efficacy toward teaching students with disabilities will be.

### **2.3.1.1 Attributes contributing for PE teacher's attitudes toward inclusion**

The literature points out significant variables affecting attitudes towards teaching students with disabilities in PE classes (e.g. Avramidis & Norwich, 2002, Rizzo & Kirkendall, 1995; Obrusnikova & Block, 2007; Rizzo, 1985). Variables related to students with a disability, such as grade level and type of disability can influence teacher's attitudes. Students with mild disabilities are viewed more favorably compared to students with more severe disabilities (Duchane & French, 1998; Rizzo, 1985; Rizzo & Vispoel, 1991; Tripp, 1988), although other authors have concluded otherwise (Downs & Williams, 1994; Zannandrea & Rizzo, 1998). The second area is teacher-related variables, including perceived competence and perception of experience in teaching students with disabilities, as well as academic courses in Special Education or Adapted PE (Kowalski & Rizzo, 1996; Rizzo & Kirkendall, 1995; Rizzo & Vispoel, 1991, 1992; Zannandrea & Rizzo, 1998). Attitudes of PE teachers are more likely to be favorable towards working with students with disabilities in teachers with higher pedagogical preparation (Rizzo & Vispoel, 1991), higher academic training in Adapted PE and Special Education (Block & Rizzo, 1995, Kowalski & Rizzo, 1996; Rizzo & Vispoel, 1991, 1992; Theodorakis, Bagiatis & Goudas, 1995; Tripp, French & Sherrill, 1995) and with more experience teaching students with disabilities (Avramidis & Norwich, 2002; Conatser, Block, & Lepore, 2000; Block & Rizzo, 1995; Folsom-Meek et al. 1999; Kowalski & Rizzo, 1996; Mauerberg-deCastro & Palla, 2004; Pinheiro, 2001; Rizzo & Vispoel, 1991, 1992; Tripp, French & Sherrill, 1995). According to Folsom-Meek et al. (1999), the experience with individuals with disabilities, both qualitatively and quantitatively, is an important factor in the development of attitudes.

However, there is a number of other studies that support the lack of correlation between attitude and experience teaching students with disabilities (e.g. Downs & Williams, 1994; Rizzo & Wright, 1988; Zanandrea & Rizzo, 1998). These studies found that teachers who had gone through experiences with people with disabilities had less favorable attitudes than the other fellows. With regard to academic training, the study carried by Kowalski and Rizzo (1996), found that coursework related to APE was a significant predictor of favorable attitudes. Hodge et al. (2002) recognized that specific preparation is of fundamental importance in the formation of favorable attitudes towards teaching students with disabilities, fostering the attitudes of teachers towards the education of students with disabilities. There is also a consensus that the training of physical educators should focus on the development of intentions, beliefs and positive attitudes towards inclusion of students with disabilities (Kowalski & Rizzo, 1996).

With regard to perceived competence, some authors suggest that the more teachers feel competent in teaching students with disability, the more favorable are their attitudes (Hodge et al., 2002; Block & Rizzo, 1995; Rizzo & Vispoel, 1991; Zanandrea & Rizzo, 1998). Kozub and Lienert (2003), indicate that perceived competence is the variable most often mentioned to explain and predict the attitudes of PE teachers towards disability. The perceived competence of teachers, the coursework / training in Adapted PE and practice-related experience appear to be the best predictors of favorable attitudes in teaching students with disabilities (Block & Rizzo, 1995; Kowalski & Rizzo, 1996; Rizzo & Kirkendall, 1995; Rizzo & Vispoel, 1991, 1992). According to Downs and Williams (1994), the quality of experience affect the perceived competence in teaching students with disabilities, i.e. the higher the quality of experience teaching students with disabilities, the greater the perceived competence is (Rizzo & Vispoel, 1991). Thus, the lack of preparation can lead to feelings of incompetence, which in turn lead to negative attitudes of PE teachers (Obrusnikova & Block, 2007). With regard to academic preparation and years of education of students with disabilities, they are positively correlated with perceived competence. That is, the greater the preparation and

experience teaching students with disabilities, the greater the perceived competence is, which leads to more favorable attitudes (Rizzo & Kirkendall, 1995; Rizzo & Vispoel, 1991). Vispoel and Rizzo (1992) report in their study that the teachers who have the opportunity to learn more about teaching students with disabilities are more likely to develop more favorable attitudes than teachers without any training. Rizzo and Vispoel (1991) infer that attitudes have a positive correlation with teaching experience with students with disabilities. However, some studies found a negative correlation with years of experience (Rizzo, 1985; Rizzo & Vispoel, 1991), showing that teachers with less teaching experience are considered more enthusiastic about inclusion than their older colleagues. This finding suggests that the quality or nature of experience in teaching is more important in fostering positive attitudes in teaching students with disabilities, rather than merely teaching experience (Rizzo & Vispoel, 1991).

Other PE teachers' variables, such as gender and age, have shown less consistency with regard to attitudes (Avramidis & Norwich, 2002; Kowalski & Rizzo, 1996; Rizzo & Kirkendall, 1995; Zanandrea & Rizzo, 1998). Some studies have concluded that female teachers have more favorable attitudes towards teaching students with disabilities than male teachers (Aloia et al., 1980; Conatser, Block, & Lepore, 2000; Downs & Williams, 1994; Folsom-Meek et al. 1999; Hutzler, Zach & Gafni, 2005), although other studies are inconsistent, as Hodge et al. (2002), Rizzo and Vispoel (1991), Rizzo and Wright (1988) and Patrick (1987) by failing to disclose significant differences between genders (Kowalski & Rizzo, 1996; Rizzo & Vispoel, 1991; Rizzo & Kirkendall, 1995; Serrano, 1998). Kowalski and Rizzo (1996) and Pinheiro (2001) showed that despite not prove statistically significant differences in attitude among teachers in males and females, however female teachers showed a more favorable attitude regarding inclusion. As referred by Kowalski and Rizzo (1996), this variable shows some inconsistency, since the results obtained by various researchers, with regard to the influence of gender on teachers' attitudes to disability have proved to be inconclusive.

Age has been negatively correlated with attitudes toward teaching students with disabilities, as research concluded that older teachers have less favorable attitudes than younger people (Kowalski and Rizzo, 1996; Rizzo and Kirkendall, 1995; Conatser, Block, & Lepore, 2000; Rizzo & Vispoel, 1991, 1992). Identical results were obtained by different authors (see Avramidis & Norwich, 2002 for an overview of studies on this topic), showing that younger teachers have more favorable attitudes towards teaching students with disabilities. In a former study in the Portuguese population on attitudes of teachers towards the inclusion of students with disabilities, Serrano (1998) found that the age group with more favorable attitudes is between 30 and 35 years. However, other research studies carried out by Patrick (1987), Pinheiro (2001) and Rizzo and Wright (1988), found no significant correlation between attitude and age.

Regarding the grade level taught, it appears that as this increases, the attitudes of PE teachers tend to become less favorable (Rizzo, 1985; Rizzo & Vispoel, 1991). Studies showed that teachers of primary and secondary school level have different perspectives regarding inclusion and thus the primary school teachers reveal a more positive attitude to inclusion, unlike their colleagues in secondary education (Avramidis & Norwich, 2002). Salvia and Mudson (1986, in Avramidis & Norwich, 2002) report that as children grow, the attitudes of teachers towards inclusion altered negatively, and this is due to the fact that teachers of older students be concerned mostly with the materials and less on the differences between children, and the presence of students with disabilities is a problem from the standpoint of managing the activities of the class. Thus, Avramidis and Norwich (2002) conclude that the value system of primary schools is more inclusive, while the secondary is more based on programs, in different ways influenced the attitudes of teachers.

The third and fourth area are, respectively, the attitudes of future teachers and changing attitudes (Kowalski & Rizzo, 1996; Rizzo & Kirkendall, 1995). Rizzo & Vispoel (1992), stated that a planned and systematic intervention, using a multilateral approach (information, direct contact with

people with disabilities, conviction and indirect experiences) has a positive effect on attitudes towards teaching students with disabilities, which suggests that the educators who have the opportunity to learn more about the education of students with disabilities are more likely to develop positive attitudes. Therefore, teachers who have positive attitudes should be more successful in inclusion of students with disabilities in regular classes (Rizzo & Vispoel, 1992).

Avramidis and Norwich (2002) conclude that teachers who accept responsibility for teaching a wide diversity of students (recognizing the importance of the development of students) and who feel confident in their management skills and education (as a result of their practice), can easily implement inclusive programs. Rizzo (1984) also notes that the curriculum of PE can, by itself, influence the attitudes of teachers towards the education of students with disabilities. Thus, the author suggests the development and implementation of an alternative curriculum that can be adapted to PE, according to the varied needs of students with disabilities. It is crucial that PE teachers are aware of their attitudes toward children with disabilities and the effects that the verbal and nonverbal communications have in social acceptance of these children in their classes (Santomier, 1985). The negative attitudes regarding students with disabilities included in regular classes, or against the inclusion process, may be typical of PE teachers who feel that inclusion is a charge (Santomier, 1985). Santomier and colleagues (1993) noted that a majority of teachers consider their own teaching skills, education and equipment and materials available as inadequate to the task of instructing children in integrated PE classes. This result suggests that many of those who teach in an integrated environment are not prepared to teach in that environment. This situation is likely to generate negative opinions and attitudes of teachers, on the level of social acceptance of children with disabilities in inclusive settings (Santomier, 1985).

According to Rodrigues (2003) there are several reasons why we still encounter problems in PE inclusion, beginning immediately with teachers' perceptions towards inclusion of students with special needs, depending on

some attributes such as gender, previous experience, knowledge of the student's impairment, type of student's disability. Another issue is related with initial PE teachers training in APE. It appears that the initial training of Portuguese PE teachers in this area is often non-existent or so little directed to solving practical problems. Moreover, there are also limitations concerning support at school level, while there are very few special education teachers with physical education training, which hinders the existence of a genuine rear of competence for professionals. Another aspect that may obstruct the successful inclusion in PE is the culture of sport competitiveness, dominant in the curriculum which becomes an additional obstacle to the inclusion of students who are immediately seen as less able to take a good performance in competition (Rodrigues, 2003). Sport when used without a pedagogical perspective is not conducive to extended cooperation, does not appreciate the difference, promotes uniformity, excellence of performance and simultaneously generates feelings of satisfaction and frustration (Rodrigues, 2003). This difficulty that PE teachers have in creating positive and motivating alternatives for pupils with difficulties often leads to exclusion in activities.

In a review of the literature in Inclusion in Physical Education, Block and Obrusnikova (2007) refer that the key to achieve positive results is not only placing pupils with special needs in PE, but also the attitude of teachers in promoting positive social interactions and develop non-competitive activities of cooperation, thus promoting positive attitudes of pupils without disabilities. Academic work from Block (2007) extends this argument by telling that PE offers opportunities for social acceptance and interaction between students with and without disabilities because of its unique instructional setting. These arguments will be extended in the next topic.

### **2.3.2. Students attitudes towards inclusion in PE classes**

According to Stubbs (2008) students are the primary stakeholders in inclusive education, yet so often their voices are not heard, not asked for, not welcomed. Learners are rarely directly involved in planning, monitoring or directing their own education. More examples are needed that demonstrate how all learners can be facilitated to contribute their knowledge, skills and perspectives on inclusive education. It is recognized that both attitudes and intentions of classmates without disabilities, as documented by numerous studies in PE play critical role in the successful inclusion of students with disabilities (Block & Obrusnikova, 2007). In a recent review of literature (O'Brien et al, 2009) it is outlined that successful inclusion in physical education can take place effectively and moreover researches revealed that inclusion can be implemented without any negative impact on students with and without disabilities. Block extended this point by suggesting PE offers opportunities for social acceptance and interaction between students with and without disabilities that are not available in other places in the school due to the unique instructional setting that often pairs students together in small groups or teams to work together for a common goal. One of the difficult barriers encountered by children with disabilities is low level of acceptance by their peers as negative attitudes and low levels of acceptance result in exclusion in activities, including in PE (Frese & Yun, 2007). It is widely recognized that social acceptance by students without disabilities is critical to successful inclusion of children with disabilities in general education settings (Block & Obrusnikova, 2007; Hutzler, 2003); however, reported experiences of children with disabilities show that social acceptance and interactions with peers without disabilities in general physical education (PE) are often limited (Goodwin & Watkinson, 2000). With increased acceptance more students with disabilities may be welcomed in PE and thus allow them to be physically active each week. Also, if students without disabilities are able to retain positive feelings of acceptance for an extended period of time, public school acceptance may likely transfer to community awareness and acceptance in adulthood as well. This would allow individuals

with disabilities to be included in public facilities and activities, continuing to be physically active throughout their lifetime.

Physical integration by itself may not impact on children without disabilities' acceptance levels due to students without disabilities still lack understanding and awareness about the capabilities of their peers with disabilities. To increase social awareness, understanding, and acceptance toward disability, awareness programs should focus on "abilities" rather than limitations of individuals with disabilities (Frese & Yun, 2007).

#### **2.4. Influence of an awareness program on attitudes**

According to Frese and Yun (2007), PE is an effective academic area to promote abilities over disabilities and help students to understand one another and their capabilities, and a disability awareness unit could allow students with disabilities to show others that they are more alike than different in terms of their skills and interests in sports. Creating opportunities for students to recreate together is very important, as well as to enjoy each other during leisure, to depend on each other, to respect strengths and weaknesses, and to demystify differences, may all be the experiences that effectively influence attitudes toward one another (Hamilton & Anderson, 1983; Sable, 1995).

Interventions that have been shown to influence attitude formation include direct contact; legislation; supporting participation of people with disabilities in all spheres; mainstreaming and dismantling structures of segregation and discrimination; political organization and widespread debate and discussion in academic and public domains around disability issues. Each of these "interventions" has a role to play in generating positive attitudes to disability in all areas of life including those of an interpersonal nature (Stubbs, 2008) and it is important to understand what each intervention can bring to change behavior and attitudes and how interventions interlink. Marks (1997) refers that deliberate and comprehensive approaches that directly address



prejudice and discrimination are necessary in today's schools and children can be sensitized to the media's presentation of persons with disabilities and may be taught to look for physical and attitudinal barriers at school and in their communities.

According to Donaldson (1980) methods of disability awareness programs include: (a) direct or indirect (media) contact with or exposure to persons with disabilities, (b) information about disabilities, (c) persuasive messages, (d) analysis of the dynamics of prejudice, (e) disability simulation, and (f) group discussion. A similar suggestion comes from Pivik and colleagues (2002), and reinforce that one of the most effective ways to impart knowledge about the realities for children with disabilities is to try to simulate that disability experience, providing an opportunity where peers without a disability literally experiences different situations, viewpoints, perceptions, and interactions from the perspective of a child with a disability.

There is some volume of evidence (e.g. Megginson & Lavay, 2001) suggesting that recreational and sport activities provide students with opportunities to share mutually enjoyable activities in PE, therefore allowing similarities among students to be highlighted and that including disability sport in PE curriculum, can also facilitate self-worth and confidence through physical skill competence, socialization, lifetime leisure skills, and healthy lifestyle choices on individuals with disabilities (see Block & Obrusnikova, 2007, for a review of research on inclusion in PE).

The success of inclusion depends on a great level on the quality of Physical Education programs and on the extent to meet individual differences (Sherrill, 2004). Rodrigues (2003) refers that the focus of inclusion in General Physical Education (PE) has been insufficiently treated in Portugal and that PE may actually be a key area to make education more inclusive and may even be a privileged field of experimentation, innovation and improving the teaching quality in regular schools. Inclusive education can benefit from the methodological proposals of PE, using the body, movement, play, expression and sport as opportunities to celebrate the difference and to provide students

with experiences that enhance cooperation and solidarity. Although, some of the barriers encountered by students with disabilities are social acceptance and interaction by their peers, studies indicate that negative attitudes and low levels of acceptance can result in exclusion in activities, including PE (e.g. Frese & Yun 2007; Goodwin & Watkinson 2000). Physical integration by itself may not impact on children without disabilities' acceptance levels due to students without disabilities still lack understanding and awareness about the capabilities of their peers with disabilities. To increase social awareness, understanding, and acceptance toward disability, awareness programs should focus on "abilities" rather than limitations of individuals with disabilities (Frese & Yun 2007). Disability sports can be used as disability awareness activities in physical education curricula, emphasizing the abilities of individuals with disabilities. Research indicates that a disability sport awareness unit could positively impact on students without disabilities' levels of general acceptance and knowledge of people with disabilities (e.g. Panagiotou et al. 2008; Van Biesen, Busciglio, & Vanlandewijck 2006).

Research on pupils' attitudes towards inclusion of students with disabilities in PE has become an area of international interest, since this perception may be crucial for a successful inclusion. There has been interest in the United States of America regarding attitudes children without disabilities towards inclusion (e.g. Block & Obrusnikova 2007; Obrusnikova, Válková & Block 2003; Karlyvas & Reid 2003; Slininger, Sherrill & Jankowski 2000; Block 1995; Vogler & Block 1994; Block & Zeman 1996; Tripp et al. 1995, Loois & Loois 1997). Although the profusion of studies few have examined the effectiveness of the implementation of disability awareness programs in changing attitudes of children without disabilities toward inclusion of peers with disabilities in PE. In Europe research on the effects of a disability awareness program has been studies in countries such as Greece (Panagiotou et al. 2008), Czech Republic (Liu et al, 2010; Jesina et al, 2006), Israel (Hutzler & Levi 2008), Belgium (Van Biesen et al, 2006). The survey CAIPE-R (Block 1995) seemed to be the survey most used in Europe to measure the impact of

an inclusive intervention in attitudes changing of students without disabilities towards inclusion in PE.

For example, Panagiotou and colleagues (2008) examined the effect of the “Paralympic School Day” (PSD) program on the attitudes of 5th and 6th grade Greek students without disabilities and the effect of gender differences on the inclusion of children with disabilities in PE. The 178 children were divided into two groups, (an experimental n=86 and a control group n=92). The experimental group received the PSD program, aimed at creating awareness and understanding of people with disabilities. Results showed significant differences on the experimental group in general attitudes. They refer that the success and development of the Paralympic Movement have created the need for an educational area in PE, and including Paralympic ideas in PE curriculum could be an effective pedagogical method to create awareness and understanding toward persons with disabilities, as acquiring an attitude of acceptance and appreciation of individual differences is a vital competence in PE curriculum (Panagiotou et al 2008). The research on this topic uses the Paralympic School Day. This is an IPC educational programme that aims to create awareness and understanding in schools about persons with a disability and contains a set of activities and background information, which can be used to educate children and youth about Paralympic sport, individual differences and disability issues. Disability awareness is something that can be included in lesson plans throughout the year. The IPC would like to encourage teachers to participate in the Paralympic School Day programme, and thereby joining schools worldwide to foster awareness and positive attitudes in your students towards people with a disability and to work for the full integration of students with a disability in the classroom. (<http://www.paralympic.org/TheIPC/WWD/ParalympicSchoolDay>). In the present research the author preferred to introduce these activities in two PE lessons since it is our opinion that the intervention can happen within the lesson content and therefore will not only be presented once.



## **CHAPTER III – METHODS**



## CHAPTER III – METHODS

This chapter focuses on the research methodology used to fulfill the purposes of the present study. This section briefly describes the procedures used to conduct the study, including the description of the participants and how they were selected for inclusion in this study; research setting and research design. Also instrumentation and analysis procedures will be presented.

### 3.1. Research design

A multi-strategy research approach (Bryman, 2004, 2006) with both quantitative and qualitative analysis was used to assess perceptions of teachers towards inclusion of students with disabilities in PE. The qualitative data were collected through one focus group with semi-structured interview for PE teachers. The quantitative data was collected once for PE teachers and a pre and posttest design was used to appraise the impact of the awareness program on students without disabilities.

#### *Why use a multi-strategy research approach?*

Based on the development of research methodology and perceived legitimacy of both quantitative and qualitative research, researchers in social and human sciences increasingly adapt the mixed methods approaches which employ strategies to collect and analyze both qualitative and quantitative data (Creswell, 2005). Similarly, Bryman (2006) refer that research strongly suggests that there is substantial value in examining both the rationales that are given for combining quantitative and qualitative research and the ways in which they are combined in practice. According to Creswell, Plano Clark, Gutmann & Hanson (2003) this form of research is more than simply collecting both quantitative and qualitative data; it indicates that data will be integrated, related, or mixed at some stage of the research process. As the authors refer, the underlying logic

of mixing is that neither quantitative nor qualitative methods are sufficient in themselves to capture the trends and details of the situation. When used in combination, both quantitative and qualitative data yield a more complete analysis, and they complement each other. As noted by Hanson, Creswell, J. W., Plano Clark, Petska and Creswell, J. D. (2005) using both forms of data, allows researchers to simultaneously generalize results from a sample to a population and to gain a deeper understanding of the phenomenon of interest. In our case, in particular, we have introduced the mixed method approach to evaluate teacher's perceptions towards inclusion of students with disabilities in PE because the PEATIDIII did not reveal to be a valid and psychometrically sound scale for measuring PE teachers' attitudes towards inclusion in their PE classes. It is our opinion that mixed methods approach brings together the benefits of both qualitative and quantitative approaches to this particular research. The present research questions were regarding PE teacher's perceptions and how their perceptions affect the inclusion in PE. While some questions might be addressed quantitatively, the qualitative method is proper to address teacher's concerns and practical issues about the implementation of inclusion. Furthermore, the qualitative method may provide different perspectives and deepening the quantitative method results. As an exploratory research in our country, it is important to approach this phenomenon under inquiry from diverse angles and to integrate diverse explanation resulting from multi-strategy research.

We are aware that this approach has some difficulties, but as reminded by Hanson and his collaborators (2005) "despite numerous challenges and obstacles, it has emerged as a viable alternative to purely quantitative or qualitative methods and designs. With studies available in the literature to serve as models (...) counseling researchers and educators may be on the verge of a new generation of thinking about method and methodology." As an exploratory approach it is our aim to stimulate additional interest and future research considering the mixed methods design.



### **3.2. Participants**

Global sample included 1101 participants recruited from Portuguese schools. All schools were recently inclusive schools, where students with different types of disability such as physical or mild intellectual disability attended pre-selected regular classes in an inclusive environment.

Participants were 413 physical educators, age ranging from 21 to 58 years old ( $M=32.43$ ;  $SD=9.01$ ), 253 male ( $M=33.00$ ;  $SD=8.92$ ) and 160 female ( $M=31.53$ ;  $SD=8.12$ ). For the qualitative study participants were five PE teachers, four male and one female, ages 25 to 32 years ( $M=27.60$ ;  $SD=2.70$ ).

Student participants were 683 middle school pupils without disabilities ( $n=316$  females and  $n=367$  males, between 11 and 16 years ( $M=13.31$ ;  $SD=1.10$ )). For the intervention study, participants were 509 students without disabilities (235 females and 274 males, between 11 and 16 years,  $M=13.32$ ;  $SD= 1.11$ ).

### **3.3. Quantitative method**

One of the aims of the present thesis was to test validity and reliability of the Portuguese version of the most used surveys regarding attitudes towards inclusion in PE: the CAIPE-R (Block, 1995) and the PEATID-III (Rizzo, 1993). Thus, firstly and to focus on the psychometric properties of the instruments which were not fully tested, quantitative data was collected. The second step and since that only the CAIPE-R was proved to be a valid and reliable instrument for the Portuguese sample, a pre and posttest design was used to appraise the impact of an awareness program on students' attitudes towards inclusion in PE.

#### **3.3.1. Instrumentation**

In order to assess participants' attitudes towards inclusion in PE two of the most widely used surveys were used.

### **3.3.1.1. Children's Attitudes towards Integrated Physical Education - Revised - CAIPE-R (Block, 1995)**

The CAIPE-R (Block, 1995) consists of (a) a description of a hypothetical student with a disability presented by a written vignette, (b) numerous questions related to students' demographics and experience being with individuals with disabilities (initial survey), (c) six or seven statements about including a student with a disability in PE (general attitude subscale), and (d) five to seven optional statements about modifying rules of sports in PE (sport-specific attitude subscale). Students respond to each statement using a 4-point Likert scale (4 = *yes*, 3 = *probably yes*, 2 = *probably no*, and 1 = *no*). The six general attitude statements focus on beliefs toward the inclusion of students with disabilities in regular PE. Similarly, the five sport specific statements focus on beliefs toward modifications to group games. By focusing solely on attitudes toward inclusion in PE, the CAIPE-R is ideally suited for regular and adapted physical educators who are concerned with the impact inclusion in PE has on students without disabilities. In addition, the CAIPE-R could be used by researchers interested in studying and understanding the influence of such factors as type and severity of disability, specific training of peers without disabilities, types of contact (e.g., peer tutor, friend, classmate) gender and age (Block, 1995).

The CAIPE-R is a valid and reliable instrument for measuring attitudes of students without disabilities towards including students with disabilities within the physical education environment (Block, 1995). The original version of the CAIPE was revised and validated based on a sample of 208 fifth- and sixth-grade students. The standardized item alphas reported were .78 to the general and .67 to the sport specific subscales, indicating good to moderate consistency of these subscales (Block, 1995). For coding purposes, the General Statement 2 was coded in reverse. According to Block (1995), a single CAIPE-R attitude score was computed by summing scaled statements, or two scores (general physical education and sport modification) can be calculated and analyzed We used the Portuguese translated version of CAIPE-R (Block, 1995), developed to

assess attitudes of students in regular schools toward including children with disabilities in their PE classes.

In international research, translation is extremely important especially if the questions are supposed to have the identical meaning to all participants (Saunders et al., 2007). Therefore the Portuguese version of the CAIPE-R was adapted and translated by two English speaking APA professionals following the procedures suggested by Vallerand (1989) using back translation by a professional English teacher together with suggestions made by Banville and Desoriers (2000) for the trans-cultural validation of psychological instruments.

In the adaptation process and in spite of the original instrument uses a description of a child with disability participating in a softball game, the present version was adapted describing a child with physical disability participating in a basketball game as basketball is a much more popular sport than baseball in the educational environments where the instrument was used to collect data, using Horvat, Block and Kelly (2007) adaptations for basketball.

### ***3.3.1.2. Physical Educators' Attitude Toward Teaching Individuals With Disabilities III – PEATID III (Rizzo, 1993)***

According to Folsom-Meek & Rizzo (2002) the PEATID III allows investigators to specify disability types and the number of disabilities they want to assess. This survey also allows investigators to assess attributes they believe may contribute to or account for variance in attitudes toward teaching students with disabilities. The PEATID III is not bound to trendy expressions (e.g., mainstreaming, regular education initiative, inclusion, etc.) in its instruction and wording of items. It is straightforward with its purpose and is versatile enough to assess attitudes of future professionals as well as teachers with many years of teaching experience. While Rizzo wishes he could claim the foresight in developing such a versatile survey, credit is due to the theoretical model for giving it the basis for this versatility (Folsom-Meek & Rizzo, 2002).

The utility of the PEATID III is that a researcher can specify one or more conditions of disability and compare attitudes. This survey allows researchers to determine if a linear hierarchical structure of beliefs and attitudes exists toward teaching students with disabilities in regular class settings. However, results of this study are generalizable only when PEATID III contains the following disabilities: behavioral disorders, mild mental retardation, and learning disabilities (Folsom-Meek & Rizzo, 2002), that is one of the reasons that in the present study, four types of disability were used – intellectual disability, physical disability, hearing impairment and visual impairment.

The PEATID III consists of two basic sections. One section assesses attitude toward teaching students with disabilities in PE by measuring beliefs. The other section assesses attributes (demographic and descriptive) of participants - gender, age, years of experience, previous experience, previous coursework in adapted physical education and special education, perceived competence and perceived quality of experience. The first portion of the PEATID III consists of 12 statements and after each of the 12 statements, labeled disability conditions are listed along with a 5–point Likert scale (i.e., 1 = strongly disagree, 2 = disagree, 3 = undecided, 4 = agree, 5 = strongly agree). Respondents are instructed to mentally insert the appropriate label into the blank when answering a given item. Six items are positively phrased and six are negatively phrased. Computer software used in the statistical analyses converted negatively worded questions to positive scores. For PEATH II and PEATID III, a table of random numbers was used to order the statements of the survey. Scale scores are derived from the items, one for each disabling condition and a total score. The labels of disabling conditions and demographics can be altered to fit individual research needs. Scale mean scores are based on the sum of the item scores for each scale divided by the number of items within the scale so that they are interpreted with reference to the original 5–point Likert scale. To derive proper scale means, the scores for statements that are negatively phrased are reversed (i.e., 5, 6, 7, 8, 9, and 10). Rizzo (1988) repeatedly used this scoring system model to show the utility of PEATID III.

The original survey, PEATH was subjected to content and construct validation procedures. Content validity was established by six nationally prominent experts, all of whom had doctoral degrees—four in physical education, one in special education, and one in educational psychology. Four of the six experts were faculty members at a Midwestern university, the fifth was employed by the (former) National Institute of Education, and the sixth was the director of physical education for the school district participating in the original 1984 study. The experts were told the purpose of the PEATH and were asked to review it for face validity. They commented on the content of the items, suggested improvements in the wording of certain items, and concluded that the PEATH had sufficient face validity because it adequately sampled the attitudes of physical educators toward teaching students with disabilities in PE.

According to Folsom-Meek and Rizzo (2002) only one study examined construct validity of the first version of the PEATH III (Rizzo, 1988) and results were presented at a national convention, but the complete findings were never published formally in a journal. Participants were 194 physical education teachers. Results of a principal components analysis on the original 20 items showed that four components were measured by PEATH: (a) effects of teaching students with disabilities on student learning, (b) need for special academic preparation to teach students with disabilities, (c) teacher beliefs about placement of students with disabilities in regular physical education classes, and (d) effects of teaching students with disabilities on teachers. Based on this principal components analysis, the length of the PEATH was reduced from 20 to 12 items, thereby making the survey more parsimonious. Reliability estimates on overall attitude score for teachers yielded an alpha coefficient of .85 for the PEATH (Rizzo, 1988). The survey was revised using principal components analysis with both varimax and oblique solutions after rotation with Kaiser normalization. Data were analyzed using composite scores for each question (sum of scores for the disabilities). Accordingly, the PEATH II (Rizzo, 1986, 1988) consisted of 12 rather than 20 belief items and changes in labels from learning/cognitive and physical disabilities to behaviorally disordered, educable mentally retarded and learning disabled. For the third revision of the survey, the

PEATH II was modified as the Physical Educators' Attitude Toward Individuals with Disabilities III (PEATID III; Rizzo, 1993). This revision was necessary to reflect current terminology and word usage describing individuals with disabilities, including person-first language, replacement of the word handicapped with disabilities, and changing educable to mild intellectual disability (Folsom-Meek & Rizzo, 2002). The latest validation of PEATID III was used with future professionals (Folsom-Meek & Rizzo, 2002) where construct validity was obtained through principal components analysis with oblique rotation and supported by principal components analysis with varimax rotation. Results showed that PEATID III measures three factors: (a) outcomes of teaching students with disabilities in regular classes, (b) effects on student learning, and (c) need for more academic preparation to teach students with disabilities. Reliability, as estimated through coefficient alpha, was .88 for the total scale and .71 or greater for each of the following disability subscales-behavioral disorders, mild mental retardation, and learning disabilities.

The Portuguese version of the PEATIDIII was adapted and translated by two English speaking APA professionals following the procedures suggested by Vallerand (1989) using back translation (Banville & Desoriers, 2000) for the trans-cultural validation of psychological instruments including back translation by a professional English teacher.

### **3.3.2. Data collection**

#### **3.3.2.1 Student's participants**

Participants were tested in groups ranging from 20 to 30 individuals at the beginning or at the end of PE classes with previous institutional approval and consent from the school deans. The questionnaire was administrated to volunteers by trained research teachers after a short briefing about the purpose

of the study. Standardized instructions were given to all participants about confidentiality as well as about encouragement to ask for help. Individual attention was provided to participants aiming to clarify doubts and to reduce the final number of spoiled returns.

The CAIPE-R questionnaire was conducted one week prior (pre-test) and one week after (post-test) the awareness program. To assess changes in student's attitudes, the CAIPE-R was administrated on a pre-and post- test basis. One week after the first application students received the awareness program on their PE classes. This program consisted one-week program and included Paralympic sports, adapted activities and films on internet sites.

Administration of the instrument was approved to institutional review procedure dean and took place at the beginning of the class by the PE teacher. Consent was given by participants completing the survey. Before the completion of the questionnaire, the information to students was given, students were told that their participation was voluntary and confidential and that there were no correct or incorrect answers, so that the answer to each question depended on how respondents felt about what the researcher said. First a short text was read describing a hypothetical situation of a student with physical disabilities, which presented some difficulties in physical activity because the use of a wheelchair. After filling the biographical data (age, gender, grade and previous exposure to disabilities) the teacher read aloud each of the statements related to the hypothetical situation that has previously been used, playing basketball as a practical example. After each question the investigator walked among the students to make sure students understood how to complete the survey.

After this first application of the instrument, the physical educators managed for one week (a PE class of 90 minutes and a PE class of 45 minutes) Paralympic sports program where students participated as a Paralympic athlete with a disability in such sports as boccia (wheelchair), goalball (blindfolded),

sitting volleyball, wheelchair basketball, and other adapted activities. Before the practical activities theoretical and historical information about the Paralympics was presented to participants via the online channel "Paralympic Sport TV" ([http://www.paralympic.org/Media\\_Centre/ParalympicSport.TV](http://www.paralympic.org/Media_Centre/ParalympicSport.TV)). These activities were undertaken to acquaint students with some specific sports for people with disabilities as well as the opportunity to experience these sports. Activities also were designed to help participants realize people with disabilities can also compete in "traditional" sports. The post-test administration of the CAIPE-R was conducted immediately after the Paralympic program (one week after the pretest).

### **3.3.2.2 PE teacher's participants**

A random sample of elementary, middle and high schools was selected, i.e., every school had an equal chance of being chosen to take part on the study (Bordens & Abbott, 2008). The purpose of the study was discussed with the principals and formal consent was obtained. In each selected school PE teachers were asked to participate in the study and the questionnaire was administrated among those that expressed will to participate in the study. The purpose of the study and the administration procedures were explained to the participants before filling the questionnaire. Approximately 1 week after the initial administration, a follow-up personal or by phone reminder was made to participants. Questionnaires were collected for an additional 1-week period, after which data collection ceased.

### **3.3.3. Data analysis**

To compute all quantitative statistics, SPSS 20.0 was used. Analyses included descriptive statistics (percentages, means and standard deviations) and parametric such as t-test and one-way ANOVAs, post hoc Scheffe and



paired t-test. In addition, correlation analysis was conducted to determine relations between personal attributes and attitudes. The level of significance for statistical analyses was set at .05 level.

To assess the validity and reliability of the PEATID III, the analysis followed Rizzo's (1988) protocol for principal components analysis, composite mean scores for each question (sum of scores for each of the three disabilities), with 15 being the highest possible composite mean score. Statistical treatment consisted of descriptive statistics and principal components analyses with oblique and varimax rotations. Principal components analysis was used. Items that loaded greater than .40 on the same component were thought to be psychologically interpretable as contributors to a given factor. Kaiser's measure of sampling adequacy for this study was .85, which was well above the recommended minimum of .60. Only eigenvalues greater than 1.0 were considered to be components (Folsom-Meek & Rizzo, 2002).

The AMOS computer program was used to test the adequacy of the confirmatory factor analytic models tested in the present thesis. Confirmatory factor analysis (CFA) is a statistical technique used to verify the factor structure of a set of observed variables and allows the researcher to test the hypothesis that a relationship between observed variables and their underlying latent constructs exists. CFA relies on several statistical tests to determine the adequacy of model fit to the data. According to (Garson, 2010) CFA seeks to determine if the number of factors and the loadings of measured (indicator) variables on them conform to what is expected on the basis of pre-established theory. Indicator variables are selected on the basis of prior theory and factor analysis is used to see if they load as predicted on the expected number of factors. The researcher's *à priori* assumption is that each factor (the number and labels of which may be specified *à priori*) is associated with a specified subset of indicator variables. A minimum requirement of confirmatory factor analysis is that one hypothesize beforehand the number of factors in the model, but usually also the researcher will posit expectations about which variables will load on which factors (Garson, 2010). The researcher seeks to determine, for

instance, if measures created to represent a latent variable really belong together.

Factor loadings were tested for statistical significance and measures were obtained to assess overall model. Chi-square was used to test the hypothesis that the relationships proposed in the model provide a plausible explanation of those that exist in the data. In the present study and the root mean squared error of approximation (RMSEA); the Goodness-of-fit index, the Root mean square (RMS) and the Comparative Fit Index (CFI) were used.

Chi-square test (the likelihood ratio test) - indicates the amount of difference between expected and observed covariance matrices. A chi-square value close to zero indicates little difference between the expected and observed covariance matrices. In addition, the probability level must be greater than 0.05 when chi-square is close to zero (Hu & Bentler, 1999).

Root mean square (RMS) - is the root mean square of the average squared difference of the loadings of the variables on each of two factors. RMS varies from 0 to 2, reaching 0 in the case of a perfect match between samples of both the pattern and the magnitude of factors in the two samples. An RMS of 2 indicates all loadings are at unity but differ in sign between the two samples. Intermediate values are hard to interpret (Garson, 2010).

The Comparative Fit Index (CFI) - is equal to the discrepancy function adjusted for sample size. CFI ranges from 0 to 1 with a larger value indicating better model fit. Acceptable model fit is indicated by a CFI value of 0.90 or greater (Hu & Bentler, 1999).

Root Mean Square Error of Approximation (RMSEA) - is related to residual in the model. RMSEA values range from 0 to 1 with a smaller RMSEA value indicating better model fit. Acceptable model fit is indicated by an RMSEA value of 0.06 or less (Hu & Bentler, 1999).

Standardized root mean square residual (SRMR) - is the standardized difference between the observed covariance and predicted covariance. A value of zero indicates perfect fit. This measure tends to be smaller as sample size

increases and as the number of parameters in the model increases. A value less than .08 is considered a good fit (Hu & Bentler, 1999).

### **3.4. Qualitative method**

To ascertain perceptions of PE teachers towards inclusion one focus group with semi-structured interview was conducted.

#### **3.4.1 Focus group interview**

The qualitative study of the present study is based on the concepts and application of Krueger's (2000) framework about focus group, as it provides practical steps for the analysis of individual data, as well as focus-group data using examples from the author's own research, in such a way as to assist the qualitative researcher to engage with this methodology. Focus groups are less threatening to many research participants, and this environment is helpful for participants to discuss perceptions, ideas, opinions, and thoughts (Krueger & Casey, 2009). Krueger (2000) suggests that the purpose is to obtain information of a qualitative nature from a predetermined and limited number of people.

The purpose of the group is to produce qualitative data to provide insights into the attitudes, perceptions, and opinions of participants. Focus groups are not intended to develop consensus, to arrive at an agreeable plan, or to make a decision about which course of action to take. Brainstorming techniques resemble the freedom and spontaneity of focus groups, having a rather narrow purpose for which they work particularly well - that is to determine the perceptions, feelings, and manner of thinking of the participants (Kruegers, 2000). According to Krueger and Casey (2009) focus group interviews typically have five features: a) people, who 2) possess certain characteristics, 3) provide qualitative data, 5) in a focused discussion, 5) to help understand the topic of interest.

### **3.4.2 Participants**

Participants are selected because they have certain characteristics in common that relate to the topic of the focus groups (Krueger & Casey, 2009).

Participants were five PE teachers, four male and one female, ages between 25 and 32 years (mean age = 27.6). All completed an undergraduate program in physical education, with at least one APE course and one was also engaged in a workshop focusing teaching students with disabilities. The PE teachers held a degree in PE and on average taught PE for 3.8 years, having on average 2.1 years of teaching students with disabilities. They all taught students with various disabilities (e.g. autism; physical disabilities; Down syndrome).

### **3.4.3 The interview guide**

A script of interview questions was developed which contained the thematic topics to be addressed throughout the session, as well as some key issues, that is, the interview guide questions were inductively generated and reflected thinking, feeling and knowing questions (van Manen, 1997 in Morphy & Goodwin, 2012). A draft interview was conducted by interviewing two PE teachers in order to organize the semi-structured format.

The focus questions were the following:

1. What is your opinion about the inclusion of students with disabilities in mainstream education? And particularly in PE class?
2. Do you find inclusion advantageous or disadvantageous?
3. How do you classify your attitudes toward inclusion in PE classes? Are you for or against this education policy?
4. What factors or variables can you point out as contributing to the improvement of attitudes and consequently your behavior towards inclusion?

#### **3.4.4 Data collection**

All participants were seated around a table arranged in a U shape with the researcher sitting in the middle of the U facing the participants. Two voice recorders and digital cameras were used to capture the discussion as well as gestures made by participants. Each participant was given to an individual identification code and a pseudonym in order to enable the correct data for the transcription of paper, maintaining secure the anonymity. Interviews were transcribed and supplemented with non-verbal reactions of the interviewees, which was analyzed and classified according to thematic topics defined. Ethical approval was obtained and informants were invited to voluntarily take part in the present research aiming at finding out their opinions about inclusion in PE.

#### **3.4.5 Trustworthiness**

To establish trustworthiness the researchers used different strategies such as peer review (i.e. first and second author worked independently at first and later converged in analyzing and interpretation the data), member check (i.e. after the verbatim transcription we asked the participants to confirm or correct the reconstruction of their statements) and rich and thick description through verbatim transcription of the all interview (Creswel, 2007) in order to bring plausibility to the data.

#### **3.4.6 Data analysis**

The semiotic analysis emerged on several recurring themes. To isolate the emerging thematic statements, we conducted a line-by-line analysis and phrases that were conceptually similar were gathered together in thematic statements. The themes were: a) Attitudes towards inclusion, b) Teaching challenges, and c) Keys for inclusive PE.



**CHAPTER IV – Analysing the structure, validity and reliability of  
the Physical Educators' Attitude Toward Teaching Individuals  
With Disabilities III – PEATID III**

**Campos, M. J., Ferreira, J. P. and Block, M. E.**

**Accepted in the *Annals of Research in Sport and Physical  
Activity***





## **Analysing the structure, validity and reliability of the *Physical Educators' Attitude Toward Teaching Individuals With Disabilities III* – PEATID III**

### **ABSTRACT**

The attitudes the teachers hold in relation to teaching students with disabilities is a key factor in the successful inclusion of these students in regular school settings. In order to get a reliable insight on the teacher's perceptions of inclusion possibility, it is crucial the use of valid instruments. This study intends to test the validity and reliability of the *Physical Educators' Attitude toward Teaching Individuals with Disabilities III* - PEATID III (Rizzo, 1993), using a Portuguese version. Although this questionnaire is one of the most popular instruments to assess attitudes of Physical Education teachers regarding the inclusion of students with disabilities in mainstream Physical Education classes, its psychometric properties have never been fully assessed using confirmatory factor analysis.

The participants in this study were 413 Portuguese physical educators, 253 males and 160 females, aged between 21 and 58 years old ( $M=32.43$ ;  $SD=9.01$ ).

Our findings suggest that the PEATID III exhibits poor goodness of fit and does not provide a valid and a reliable scale to measure attitudes of physical educators toward the inclusion of students with disabilities in their classes.

**KEY-WORDS:** PEATID III, validity, reliability, attitudes, physical education teachers

## INTRODUCTION

Following international demands (e.g. Standard Rules on Equalization of Opportunities for Persons with Disabilities - UNESCO, 1993; Salamanca Statement and Framework for Action – UNESCO, 1994; United Nations Convention on the Rights of Persons with Disabilities - UNESCO, 2006) governments of the signing nations are supposed to eliminate legislative and constitutional barriers to inclusive education and ensure that the national school system educates all children. These concerns have become a central interest to educational researchers worldwide.

The Salamanca Statement (UNESCO, 1994) became an important guideline for policies in inclusive education and social services in many countries, including Portugal. However, these legal mandates for inclusion are not guarantee that all children will be accepted and treated equitably (Marks, 1997). Moreover, the European Agency for Development in Special Needs Education (Meijer, 2001) recognizes that inclusion largely depends on teachers' attitudes toward pupils with different needs and on the resources available to them, hence this topic has advanced as a decisive factor toward more inclusive schools. For these reasons, as international policies demand for new pedagogical approaches, schools must prepare themselves for the challenges of inclusion, being the teacher's responsibility to ensure that children with disabilities are accepted and challenged as learners (Marks, 1997). In the particular case of physical educators they should become proactive agents of change so that programs remain consistent with the intent of inclusion mandates (Kozub & Lienert, 2003). Teachers are authority figures who hold the power to facilitate acceptance or rejection of children with disabilities and by the attitudes they model in the classroom (Marks, 1997). Favorable attitudes of teachers and students are seen as key factors for a successful inclusion (Conatser, Block & Lepore, 2000) and therefore they are of great interest for research. According to Block and Obrusnikova (2007), the key to achieve positive results in inclusion is not only placing pupils with special needs in PE, but also teacher's attitude in promoting positive social interactions and developing cooperative activities of, as well as promoting positive attitudes in pupils without disabilities. Block (2007) extends

this argument suggesting that PE offers valuable opportunities for social acceptance and interaction between students with and without disabilities because of its unique instructional setting. It is also consensual that the teaching training of these physical educators should focus on the development of intentions, beliefs and positive attitudes toward inclusion of students with disabilities (Kowalski & Rizzo, 1996).

In order to assess teacher's perceptions toward inclusion, the use of valid and reliable instruments is crucial. According to Kobuz and Lienert (2003), attitude's studies in adapted physical education have mainly used two instruments to assess the physical educators' attitudes toward teaching students with disabilities: the *Physical Educators Attitude Toward Teaching the Handicapped* - PEATH (Rizzo, 1984), including modifications of the instrument (*Physical Educators' Attitude Toward Teaching Individuals With Disabilities III* - PEATID III, Rizzo, 1993) and the *Attitudes Toward Disabled Persons Scales* (Yuker, Block, & Young, 1966).

Tripp and Sherrill (1991) refer that Rizzo's survey has a theoretical foundation, whereas many other studies (instruments) do not have that theoretical foundation. More recently, two other surveys were developed: *Attitudes toward Teaching Individuals with Physical Disabilities in Physical Education* – ATIPDPE (Kudlacek, Valkova, Sherrill, Myers & French, 2002) and the *Physical Education Teachers' Beliefs and Intentions toward Teaching Students with Disabilities* (Block & Jeong, 2011). Despite these new options, the PEATID III seems to be the most popular and used survey worldwide.

According to Folsom-Meek and Rizzo (2002) the PEATID III measures the psychological construct of teacher's attitudes toward teaching students with disabilities in a regular physical education setting. Based on a principal dimensions' analysis, PEATID III measures three psychological properties (of the beliefs about teaching students with disabilities). These three properties are (a) outcomes of teaching students with disabilities in regular classes, (b) effects on student learning, and (c) the need for more academic preparation to teach students with disabilities. The PEATID III seems to measure beliefs about

teaching students with disabilities in regular classes. Beliefs, according to the theory of reasoned action (Ajzen & Fishbein, 1980), are the basis of attitudes toward teaching students with disabilities.

According to Folsom-Meek and Rizzo (2002) due to the increasing use of the PEATID III, it is crucial to prove its construct validity and reliability in order to give credibility to research examining attitudes toward teaching students with disabilities. Although widespread, the survey was criticized for its lack of theoretical completeness and robustness (Kozub & Lienert, 2003). Previous studies have reported construct validity of the first version of the instrument (Rizzo, 1988) and in 2002, Folsom-Meek and Rizzo examined the construct validity of the PEATID III only for future professionals. They defended that further research needs to address construct validity of PEATIDIII containing other disabilities and that the next step in research is to establish concurrent validity of the PEATID III (Folsom-Meek & Rizzo, 2002).

Although some studies demonstrated the reliability of Rizzo's instruments, none has been published with confirmatory factor analysis for PE teachers. As such, the main purpose of the present study is to assess the validity and reliability of the survey *PEATID III* (Rizzo, 1993) using the Portuguese version. Additionally, it also focus on its psychometric properties using confirmatory factor analysis to assess the goodness-of-fit for the original three factors model.

## METHOD

### Participants

The participants of this study were 413 physical educators, age ranging from 21 to 58 years old ( $M=32.43$ ;  $SD=9.01$ ), 253 male ( $M=33.00$ ;  $SD=8.92$ ) and 160 female ( $M=31.53$ ;  $SD=8.12$ ). Participants ranged from 1 to 36 years of experience ( $M= 8.43$ ;  $SD 8.28$ ). From the sample, 237 PE teachers had experience in teaching students with disabilities and 176 had never taught students with disabilities in their PE classes.

Participants were recruited in elementary, middle and high schools from the central part of Portugal. All schools were inclusive, that is, students with different types of disability such as physical or mild intellectual disability attended regular PE classes in an inclusive environment. Participants were recruited from different backgrounds (public/ private schools; elementary, middle and secondary PE teachers) in order to assure the maximum representativeness of the target population.

### Instruments

The Portuguese version of the *Physical Educators Attitude toward Teaching Individuals with Disabilities – III (PEATID-III)* (Rizzo, 1993) was used to measure the attitude of physical education teachers toward inclusion in PE. According to Folsom-Meek and Rizzo (2002) PEATID III is useful to allow researchers to specify disability types and the number of disabilities they want to assess. This instrument also allows researchers to assess attributes they believe may contribute to or account for variance in attitudes toward teaching students with disabilities. It is straightforward in its purpose and versatile enough to assess attitudes of future professionals as well as teachers with many years of experience (Folsom-Meek & Rizzo, 2002). This questionnaire allows researchers to determine if a linear hierarchical structure of beliefs and attitudes toward teaching students with disabilities exists in regular class settings. However, results are generalizable only when PEATID III contains the following disabilities: behavioral disorders, mild intellectual disabilities, and learning disabilities (Folsom-Meek & Rizzo, 2002). In the present study, four disability conditions were present – intellectual disability, physical disability, hearing impairment and visual impairment.

The PEATID III consists of two sections. The first section assesses attitudes toward teaching students with disabilities in PE by measuring beliefs. The second section assesses attributes (demographic and descriptive) of participants - gender, age, years of experience, previous experience, academic preparation in adapted physical education and special education, perceived

competence and perceived quality of experience. The first section of the PEATID III consists of 12 statements and after each of the 12 statements, labeled disability conditions are listed along with a 5–point Likert scale (i.e., 1 = strongly disagree, 2 = disagree, 3 = undecided, 4 = agree, 5 = strongly agree). Respondents are instructed to mentally insert the appropriate label into the blank when answering a given item. Six items are positively phrased and six are negatively phrased. Computer software used in the statistical analyses converted negatively worded questions to positive scores. For PEATH II and PEATID III, a table of random numbers was used to order the statements of the questionnaire. Scale scores are derived from the items, one for each disability condition and a total score. Scale mean scores are based on the sum of the item scores for each scale divided by the number of items within the scale so that they are interpreted with reference to the original 5–point Likert scale. To derive proper scale means, the scores for statements that are negatively phrased are reversed (i.e., 5, 6, 7, 8, 9, and 10). Rizzo (1983, 1984, 1988) repeatedly used this scoring system model to show the utility of PEATID III.

The original survey, PEATH (Rizzo, 1983, 1984) was subjected to content and construct validation procedures. According to Folsom-Meek and Rizzo (2002) only one study examined the construct validity of the first version of the PEATID III (Rizzo, 1988) and its results presented at a national convention, but the complete findings were never published formally in a journal. Reliability estimates on overall attitude score for teachers yielded an alpha coefficient of .85 for the PEATH (Rizzo, 1988). The instrument was revised using principal dimensions analysis with varimax and oblique solutions after rotation with Kaiser normalization. Data were analyzed using composite scores for each question (sum of scores for the disabilities). Accordingly, the PEATH II (Rizzo, 1986, 1988) consisted of 12 rather than 20 belief items and changes in labels from learning/cognitive and physical disabilities to behaviorally disordered, educable mentally retarded and learning disabled. For the third revision of the questionnaire, the PEATH II was modified as the *Physical Educators' Attitude toward Individuals with Disabilities III* - PEATID III (Rizzo, 1993). This revision was necessary to reflect the current terminology describing individuals with

disabilities, including person-first language, replacement of the word handicapped with disabilities, and changing educable to mild intellectual disability (Folsom-Meek & Rizzo, 2002).

The validity of PEATID III was assessed only with future PE professionals (Folsom-Meek & Rizzo, 2002) where construct validity was obtained through principal dimensions analysis. The Portuguese version of the PEATIDIII used was adapted and translated by two English speaking APA professionals following the procedures suggested by Vallerand (1989), using back translation (Banville & Desoriers, 2000) by a professional English teacher for the trans-cultural validation of the psychological instrument.

### ***Procedures***

A sample of elementary, middle and high schools was randomly selected, i.e., every school had an equal chance of being chosen to take part on the study (Bordens & Abbott, 2008). The purpose of the study was discussed with the principals and formal consent was obtained. The purpose of the study and the administration procedures were explained to the participants before filling in the questionnaire. Approximately one week after the initial administration, a follow-up personal or by phone reminder was made to participants. Questionnaires were collected after an additional week period, when data collection formally ceased.

### ***Data analysis***

Descriptive statistics were computed for every item and for the three subscales of the PEATID III, including the mean and standard deviation values.

To assess the validity and reliability of the PEATID III, the analysis followed Rizzo's (1988) protocol for principal dimensions analysis, composite mean scores for each question (sum of scores for each of the four disabilities), with 20 being the highest possible composite mean score.

Alpha coefficient (Cronbach, 1951) was used to assess internal consistency of the three subscales. An acceptable reliable value was set at .70

(Bryman, 2004). Test retest reliability using 15 PE teachers was assessed to measure the temporal stability, using the intra class correlation coefficient (ICC). ICCs were classified as follows: 'excellent' ( $\geq .81$ ), 'good' (.61 - .80), 'moderate' (.41 - .60), 'poor' ( $\leq .40$ ) (Bryman, 2004).

Confirmatory factor analysis (CFA) is a statistical technique used to verify the factor structure of a set of observed variables and allows the researcher to test the hypothesis that a relationship between observed variables and their underlying latent constructs exists. CFA relies on several statistical tests to determine the adequacy of model fit to the data (Hu & Bentler, 1999). Hair et al. (2010) recommend the following goodness of fit indices to be reported for both measurement model and structural model fit: Chi square, degrees of freedom, one absolute fit index (e.g. goodness of fit index (GFI)), one incremental fit index (e.g. normed fit index (NFI)), and one badness of fit index (e.g. root mean square error of approximation (RMSEA)). In the present study five goodness-of-fit indices were calculated in order to assess global fit of the model. These indices include: chi-square ( $\chi^2$ ) and its subsequent ratio with degrees of freedom ( $\chi^2/df$ ); goodness-of-fit index (GFI); adjusted GFI; comparative fit index (CFI) and root mean square error of approximation (RMSEA).

## **RESULTS**

### **Descriptives**

Table 1 shows the description of the 12 Items on the PEATID III with means and standard deviations.



Table 1 – Means and standard deviations for the three dimensions of PEATID III

	M	SD
Outcomes of teaching students with disabilities in regular classes	13.31	3.13
(5, 6, 7, 9, 10, 12):		
mean_item5	16.40	4.01
mean_item6	14.31	4.32
mean_item7	9.32	4.43
mean_item9	9.33	4.17
mean_item10	15.33	4.37
mean_item12	15.17	4.22
Effects on student learning	13.51	3.56
(1, 2, 3, 4):		
mean_item1	14.02	4.13
mean_item2	11.72	4.71
mean_item3	13.87	4.20
mean_item4	14.42	3.89
Need for more academic preparation to teach students with disabilities	10.30	3.89
(8, 11):		
mean_item8	12.34	5.12
mean_item11	8.25	4.20

Means and standard deviation values derive from composite scores for each question (sum of scores for each of the four disability conditions) with 20 being the highest possible composite mean score. According to Rizzo (1993) and Folsom-Meek & Rizzo (2002), the first component *outcomes of teaching students with disabilities in regular classes* contained six outcome beliefs. These belief items, with regard to students with disabilities, were: (a) would not

be accepted by peers, (b) would disrupt harmony of the class, (c) would cause an unfair burden on teachers, (d) would cause more work for the teacher, (e) should not be taught in regular classes as require too much teacher time, and (f) should be taught in a regular class whenever possible, presented a mean value of  $13.31 \pm 3.13$ . The second dimension, *effects on student learning*, contained four items: (a) both groups of students work together, (b) working together motivates students without disabilities, (c) students with disabilities will learn more rapidly in classes with peers, and (d) students with disabilities will have more positive self-concept as a result of being successful in regular classes. The items represent students with varying abilities learning together in physical education. Our results indicated a mean value of  $13.51 \pm 3.56$ . The third dimension, *need for more academic preparation to teach students with disabilities*, includes just two items both related to the need for additional coursework and academic preparation. Results showed a mean value of  $10.30 \pm 3.89$ .

### **Reliability**

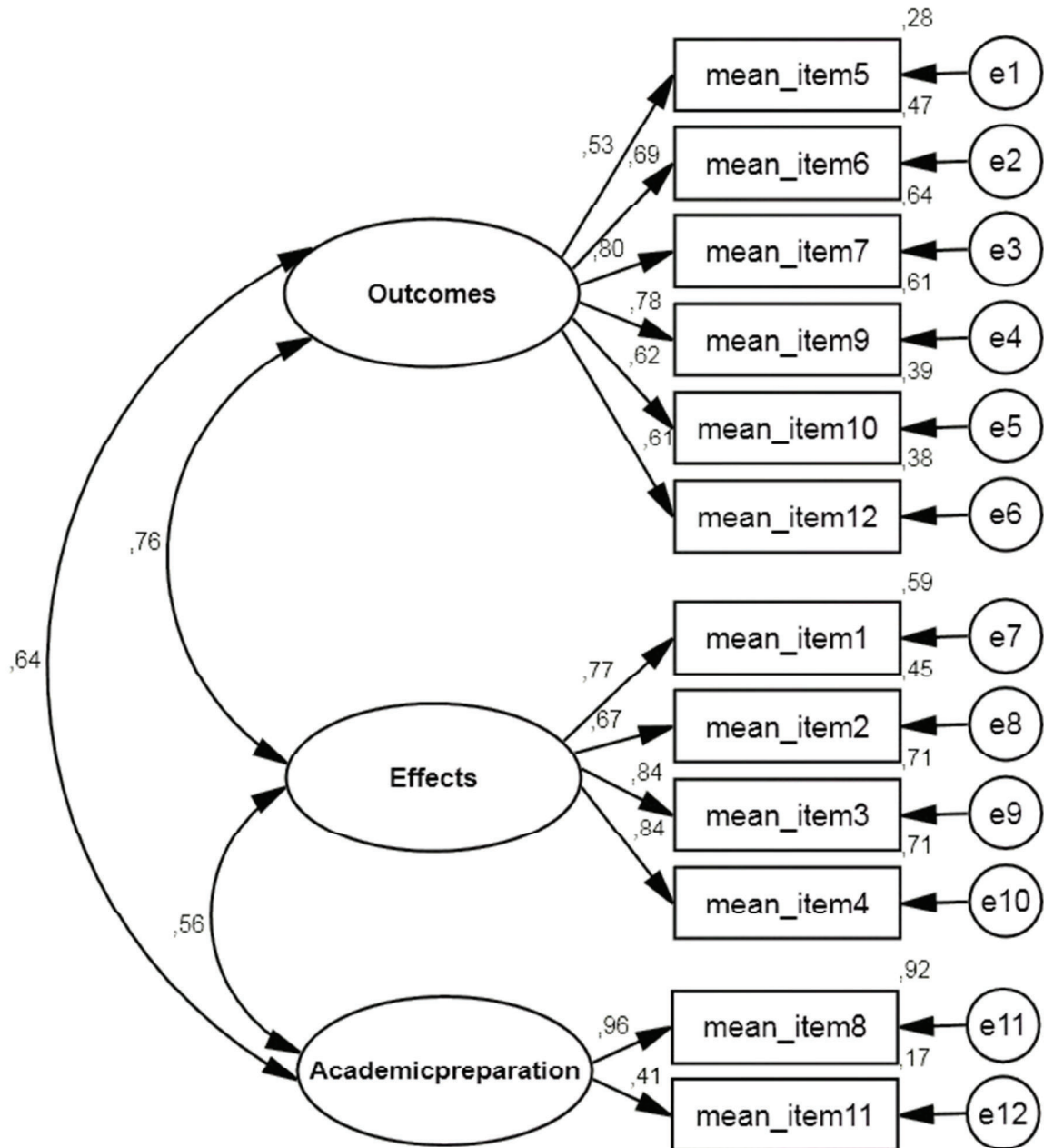
The Portuguese version of the PEATIDIII showed a good internal consistency (Hair et al., 2010) with a total Cronbach Alpha coefficient value of .89. The *outcomes* and the *effects* subscales showed a good internal consistency,  $\alpha=.83$  and  $\alpha=.86$  respectively, however the *need for more academic preparation* subscale revealed a poor value of  $\alpha=.55$ . The Test-retest reliability values were excellent for the *outcomes* dimension (ICC= .91), good for *need for more academic preparation* (ICC=.72) and moderate for the *effects* dimension (ICC=.53) over a 16 day period.

### **Confirmatory factor analysis (CFA)**

The goodness-of-fit for the factorial model was assessed using CFA to identify the three factor model in order to estimate the model parameters with a sample

of 413 PE teachers. Figure 1 represents the factorial structure for PEATID III with the three dimensions defined by Rizzo (1993, 2002).

Figure 1 – Three factors structure for the PEATID III



The covariance values in the factorial structure of PEATID III with three unobserved variables, ranged from .53 to .80 for “outcomes of teaching students with disabilities in regular classes”, from .67 to .84 for “effects on student learning” and from .41 to .96 for “need for more academic preparation to teach students with disabilities”.

Table 2 shows CFA absolute fit indices results for the PEATID III original model tested with a Portuguese PE teacher’s sample.

Table 2 – CFA results for the Portuguese version of PEATID III

Model	Sample size	$\chi^2$	df	P	$\chi^2/df$	CFI	GFI	AGFI	SRMR	RMSEA
12 items	413	575.96	51	.000	11.29	.80	.79	.68	1.41	.16

The  $\chi^2$  value obtained (575.96) differs significantly from the independence model ( $p < .001$ ). CFI, GFI and AGFI index values were .80, .79 and .68 respectively, showing a poor model fit (Hu & Bentler, 1999).  $\chi^2/df$  value, a ratio value used to assess the level of adjustment to the model was higher than 3.0 ( $\chi^2/df=11.29$ ) showing a poor adjustment (Joreskog, 1969) for this specific criteria. Additionally, SRMR index showed a cut-off value higher than 0.08 (SRMR=1.41) and RMSEA a cut-off value higher then 0.06 (RMSEA=0.16) providing further evidence model fit adjustment problems.

## DISCUSSION

This study aimed to assess the validity and reliability of the *Physical Educators’ Attitude toward Teaching Individuals with Disabilities III* - PEATID III (Rizzo, 1993) using a sample of Portuguese physical educators.

To determine internal consistency Cronbach's alpha coefficient was used and the scale showed a good internal consistency ( $\alpha = .89$ ). In a previous study Folsom-Meek and Rizzo (2002) reported a value of .85 for the total score. Although *outcomes* and *effects* subscales showed a good internal consistency ( $\alpha = .83$  and  $\alpha = .86$ , respectively), the *need for more academic preparation* subscale revealed poor Alpha values ( $\alpha = .55$ ). Having only two items in this subscale is problematic in reliability terms.

Test-retest was assessed using repeated administration over a 16 day period, with ICC ranging from moderate .53 (*effects*) to excellent .91 (*outcomes*). The *need for more academic preparation* subscale revealed a ICC value of .72. Overall, the PEATID III showed to be a reliable inventory.

The three-factor correlated model showed standardized factor loadings ranging from .41 to .96. The  $\chi^2$  value obtained (575.96) differs significantly from the independence model ( $p < .001$ ).  $\chi^2/df$  value, a ratio value used to assess the level of adjustment to the model was higher than 3.0 ( $\chi^2/df = 11.29$ ) showing a poor adjustment (Joreskog, 1969) for this specific criteria. CFI, GFI and AGFI indices values were .80, .79 and .68 respectively, showing a poor model fit (Hu & Bentler, 1999). These values demonstrate important limitations of the structure of the three-factor model tested, reflecting a poor model fit. Additionally, SRMR index showed a cut-off value higher than 0.08 (SRMR=1.41) and RMSEA showed a cut-off value higher than 0.06 (RMSEA=0.16), providing evidence of two a cut-off index value that clearly contributes to an higher type II error rate and doesn't provide good support for the model fit (Hu & Bentler, 1999) among the physical educators. Folsom-Meek & Rizzo (2002) established construct validity and subsequently reliability of the PEATID III using the principal dimensions analysis and attested that it was a reliable survey for future professionals; however the present study showed that the psychometric properties are not supporting the original model when using the instrument with PE teachers with a range of experience varying from 1 to 36 years. Furthermore, results from the confirmatory factor analysis revealed structure problems that require further in-depth analysis.

## CONCLUSIONS

In the last decades many studies had been conducted using the PEATID-III with PE teachers, as no previous published study reported any factor analysis to this specific questionnaire. Despite its dissemination worldwide, the psychometric properties of the PEATID III have not been assessed with physical education teachers.

The results of this study indicate that the questionnaire is not a satisfactory self-reported measure to assess PE teachers' attitudes toward inclusion of students with disabilities. As such, the present study does not support the usefulness of the PEATID III as a brief and psychometrically sound scale for measuring attitudes among physical educators in relation to inclusion of students with disabilities.

### Acknowledgements

The authors would like to thank Carlos Lebres, Mafalda Cortez, Sara Silva and Sara Lemos for their contributions in data collection.

The authors also thank Carla Filomena Silva for her thoughtful review and insights on previous version of this manuscript.

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**CHAPTER V – An analysis into the structure, validity and reliability of the Children’s Attitudes Towards Integrated Physical Education-Revised**

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**Accepted in the *European Journal of Adapted Physical Activity***



**An analysis into the structure, validity and reliability of the *Children's Attitudes Towards Integrated Physical Education-revised (CAIPE-R)***

**ABSTRACT**

The main purpose of the present research is to test the validity and reliability of the revised version of the Children's Attitudes towards Integrated Physical Education-revised – CAIPE-R (Block, 1995), using a Portuguese sample.

Participants were 683 middle school students without disabilities (n=316 females and n=367 males, between 11 and 16 years, mean age  $13.31 \pm 1.10$ ).

The CAIPE-R measures students' attitudes toward including students with a disability in general physical education (GPE). The estimation of reliability was ascertained using the coefficient alpha for the two subscales and was reported at 0.72 and 0.48 respectively. Exploratory factor analysis revealed a slightly different factorial organization with a small number of cross loadings. The internal consistency and the validity of the CAIPE-R have been adequately tested, replying the original structure presented by Block (1995). Results point out that the Portuguese version of the CAIPE-R is a valid and reliable instrument to assess attitudes of students without disabilities toward including peers with disabilities in their GPE classes, providing significant interest and adequacy for the use of CAIPE-R in future researches.

**KEY WORDS:** Validity; reliability; CAIPE-R; attitudes; inclusion

## INTRODUCTION

Perhaps the most transformative school reform in the past thirty years has been the movement away from educating students with disabilities in special schools and special classes to inclusive settings where students with disabilities are educated alongside peers without disabilities in regular classrooms where adequate resources for enabling the success for all students is warranted (Block, 2007; Kennedy & Horn, 2004; Lipsky & Garnter, 1997). The rationale for inclusion is based on benefits to children with disabilities, children without disabilities, and to the school and greater community as a whole (Block, 2007; Karagiannis, Stainback & Stainback, 1996; Stainback & Stainback, 1991). "The fundamental principle of inclusive schools is to all children should learn together, wherever possible, regardless of the difficulties and differences that show. Schools should accommodate all children regardless of their physical, intellectual, social, emotional, and linguistic or other "(UNESCO, 1994).

While this movement towards inclusion was mainly focused in the United States, this trend towards inclusive education has begun to take hold worldwide and according with recent reviews (e.g. Klavina & Kudlacek, 2011; O'Brien, Kudlacek & Howe, 2009) Europe is in the process of making a positive move towards greater inclusion of students with both mild to severe disabilities. In same European Countries such as Portugal, public policies require all students with disabilities to be included in regular school settings. Since the mid-twentieth century to the present days, development was supported by numerous legislative measures (e.g. Public Laws PL 317/76; Education Law, 1986; PL 35/90; PL 105/97; PL 319/91; PL 3/2008) revelling a clear political effort towards inclusion and providing an effective support for the educational needs of many students with disabilities.

PE and sports play an important role in European society and is considered as a growing social phenomenon which makes an important contribution to the EU's strategic objectives of solidarity, although the current situation in Europe requires substantial improvements towards the philosophy and the practice of inclusion of students with disabilities into PE classes (Klavina & Kudlacek, 2011).

## **Inclusion in General Physical Education**

General physical education (GPE), as a fundamental subject in the school curriculum, should not remain outside the inclusive movement (Rodrigues, 2003) and it may be used as a fundamental tool to transform regular school into a more inclusive environment. According to Frese and Yun (2007), GPE is an effective academic area to promote abilities over disabilities and help students to understand one another and their capabilities. Block (2007) extended this point by suggesting GPE offers opportunities for social acceptance and interaction between students with and without disabilities that are not available in other places in the school due to the unique instructional setting that often pairs students together in small groups or teams to work together for a common goal. It is recognized that both attitudes and intentions of classmates without disabilities, as documented by numerous studies in GPE play critical role in the successful inclusion of students with disabilities (Block & Obrusnikova, 2007). In a recent review of literature (O'Brien, Kudlacek & Howe, 2009) it is outlined that successful inclusion in physical education can take place effectively and moreover researches revealed that inclusion can be implemented without any negative impact on students with and without disabilities. To ascertain the impact of inclusion in PE classes is crucial to have reliable instruments to measure student's attitudes towards peers with disabilities in GPE.

There are some studies that have been published about the attitudes of students without disabilities towards inclusion in GPE. Among those the Children's Attitudes Towards Integrated Physical Education - CAIPE-R (Block, 1995) is the most used instrument to measure the student's attitudes towards the inclusion of peers with disabilities in GPE. By focusing solely on attitudes toward inclusion in GPE, the CAIPE-R is ideally suited for regular and adapted physical educators who are concerned with the impact inclusion in GPE has on students without disabilities. In addition, the CAIPE-R could be used by researchers interested in studying and understanding the influence of different factors such as gender, age, type and severity of disability, types of contact (e.g., family, friend and classmate), specific training of peers without disabilities (Block, 1995). The original CAIPE inventory was validated on a sample of 44

participants from 6th grade, and the revised CAIPE-R inventory was validated on a sample of 208 participants from 5th and 6th grade. The CAIPE-R is assumed to be a valid and reliable instrument for measuring attitudes of students without disabilities towards including students with disabilities within the physical education environment (Block, 1995). In spite of its use in different cultures (e.g. USA, Israel, Czech Republic, Belgium and Greece) the psychometric properties of the instrument were not yet fully tested providing evidence for its generalized use as a valid psychometric instrument for the assessment of attitudes among children and youth. For example, Hutzler and Lezi (2008) validated the Israeli version of CAIPE-R and findings showed that the internal consistency of the CAIPE-IL scale with 11 items (seven in the general subscale and four in the sport specific subscale) reached acceptable values, ( $\alpha = .77$  and  $\alpha = .62$  respectively). EFA was used and a bi-factor solution was computed accounting for 42% of the variance and 48% of the variance however CFA was not performed. Also, in the Czech version (Kudlaček, Ješina & Wittmanova, 2011) CFA was not computed. Therefore, the main purpose of the present study is to test validity and reliability of the Portuguese version of the Children`s Attitudes Towards Integrated Physical Education - Revised (CAIPE-R) (Block, 1995) as well as to focus on the psychometric properties of the instrument which were not fully tested using confirmatory factor analysis to assess the goodness-of-fit for the original two factors model.

## **METHOD**

### **Participants**

The global number of participants were 683 students (n=316 girls and n=367 boys) selected from a convenience sample ranging from 11 to 16 years of age (mean age  $13.31 \pm 1.10$ ) recruited from different state middle schools (7th to 9th grade) from rural and suburban areas in Portugal. All schools were recently inclusive schools, where students with different types of disability such as physical or mild intellectual disability attended pre-selected regular classes in an inclusive environment. Two different samples were used: to run the exploratory factor analysis (EFA) participants were 174 students, 81 girls and 93 boys



(mean age  $13.36 \pm 1.09$ ). Confirmatory factor analysis (CFA) was run with 509 students, 235 girls and 274 boys (mean age  $13.32 \pm 1.11$ ).

The use of volunteers from a convenience sample is a clear limitation for the study assuming that those who accept to express their personal feelings and opinion about their inclusion attitudes may feel more comfortable and confident in their relationship with peers with disability. An effort was made to recruit participants from different backgrounds and geographic areas in order to assure the representativeness of the target population.

### **Instrumentation**

A Portuguese version of the Children's Attitudes towards Integrated Physical Education - Revised CAIPE-R (Block, 1995) was used in this study. The CAIPE-R consists of (a) a description of a hypothetical student with a disability presented by a written vignette, (b) numerous questions related to students' demographics and experiences with individuals with disabilities (initial survey), (c) six or seven statements about including a student with a disability in GPE (general attitude subscale), and (d) five to seven optional statements about modifying rules of sports in GPE (sport-specific attitude subscale). Students respond to each statement using a 4-point Likert scale (4 = yes, 3 = probably yes, 2 = probably no, and 1 = no). For coding purposes, the general statement 2 was coded in reverse. According to Block (1995), a single CAIPE-R attitude score was computed by summing scale statements or two separate scores (general physical education and sport modification) can also be calculated and analysed. The general attitude statements focus on beliefs toward the inclusion of students with disabilities in GPE. Similarly, the sport specific statements focus on beliefs toward modifications to group games. For scoring purposes, item 7 was deleted as previously suggested by Block (1995) with a total number of six general attitude statements and five sport specific statements used.

In international research, translation is extremely important especially if the questions are supposed to have the identical meaning to all participants (Saunders et al., 2007). Therefore the Portuguese version of the CAIPE-R was adapted and translated by two English speaking APA professionals following

the procedures suggested by Vallerand (1989) using back translation together with suggestions made by Banville and Desoriers (2000) for the trans-cultural validation of psychological instruments including back translation by a professional English teacher.

In the adaptation process and in spite of the original instrument uses a description of a child with disability participating in a softball game, the present version was adapted describing a child with physical disability participating in a basketball game as basketball is a much more popular sport than baseball in the educational environments where the instrument was used to collect data, using Horvat, Block and Kelly (2007) adaptations for basketball.

## **PROCEDURE**

Participants were tested in groups ranging from 20 to 30 individuals at the beginning or at the end of GPE classes with previous institutional approval and consent from the school deans. The questionnaire was administered to volunteers by trained research teachers after a short briefing about the purpose of the study. Standardized instructions were given to all participants about confidentiality as well as about encouragement to ask for help. Individual attention was provided to participants aiming to clarify doubts and to reduce the final number of spoiled returns.

## **Data Analysis**

The full range of descriptive statistics (frequencies, means and standard deviations) were calculated for both domains. An alpha level of .05 was used for all statistical tests. Validation of the CAIPE-R was undertaken using exploratory factor analyses (EFA) with a total sample of 174 participants (sample A). Principal components analysis with robust rotation was calculated in order to establish the independence and integrity of the CAIPE-R subscales in students population without disability. Factors with an eigenvalue of greater than one were selected. Factor loadings below 0.4 were eliminated for the sake of clarity and factor solutions explaining less than 40% of item covariance and fewer than

three items in each factor were not given further consideration (Tinsley & Tinsley, 1987).

Subscales internal consistency was assessed using Cronbach's alpha coefficients (Cronbach, 1951). Bivariate correlations were used to analyse the relationship between the CAIPE-R different subscales (general attitude subscale and the sport-specific attitude subscale) and the global attitude towards inclusion. Stepwise multiple regression was also used to assess the level of explained variance between the two subscales and the global attitude towards inclusion. Finally, a confirmatory factor analysis (CFA) using robust condition was calculated to test the goodness-of-fit for the original model. The goodness-of-fit is the most common way to establish both measurement and structural model validity. There are several fit measures assessing different aspects of model fit, categorized as absolute fit indices and incremental fit indices. Hair, Anderson, Tatham and Black (2010) recommend the following goodness of fit indices to be reported for both measurement model and structural model fit: Chi square, degrees of freedom, one absolute fit index (e.g. goodness of fit index (GFI)), one incremental fit index (e.g. normed fit index (NFI)), and one badness of fit index (e.g. root mean square error of approximation (RMSEA)). Different indices are suited for different sample sizes and different numbers of observed variables. For example the standardized root mean residual (SRMR) is not suited for sample sizes above 250 and less than 12 observed variables (Hair et al. 2010).

## **RESULTS**

Table 1 provides a comparison of subscale mean values and standard deviations from female and male middle school students in the present study (samples A and B) as well as from the original study (Block, 1995) with a similar sample.

**TABLE 1**

Means and standard deviations from CAIPE-R subscales analysed by gender

Dimension	Gender	Sample A n=174		Sample B n=509		Total sample n=683		Block, 1995 n=208	
		M	SD	M	SD	M	SD	M	SD
Global	Female	3.28	.29	3.37	.28	3.34	.28	2.89	.38
Attitude	Male	3.12	.42	3.27	.40	3.25	.39	3.13	.28
General	Female	3.07	.43	3.23	.38	3.17	.39	3.09	.60
PE	Male	2.88	.56	3.12	.52	3.08	.51	2.80	.67
Sport	Female	3.52	.32	3.54	.33	3.53	.32	3.17	.66
Specific	Male	3.41	.46	3.47	.43	3.47	.42	3.12	.68

Descriptive results analysed by gender reveal that female participants (samples A, B and total) present higher mean values for general PE and sport specific subscales as well as for the global attitude than their male colleagues, revealing that females have more positive attitudes towards inclusion of children with disabilities in regular PE classes than males. Further comparison between samples revealed that both male and female participants presented higher mean values for general PE and sport specific subscales as well as for the global attitude than those reported by Block (1995) for the male and female USA sample, revealing more positive attitudes to inclusion of children with disability in regular PE classes than their American mates.

### **Dimensionality**

Initial validation of the CAIPE-R was undertaken using exploratory factor analyses, Principal Components Analysis extraction method with Varimax rotation, to analyse the replication of the original structure of the instrument suggested by Block (1995) with a total sample of 174 participants (n=81 girls and n=93 boys, mean age  $13.36 \pm 1.09$ ). The results of the preliminary

exploratory factor analysis from the middle school students are presented in table 2.

**TABLE 2**

Principal components factor loadings for CAIPE-R items (n=174)

Subscale	Item number	F1 loadings	F2 loadings	F3 loadings
General PE	1	.702		
	2	.538		
	3	.698		
	4	.562		
Sport Specific	5		[.572]	
	6		[.608]	
	7	[.364]	.367	
	8		.344	
	11		.689	
F3	9			[.876]
	10			[.569]
Eigenvalue		3.004	1.825	1.325
% Variance		16.849	13.895	10.643
Cum. % Variance		16.849	30.743	41.386

The three factor solution explained a total of 41.4% of the variance among the sub scale items. The majority of items loaded on their intended factors, general PE and sport specific sub-domains were clearly defined with four out of six and three out of five items loading on their intended factor. Items 5 and 6,

originally allocated to general PE sub-domain cross loaded in sport specific sub-domain with loading values of .57 and .61 respectively, while items 9 and 10 originally allocated to sport specific sub-domains cross loaded in factor three with loading values of .88 and .67 respectively.

### **Reliability**

Hair et al. (2010) defined reliability as an assessment of the degree of consistency between multiple measures of a variable. Internal consistency and reliability was undertaken for each sub-scale using Cronbach Alpha values (Cronbach, 1951) for attitude scales as recommended by Thomas and Nelson (2001). General PE sub-scale showed a good internal consistency with a coefficient Cronbach Alpha value of .72 while sport specific sub-scale showed a poor internal consistency with Cronbach Alpha value of .48, according to Hair et al. (2010).

### **Confirmatory factor analysis**

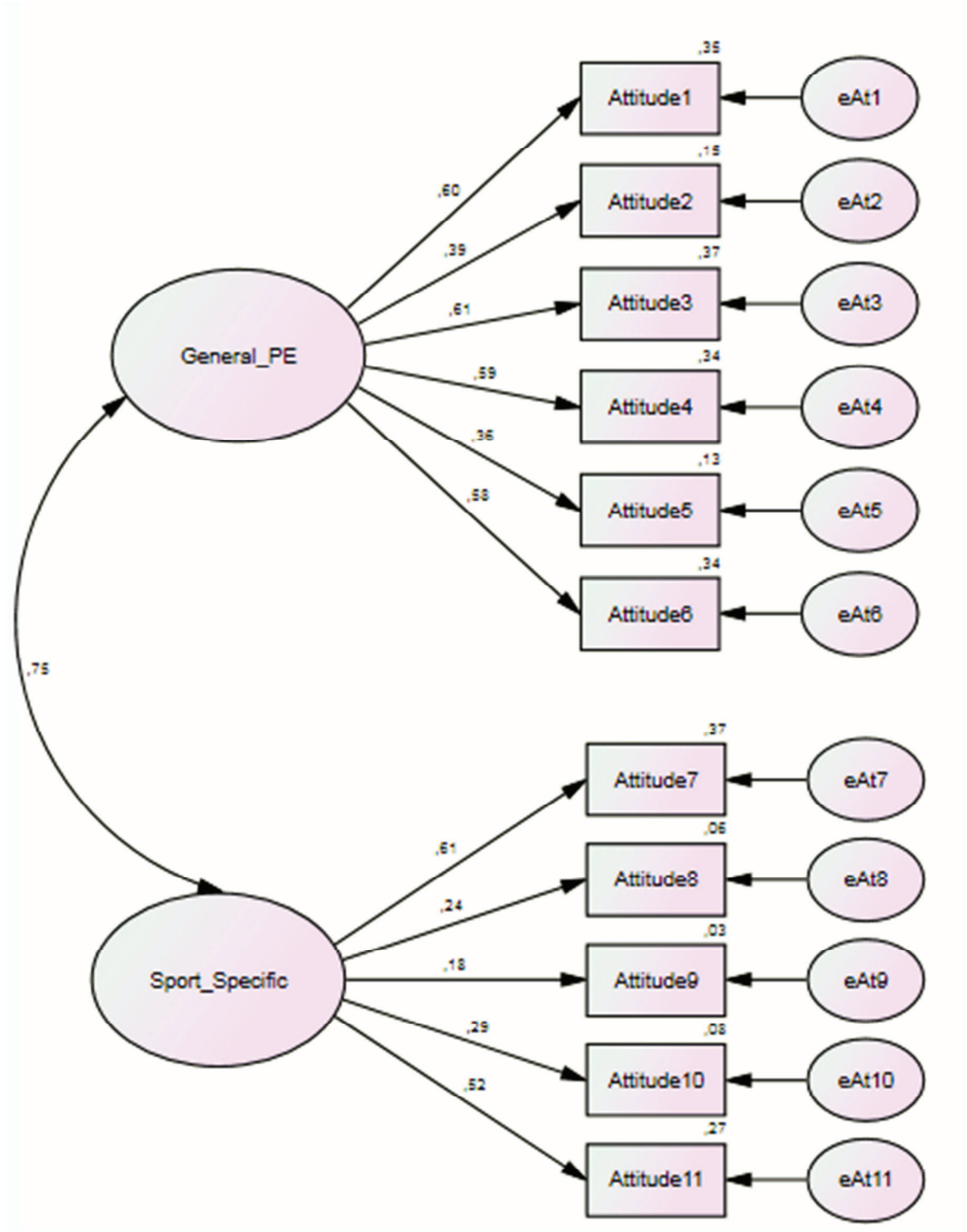
Confirmatory factor analysis (CFA) was conducted to assess the goodness-of-fit of the original CAIPE-R factorial model with a second sample of 509 Portuguese middle school students (n=235 girls and n=274 boys, mean age  $13.30 \pm 1.11$ ). Figure 1 represent the factorial structure for CAIPE-R with the general physical education and the sport specific subscales as two unobserved latent variables each one associated to a group of observed variables and designated as factors, as well as the covariance values between each pair of variables and the residual errors in the prediction of an observed factor.

Coefficients associated with single-headed straight arrows are standardized regression weights that indicate the effect of one variable on another and the double-headed curved arrow represents the correlation between variables. The covariance values in the factorial structure of CAIPE-R with two unobserved variables, ranged from .36 to .61 for “general physical education” and from .18 to .61 for sport specific subscales.

CFA was run with an eleven items model and produced improved values for the  $\chi^2$ , CFI, GFI, AGFI, SRMR and RMSEA indices. The  $\chi^2$  value obtained (148.419) differs significantly from the independence model ( $p < .001$ ). CFI, GFI and AGFI index values were .81, .95 and .92 respectively.  $\chi^2/df$  value, a ratio value used to assess the level of adjustment to the model was higher than 3.0 ( $\chi^2/df=3.45$ ). Additionally, SRMR index showed a cut-off value lower than 0.08 (SRMR=0.03) and RMSEA also showed a cut-off value close to 0.06 (RMSEA=0.067) as recommended by Hu and Bentler (1999).

FIGURE 1

Confirmatory factor analysis of the two factors structure for the CAIPE-R scale





## DISCUSSION

The main purpose of this study was to investigate validity and reliability of the Children's Attitudes Towards Integrated Physical Education-revised - CAIPE-R using a sample of middle school students. Preliminary factorial structure, tested using sample A participants (n=174) revealed a final factor solution explaining 41.4% of the variance among the subscale items. Results from Block's study revealed Cronbach Alpha values of .78 for the general attitude subscale and .67 for the sport specific subscale. In the Israeli version of the CAIPE-R and after omitting two items, Hutzler and Levi (2008) reported Cronbach's alpha coefficients of .77 in the general subscale and .62 in the sport specific subscale. The Czech version (Kudlaček, Ješina & Wittmanova, 2011) showed a high internal consistency ( $\alpha = 0.84$ ) in the total scale. In the present study internal consistency seemed to be different among subscales, general PE subscale showed a good internal consistency with a Cronbach Alpha coefficient of .72 similar to those reported for the USA and Israeli populations while sport specific subscale showed a much poor internal consistency with a Cronbach Alpha coefficient value of .48, lower than those reported for this subscale in the studies previously mentioned.

Principal components factor analysis results provide a moderate support for the two sub domain factor model of CAIPE-R proposed by Block (1995) that has been confirmed in other studies with children without disabilities (Hutzler & Levi, 2008; Panagiotou et al., 2008; Obrusníková, Válková & Block, 2003) in different cultural and educational settings, however the confounding of items from general PE into sport specific subscales and in particular the strong cross loading of item 9 into a third factor (F3) requires further investigation as the content meaning of this particular item – John could stay in the keyhole longer (five seconds instead of three) - may not be interpreted similarly in different cultures. It appears that Portuguese students are not comfortable in changing rules that much. Probably this item should be changed to another sport specific item. It is interesting to see that in CFA this is the item with lower covariance value (.18). In contrast, the Czech version (Kudlaček, Ješina & Wittmanova, 2011) items were structured in a slightly different way, and item 10 did not load

and the authors suggested deleting this item. Also in Czech version, the fifth and sixth items were loaded to the second component and those 6 items were entitled “Beliefs about actual behaviour”. In our understanding further research is needed in order to understand those different cross loadings. As said before, no previous study ran CFA for CAIPE-R. CFA was run in order to show different fit indices values considered as relevant for the CAIPE-R model evaluation. CFI and AGFI index values were .81 and .92 respectively, showing an acceptable cut-off criteria (Hu & Bentler, 1999). The  $\chi^2/df$  value showed a poor adjustment (Joreskog, 1969) for this specific criterion. SRMR index showed a cut-off value lower than 0.08 (SRMR=0.03) and RMSEA also showed a cut-off value close to 0.06 (RMSEA=0.067) as recommended by Hu and Bentler (1999) providing important evidence of two cut-off index values that clearly contribute to a lower type II error rate and provide good support for the model fit, showing this survey is a valid and reliable instrument with the Portuguese middle school student’s sample.

In many European countries (e.g. Germany, France, Italy, the Netherlands, Spain or Portugal, among many others) there is still very few information about students personal feelings on inclusion available for comparison. Further research is needed on attitudes, feelings and intentional behaviour of students without disability towards inclusion of peers with disability in GPE classes. Moreover, this type of information will provide important support to schools, teachers, staff members, school managers and legislators to define inclusive and motivational strategies powerful enough to modify stigma, segregational attitudes and inappropriate behaviours aiming to promote a more positive and inclusive educational environment.

As previously mentioned, legislation norms are not strong enough (just by themselves) to produce change towards an inclusive education setting and the assessment of attitudes and behaviours may be seen as the starting point for a profound curricula change in GPE, including the enclosure of new events and topics such as an introduction to Paralympic sports, the Paralympic school day as well as other adapted physical activities and specific adapted sport and exercise information both in regular curricula and PE school manuals, as it has

already been done in some others countries (e.g. United States of America, Greece; Israel; Czech Republic and Belgium). This type of programs may be seen as models and should be significantly expanded and strengthened through evidence-based studies. Future research should focus attention into a deeper and more detailed analysis of these particular intervention programs as well as on the duration of these attitude changes over time. The use of valid instruments such as the Portuguese version of the CAIPE-R seems to be very relevant in order to ascertain the impact of awareness programs in Portuguese schools.

### **Perspective**

In summary, results from the present study showed that indices of overall model fit moderately support the two factors structure for the attitudes scale with four out of six criteria reaching the cut-off intervals acceptable to confirm the model fit, providing important evidence for the validity and reliability of the instrument. Therefore, present results confirm CAIPE-R as a valid and reliable instrument to assess attitudes of students without disabilities toward including peers with disabilities in their GPE classes, promoting additional interest and adequacy for the use of CAIPE-R in future research actions with this scope.

### **Acknowledgements**

The authors would like to thank César Rodrigues, Fabiana Gonçalves, Gonçalo Gomes, Joana Amaral, José Godinho and Marco Nobre for their contributions in data collection.

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**CHAPTER VI – Changing attitudes through Physical Education:  
Influence of an awareness program on students perceptions  
toward peers with disabilities**

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**Submitted to the *Psychological Reports***





## **Changing attitudes through Physical Education: Influence of an awareness program on students perceptions toward peers with disabilities**

### *Summary*

The main purpose of this research is to ascertain the impact of an awareness program on students' attitudes towards the inclusion of peers with disabilities in Physical Education (PE).

Participants were 509 students without disabilities (235 girls and 274 boys, 11 to 16 years, mean age  $13.32 \pm 1.11$ ), who attended middle Portuguese schools. The awareness intervention consisted in one-week program. The Children's Attitude towards including *Children with disabilities in Physical Education - Revised* scale (CAIPE-R) (Block, 1995) was used in a pre and post-test design. Results showed statistically significant differences for most variables analyzed including gender and previous contact to disability. We also found the incorporation of the awareness program had a positive and significant influence on changing students' attitudes towards the inclusion in PE. Future research should include a more detailed analysis of intervention programs.

KEYWORDS: PHYSICAL EDUCATION, DISABILITY AWARENESS PROGRAM; ATTITUDES

### *On the way to inclusion*

Inclusion of students with disabilities is one of the main school reform movements of the past several years in many countries (O'Brien, Kudlacek and Howe, 2009) including Portugal. Due to a sequence of social, legislative and political measures that have emphasized equal participation and access of people with disabilities in the society, inclusion today is an international and national imperative. The Salamanca Statement and its Framework for Action (UNESCO, 1994) has been pointed out as the most important international document in the field of inclusive education, claiming that "regular schools with an inclusive orientation are the most effective means of combating discriminatory attitudes, creating welcoming communities, building an inclusive society, and achieving an educational for all". Despite the existence of policies promoting inclusive philosophies is not by itself sufficient to guarantee the implementation of these designs in regular schools.

In Portugal, public policies require all students with disabilities to be included in regular school. However, the educational responses for students with disabilities and other special needs began in the mid-1970s. Meanwhile, human resources, different types of services and resources, provision of specialized training and availability of financial resources (mainly for special schools) have multiplied (Costa, 1996). Since the mid-twentieth century to the present days, development in Portugal was supported by numerous of legislative measures (e.g. Public Law PL 317/76; PL 35/90; PL 105/97). The integration of students with disabilities in regular education has increased considerably with the regulations of PL 319/91. It also was the intent of the current Constitutional Portuguese Government "to promote equality of opportunity, to value education and to encourage improvements in the quality of teaching, promoting and encouraging democratization school inclusion of all children and young people" (PL 3/2008). One can see three distinct phases of special education evolution in Portugal: segregated education (with regular school and special schools), integrated education (which corresponds to the opening of school for students with any special needs) and finally, inclusion

characterized by aligning systems for regular and special education in the same school and classes to response to students diversity.

According to Costa and Rodrigues (1999), in Portugal, in 1997, 75% of students with special education needs already received their education in regular schools. Recent data (Rodrigues and Nogueira, 2010) indicates that the percentage of pupils with special educational needs attending regular school is now more than 98% these figures put Portugal in the group of European countries with highest rate of inclusion education of students with disabilities.

The existence of policies promoting inclusive philosophies is not by itself sufficient to guarantee the implementation of these designs in regular schools. For example, in the United States legislation focusing on placing children with disabilities in setting with peers without disabilities was enacted in 1975. However, research shows that teachers do not always feel prepared for to teach children with disabilities in inclusive settings, and the experiences of children with disabilities has not always been positive (Block and Obrusnikova, 2007).

#### *How powerful is Physical Education?*

According to Sherrill (2004), the success of inclusion depends on a great level on the quality of PE programs and on the extent to meet individual differences. Research on pupils' attitudes towards inclusion of students with disabilities in PE has become an area of international interest, since this perception may be crucial for a successful inclusion. There has been interest in the United States of America regarding attitudes children without disabilities towards inclusion (e.g. Block & Obrusnikova, 2007; Obrusnikova, Válková & Block, 2003; Karlyvas & Reid, 2003; Slininger, Sherrill & Jankowski, 2000; Loovis and Loovis, 1997; Block & Zeman, 1996; Tripp, French, & Sherrill, 1995; Block, 1995; Vogler & Block, 1994; Archie & Sherrill, 1989). Rodrigues (2003) argued that the focus of inclusion in PE has been insufficiently addressed in Portugal, and that PE may actually be a key area to make regular schools more

inclusive. Moreover, inclusive education can benefit from the methodological proposals of PE, using the body and the sports as opportunities to celebrate the difference and to provide students with experiences that enhance cooperation and solidarity. However, physical integration by itself may not have an impact on children without disabilities' acceptance of peers with disabilities, because students without disabilities still lack understanding and awareness about the capabilities of their peers with disabilities. Some of the barriers encountered by students with disabilities are social acceptance and interaction by their peers, and research seems to point out that negative attitudes and low levels of acceptance can result in exclusion in activities, including in PE (e.g. Frese & Yun, 2007; Goodwin & Watkinson, 2000). To increase social awareness, understanding, and acceptance toward disability, awareness programs should focus on "abilities" rather than limitations of individuals with disabilities (Frese & Yun, 2007). Disability sports can be used as disability awareness activities in PE curricula, emphasizing the abilities of individuals with disabilities. Research indicates that a disability sport awareness unit could positively impact on students without disabilities' levels of general acceptance and knowledge of people with disabilities (e.g. Panagiotou, Evaggelinou, Doulkeridou, Mouratidou, & Koidou, 2008; Van Biesen, Busciglio & Vanlandewijck, 2006). Although there have been several studies recently on the effectiveness of disability awareness programs, few have examined the effectiveness of the implementation of disability awareness programs in changing attitudes of children without disabilities toward inclusion of peers with disabilities in PE. In Europe research on the effects of a disability awareness program has been done in countries such as Greece (Panagiotou et al., 2008), Czech Republic (Liu, Kudláček & Jesina, 2010; Jesina, Lucas, Kudláček, Janecka, Machová, & Wittmannová, 2006), Israel (Hutzler & Levi, 2008), and Belgium (Van Biesen, et al, 2006). The Children's Attitude toward Inclusion in Physical Education – Revised (CAIPE-R) (Block, 1995) has been the survey most often used in Europe to measure the impact of an awareness program in attitudes of students without disabilities towards inclusion in PE. For example, Panagiotou et al., (2008) examined the effect of the "Paralympic School Day" (PSD) program on the attitudes of 5th and

6th grade Greek students without disabilities and the effect of gender differences on the inclusion of children with disabilities in PE. The 178 children were divided into two groups, (an experimental  $n = 86$  and a control group  $n = 92$ ). The experimental group received the PSD program, aimed at creating awareness and understanding of people with disabilities. Results showed significant differences on the experimental group in general attitudes. They suggested the success and development of the Paralympic Movement have created the need for an educational area in PE, and including Paralympic ideas in PE curriculum could be an effective pedagogical method to create awareness and understanding toward persons with disabilities, as acquiring an attitude of acceptance and appreciation of individual differences is a vital competence in PE curriculum (Panagiotou et al., 2008).

Although research has increased in the last years, results are still inconclusive as different methodology is being used. Unfortunately, to date there has been no published research in Portugal on attitudes of children without disabilities towards inclusion in PE. Therefore, this study is of extreme importance in Portugal, as it may become a relevant instrument for the development of future interventions, giving important information for a successful inclusive PE. In addition, this study may give us some insight of pupils' attitudes towards the inclusion of students with disabilities in PE. Therefore, the main purpose of the present research is to assess the impact of an awareness program, the "Adapted PE Week" on students' attitudes towards the inclusion of students with disabilities in PE, using the Portuguese version of the CAIPE-R (Block, 1995) validated by Campos, Ferreira and Block (in press) and to scrutinize which attributes might have a positive effect on attitudes.

## Method

### *Participants*

Participants included a convenient sample of 509 students (235 girls, mean age  $13.16 \pm 1.01$  and 274 boys, mean age  $13.46 \pm 1.17$ ) ranging in age from 11 to 16 years (mean age  $13.32 \pm 1.11$ ). Participants for this study were recruited from 3 middle schools in Portugal. Approximately half of the participants (44.6%) reported having family, friends or close neighbors with some type of disability, and 151 (29.7%) reported having a classmate with disabilities. With regard to PE classes, less than one-quarter of the participants (24.4%) already had a peer with disabilities in their classes. Concerning competitiveness, 81 (15.9%) students considered to be very competitive, 334 (65.6%) more or less competitive and 94 (18.5%) said they were not competitive.

### *Measures*

The *Children Attitudes towards Inclusion in Physical Education - Revised - CAIPE-R* (Block, 1995) was used. It was developed to assess attitudes of students in regular schools toward including children with disabilities in their PE classes. The CAIPE-R consists of a description of a hypothetical student with a disability presented by a written vignette and numerous questions related to students' demographics and experience being with individuals with disabilities. The survey has six items about including a student with a disability in PE (general attitude subscale), and five optional items about modifying rules of sports in PE (sport-specific attitude subscale). Students respond to each item using a 4-point Likert scale (4 = *yes*, 3 = *probably yes*, 2 = *probably no*, and 1 = *no*). The general attitude subscale focus on beliefs toward the inclusion of students with disabilities in regular PE and the sport specific subscale focus on beliefs toward modifications to group games. By focusing solely on attitudes toward inclusion in PE, the CAIPE-R is ideally suited for regular and adapted physical educators who are concerned with the impact inclusion in PE has on

students without disabilities. In addition, the CAIPE-R could be used by researchers interested in studying and understanding the influence of such factors as type and severity of disability, specific training of peers without disabilities, types of contact (e.g., peer tutor, friend, classmate) gender and age (Block, 1995).

The CAIPE-R is a valid and reliable instrument for measuring attitudes of students without disabilities towards including students with disabilities within the PE environment (Block, 1995). The original version of the CAIPE was revised and validated based on a sample of 208 fifth- and sixth-grade students. The standardized item alphas reported were .78 to the general and .67 to the sport specific subscales, indicating good to moderate consistency of these subscales (Block, 1995). The Portuguese translated version of CAIPE-R (Campos, Ferreira and Block, in press) was used. The Portuguese version presented the value of alpha ( $\alpha$ ) Cronbach of 0.72 for general attitude subscale and 0.48 for sport-specific subscale and confirmatory factor analysis support the Portuguese version as a valid and reliable instrument.

For coding purposes, the General Statement 2 was coded in reverse. A single CAIPE-R attitude score was computed by summing scaled statements, or two scores (general PE and sport modification) can be calculated and analyzed (Block, 1995). Although the original version used a description of a child with disability participating in a softball game, the Portuguese version was adapted describing a child with physical disability participating in a basketball game, which is a popular game in Portuguese schools.

### *Procedures*

The CAIPE-R questionnaire was conducted one week prior (pre-test) and one week after (post-test) the awareness program. To assess changes in student's attitudes, the CAIPE-R was administered before and after the implementation of the disability awareness program. . One week after the first

application students received the awareness program on their PE classes. This program consisted one-week program (2 PE classes: 90' and 45') and included Paralympic sports, adapted activities and films on internet sites.

Institutional ethics board's approval was obtained and the CAIPE-R was administrated at the beginning of the class by the PE teacher. Before the completion of the questionnaire, students were told that their responses were anonymous and that they could withdraw at any time, and that their participation was voluntary and confidential and that there were no correct or incorrect answers, so that the answer to each question depended on how respondents felt about what the researcher said. First a short text was read describing a hypothetical situation of a student with physical disabilities, which presented some difficulties in physical activity because the use of a wheelchair. After filling the biographical data (age, gender, grade and previous exposure to disabilities) the teacher read aloud each of the statements related to the hypothetical situation that has previously been used, playing basketball as a practical example. After each question the teacher walked among the students to make sure they understood how to complete the survey.

After the first application of the instrument, all physical educators administered a one week (a class of 90 minutes and a class of 45 minutes) Paralympic sports program where students participated as athletes with a disability in such sports as boccia (wheelchair), goalball (blindfolded), sitting volleyball, wheelchair basketball, and other adapted activities. Before the practical activities theoretical and historical information about the Paralympics was presented to participants via the online channel "Paralympic Sport TV" ([http://www.paralympic.org/Media\\_Centre/ParalympicSport.TV](http://www.paralympic.org/Media_Centre/ParalympicSport.TV)). These activities were undertaken to acquaint students with some specific sports for people with disabilities as well as the opportunity to experience these sports. Activities also were designed to help participants realize that people with disabilities can also compete in "traditional" sports. The post-test administration of the CAIPE-R was conducted after the Paralympic program.



## *Analysis*

The Statistical Package for the Social Sciences (SPSS) version 18.0 was used for the data analysis. Analyses included descriptive statistics (percentages, means and standard deviations) and parametric such as independent samples t-test and one-way ANOVAs, post hoc Scheffe and paired t-test. In addition, correlation analysis was conducted to determine relations between personal attributes (e.g., gender, competitiveness) and attitudes. The level of significance for statistical analyses was set at .05 level Cronbach (1951).

## Results

To assess student's perceptions towards inclusion of children with disabilities on PE classes, mean comparisons and t-test were conducted for gender and previous contact to disabilities (at two different levels: family/friends and PE class) before and after the awareness program (Table 1).

Table 1 – Descriptive and t-test results for Gender, family contact and PE class contact (a) pre-test; (b) pos-test

		Pre-test (a)											
		Global Attitude				General PE				Sport specific			
		Mean	SD	t	p	Mean	SD	t	p	Mean	SD	t	p
Gender	Female	3.37	.28	2.96	.003*	3.23	.39	2.93	.004*	3.54	.33	1.92	ns
	Male	3.28	.40			3.12	.51			3.47	.43		
Family contact	Yes	3.37	.32	2.65	.008*	3.21	.43	1.59	ns	3.56	.38	3.10	.002*
	No	3.28	.38			3.14	.49			3.45	.41		
PE contact	Yes	3.43	.33	4.26	.000*	3.29	.39	3.45	.001*	3.60	.38	3.29	.001*
	No	3.29	.36			3.13	.47			3.47	.39		

		Pos-test (b)											
		Global Attitude				General PE				Sport specific			
		Mean	SD	t	p	Mean	SD	t	p	Mean	SD	t	p
Gender	Female	3.46	.31	2.64	.009*	3.41	.39	3.85	.000*	3.52	.39	.25	ns
	Male	3.38	.42			3.26	.49			3.51	.49		
Family contact	Yes	3.48	.34	3.31	.001*	3.39	.42	2.47	.014*	3.59	.39	3.07	.002*
	No	3.37	.39			3.29	.47			3.47	.48		
PE contact	Yes	3.54	.31	4.06	.000*	3.48	.37	4.17	.000*	3.62	.41	3.06	.002*
	No	3.38	.38			3.28	.47			3.49	.45		

\*p < 0.01; \*\*p < 0.05

There were significant differences for gender both in the pre-test and the posttest. Both groups had relatively positive attitudes; however girls had statistically significant more positive attitudes compared to boys, both on the global scale (pre-test: p=0.003 and posttest: p=0.013) and on the general attitude on PE classes subscale (pre-test: p=0.004 and posttest: p< 0.001).

Exposure to disability in a family context revealed significant outcomes for all variables, as students with previous contact had significantly higher attitudes values in both pre-test and posttest scores, on the global scale (pre-test:  $p=0.012$  and posttest:  $p=0.001$ ), on the general attitude on PE classes subscale (pre-test:  $p=0.045$  and posttest:  $p=0.020$ ) and on sport specific subscale (pre-test:  $p=0.46$  and posttest:  $p=0.001$ ). Participants who had previous contact with disability in their PE classes had significantly higher attitude scores compared to participants without previous contact in PE classes, both on pre-test and posttest scores (global scale - pre-test:  $p < 0.001$  and posttest:  $p < 0.001$ ), on the general attitude on PE classes subscale (pre-test:  $p < 0.001$  and posttest:  $p < 0.001$ ) and on Sport specific subscale (pre-test:  $p=0.004$  and posttest:  $p=0.005$ ).

The table below shows the statistic results for competitiveness and grade level.

Table 2 - Descriptive and ANOVA One way results for competitiveness and grade level (a) pre-test; (b) pos-test

		Pre-test (a)											
		Global Attitude				General PE				Sport specific			
		M	SD	F	p	M	SD	F	p	M	SD	F	p
Competitive level	Very	3.23	.44			3.04	.55			3.46	.44		
	+ -	3.31	.34	9.79	.000*	3.15	.42	10.67	.000*	3.49	.39	2.80	ns
	Not	3.45	.30			3.35	.48			3.58	.32		
GRADE	7 <sup>th</sup>	3.37	.33			3.32	.40			3.44	.46		
	8 <sup>th</sup>	3.41	.32	18.95	.000*	3.31	.38	27.69	.000*	3.54	.43	3,54	.030**
	9 <sup>th</sup>	3.19	.37			3.02	.46			3.43	.45		

		Pos-test (b)											
		Global Attitude				General PE				Sport specific			
		M	SD	F	p	M	SD	F	p	M	SD	F	p
Competitive level	Very	3.33	.47			3.22	.57			3.46	.55		
	+ -	3.42	.35	4.01	.019**	3.33	.42	4.97	.007*	3.52	.42	1.04	ns
	Not	3.49	.34			3.43	.41			3.55	.42		
GRADE	7 <sup>th</sup>	3.52	.35			3.45	.41			3.60	.44		
	8 <sup>th</sup>	3.40	.34	7.30	.001*	3.36	.39	6.54	.002*	3.44	.51	4.66	.010*
	9 <sup>th</sup>	3.37	.42			3.29	.48			3.49	.53		

\*p < 0.01 \*\*p < 0.05

Grade level also appears to influence student's attitudes towards inclusion in PE class, as we can see on ANOVA tests. Even though both groups had relatively high scores on both the global and general PE scales, 9<sup>th</sup> grade students had significantly lower scores compared to 8<sup>th</sup> and 7<sup>th</sup> graders. It is clear, from our results, that student's in 7<sup>th</sup> grade revealed higher mean values.

On the pre-test, 9<sup>th</sup> grade students have significantly lower scores on global scale as well as on general PE subscale ( $p=0.000$ ). Posttest results reveal that for global scale, 7<sup>th</sup> grade students have significant higher results than 8<sup>th</sup> ( $p=0.009$ ) and 9<sup>th</sup> graders ( $p=0.003$ ). For general PE scale, results are significant for 7<sup>th</sup> graders compared with 9<sup>th</sup> graders ( $p=0.002$ ). Sport specific subscale revealed a significant effect between 7<sup>th</sup> graders and 8<sup>th</sup> graders ( $p=0.011$ ). As we can see from the above results, we can assume that older students have significantly lower levels of attitudes on both scales. That means that younger students are more likely to have favorable attitudes towards including peers with disabilities in PE.

Significant differences were also found for competitive level (Table 2). Generally, less competitive students have more favorable attitudes when compared with competitive students. Pretest results show significant differences on both global scale and general PE subscale, where less competitive students revealed more favorable attitudes. After the awareness week, results slightly changed, there is significance between noncompetitive students and the most competitive, both for global scale ( $p=0.025$ ) and general PE subscale ( $p=0.007$ ). An interesting result is that, on sport specific subscale no significant differences were found.

To assess changes in the attitudes of student's toward inclusion in PE classes, paired samples t-test was calculated. Table 3 presents means, standard deviations and correlations for the pretest and posttest comparison and table 4 presents the Paired Samples Test.

Table 3 - Descriptive and correlations Paired Samples T-Test

		Mean	SD	Correlation	Sig.
Pair 1	Global a	3.32	.36	.646	.000*
	Global b	3.42	.38		
Pair 2	General a	3.17	.46	.629	.000*
	General b	3.33	.45		
Pair 3	Sport specific a	3.50	.39	.513	.000*
	Sport specific b	3.52	.44		

\*p < 0.01

The mean pretest scores were lower than the scores revealed after the intervention program, for all the dependent variables. Overall, students rate their scores higher on the posttest. The significance of the correlation is p=.000 for the three pairs. We can find high correlations for pair 1 (.629) and pair 2 (.635).

Table 4 - Paired Samples T-Test

		Mean difference	SD	T	Sig.
Pair 1	Global a	-1.05	3.39	-7.00	.000*
	Global b	-.096	.308		
	General a	-.096	2.36	-9.22	.000*
Pair 2	General b	-.161	.393		
	Sport specific a	-.088	2.07	-.96	-
Pair 3	Sport specific b	-.018	.414		

\*p < 0.01

The awareness program appeared to be significantly effective in increasing attitude level. The paired T-test revealed significant differences for global scale ( $t=-7.002$ ;  $p< 0.001$ ), and for general attitude ( $t=-9.218$ ;  $p< 0.001$ ). The significant increases in attitudes shown within pre and posttest are not surprising, although students did not differ in the sport specific subscale.

## Discussion

The purpose of the present research was to assess the influence of an awareness program on Portuguese students' attitudes towards the inclusion of peers with disabilities in PE classes and to analyze which variables may influence their attitudes. It is important to notice how high/positive the attitudes were throughout the study. Even though significant differences were found from pre to posttest as well as with some of the variables, it is important to emphasize that effect sizes were small due to the high attitude scores. Portuguese students may have high attitudes even before the intervention because they already have some contact with children with disabilities in different contexts. Other reason why we probably got such positive results is the large sample of the study.

In respect to gender differences, it seems that girls have more positive attitudes than boys with regard to the inclusion of students with disabilities in PE, showing statistically significant differences in all dependent variables. The finding that females had better attitudes than males supports a growing body of literature on gender differences in attitudes toward individuals with disabilities (e.g. Van Biesen, et al, 2006; Voeltz, 1982; Hazzard, 1983, Condon et al, 1986, Tripp et al, 1995). Block (1995) also found that females had more favorable attitudes toward children with disabilities compared to males. In the study conducted by Van Biesen, et al (2006), girls had better attitudes than boys in all dependent variables. However, Block (1995) pointed out that gender was only significantly correlated with the general PE subscale. Panagiotou et al (2008)

and Liu, et al (2010) came to different conclusions as no significant differences in attitudes were found between boys and girls.

Regarding family contact, results indicate that students who have a family member, friends or neighbors with disabilities have significant more favorable attitudes for all dependent variables. Present results are similar to other studies For example, Block's (1995) study revealed that children who had a family member or close friend contributed significantly to higher general and sport specific attitudes. Also, Hutzler and Levi (2008) findings showed that the mean averages of students who have no family or close friends with disabilities were higher on all dependent variables. On the other hand, Van Biesen, et al (2006) did not find that previous contact with a close friend or family member with a disability influenced attitudes. People who have a close friend or family member with disability more naturally accept a classmate with a disability in PE and are more likely to accept changes to accommodate this child in games and activities in PE. Fact that can be possibly justified by the tolerance and acceptance established by close contact and possibly by a greater knowledge of their potential and their capabilities.

Exposure in PE classes revealed a significant effect in both pre-test and posttest. Students who have peers with disability in PE reveal better level on attitudes scores. This study supports previous research findings (e.g. Murata, et al, 2000). However, Block (1995) did not find significant results for this variable. According to Block (1995) was somewhat surprisingly that currently having a child with a disability in PE was not significantly associated with either general or sport specific attitudes in his research. Tripp, et al (1995), Slininger, et al. (2000) and Van Biesen, et al (2006) also didn't find statistically significant differences. Unexpectedly, Hutzler and Levi (2008), found statistically significant differences, where students without a peer with disabilities in PE presented a more positive mean value.

Overall, results obtained in the present study suggest that students without disabilities who have a more competitive nature have more negative attitudes toward inclusion of students with disabilities in PE. Hutzler and Levi



(2008) and Panagiotou et al. (2008), found no statistically significant for competitiveness level. Block (1995), found that self-reported non-competitive students had significantly higher attitudes scores compared to self-reported competitive students, and Van Biesen et al. (2006), conclude that the more competitive the students, the less positive their attitudes towards inclusion of peers with disabilities in PE. According to Kalyvas and Reid (2003), results indicate that students do not agree with the amendment of rules, this may be due to the fact that the adjustment in the rules can take the challenge and competition of the proposed exercises. It is possible that more competitive children believe inclusion of a student with disabilities and accommodations needed to make this student successful might decrease the intensity or even completely ruin games played in PE such as basketball and football.

Changes of attitudes from pre- to post-test were very significant for global scale and for general subscale. These results are supported by Van Biesen, et al (2006) and Panagiotou, Kudlacek and Evaggelinou (2006) which state that overall, the implementation of the awareness program had a positive influence on the attitudes of students without disabilities regarding the inclusion of peers with disabilities in PE. It was interesting to notice that there are no significant differences for sport specific subscale between before and after the awareness program. Some studies came across with similar findings (e.g. Liu, Kudláček & Ješina, 2010; Xafopoulos, Kudláček, & Evaggelinou, 2009) suggesting that students are willing to accept peers with disabilities in PE, but they don't agree with the many of the rule changes needed to accommodate them.

According to Block (1995), three attributes contributed significantly to general attitude toward inclusion in PE (school attended, gender, and having a family member or close friend with a disability), while only one attribute contributed significantly to sport-specific attitudes (having a family member or close friend with a disability). The present study supports the idea that attitudes correlate with gender; previous contact with disability (having a family member or close friend and PE); Competitiveness and grade level before the awareness program and after the awareness program some changes occurred: Gender,

grade level, having a family member or close friend with a disability, previous exposure on a class and on the PE, and competitive level were associated with both global scale and general PE subscale. Variables such as grade level, having a family member or close friend with a disability, previous exposure on a class and on the PE class were associated with sport specific subscale.

There are numerous positive outcomes of inclusion in PE based on research conducted in the past ten years. Data collection instruments indicated that students with disabilities (a) can be successfully included in PE when given proper support, (b) do not have any negative effect on peers without disabilities and (c) tend to have moderately positive attitudes toward peers with disabilities, but further research is needed (Block and Obrusnikova, 2005). Also previous research findings (e.g., Block & Zeman, 1996; Murata & Jansma, 1997; Vogler, Koranda & Romance, 2000; Obrusniková, Block & Kelly, 2001) suggest that the inclusion of students with disabilities does not adversely affect the participation and/or motor performance of students without disabilities. However, are those students prepared to receive peers with disabilities in PE? Our results indicate they are prepared, particularly if they would be involved in an awareness program with adapted physical activities in PE. It seems that students who have experienced the situation as if they were students with disabilities, which made it feel more intrinsically to the conditions and limitations of people with disabilities. This fact has them eventually prone to a more positive attitude. Our experience with the awareness program showed (and the results of the present study corroborate it) that students attitudes improved after the implementation of the program and the students became more aware of inclusion of peers with disabilities and more open to their participation in PE. In addition to the implementation of these programs, curricular or extra-curricular activities, attention must also be in teacher training and awareness of students and parents, so the inclusion would be actually a success in PE and consequently, in schools.

As mentioned previously, the absence of other studies in Portugal on this issue leaves us no comparative benchmark, so we encourage colleagues to adopt this theme in future research. One limitation of the present study was the absence of a control group, as all children received the treatment. Future studies should also consider a control group. But probably more important than doing these surveys is follow up the implementation of activities as the awareness programs like the week of Adapted PE. This will certainly be a crucial step along the path that seems to be the inclusion of students with disabilities in regular schools in general and in PE in particular. We believe our study can be a key tool to identify problems and start actions to avoid negative attitudes of the students and in addition, results can draw some conclusions about attitudes of students without disabilities towards the inclusion of peers with disabilities in PE classes. This could be a crucial contribution for future action in this scope, as well as for the success of inclusion in schools in Portugal. We underline the need of more knowledge and consequently more scientific research in order to obtain more conclusive results that could be generalized and thus help schools and teachers define strategies that should lead to a high-quality educational atmosphere such a positive attitude might lead to an even more positive attitude from pupils towards including students with disabilities in PE, and consequently at school and in general society. Future research should include a more detailed analysis of this intervention programs as well as changing the PE curricula and PE school books by including adapted sports and other awareness activities. We also recommend doing some follow up qualitative work such as focus groups to find out why attributes such as gender, competitiveness, and previous exposure seems to make a difference.

We still have a long way to go and certainly many studies are needed to be able to draw some effective conclusions. Despite the many hurdles, whether they be cultural, in the field of mentalities or architectural (adaptation of pavilions, pools, classrooms), it is essential to move forward with these type of

awareness programs so that we can make progress in this area of knowledge with the main objective to create conditions for a more equitable education for all. We believe there's still a sinuous path to achieve inclusive education, but we also believe that PE and the awareness programs can act as a catalyst to reach it.

### **Acknowledgements**

The authors would like to thank César Rodrigues, Fabiana Gonçalves, Gonçalo Gomes, Joana Amaral, José Godinho and Marco Nobre for their contributions in data collection.

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**CHAPTER VII – Exploring Portuguese teacher’s voices about  
inclusion in Physical Education: A qualitative analysis**

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**Submitted to the *European Physical Education Review***



## **Exploring Portuguese teacher's voices about inclusion in Physical Education: A qualitative analysis**

### **Abstract**

There are several international studies about teacher's attitudes towards inclusion in Physical Education, but little research has been done in Portugal. Yet, to truly understand Portuguese physical educators concerns about inclusion their voices must be heard. For this reason we held a semi-structured interview in a focus group with 5 physical educators aiming to identify the perceptions and challenges of PE teachers with respect to inclusion in their PE classes.

Findings of the present research suggest that PE teachers advocate for inclusion, pointed advantages for both students with and without disabilities although they raised some challenges that can be an obstacle to its effectiveness, including the lack of specific training in APE and type and level of the student's impairment. These results emphasize the need for specific preparation of Portuguese PE teachers in APE not only during the university curricula but also during their professional careers.

**Keywords:** Physical educators; perceptions; concerns; inclusion; attitudes; physical education classes

## Introduction

Since the Universal Declaration of Human Rights (1948), there has been a continual cultural shift towards the inclusion of individuals into general society (e.g. World Program of Action, 1982; Standard Rules on Equalization of Opportunities for Persons with Disabilities, 1993; United Nations Convention on the Rights of Persons with Disabilities, 2006). The right to inclusive education was initially stated in the Salamanca Statement and Framework for Action (UNESCO, 1994) which emphasized that schools need to change and adapt to diversity. Because of these international demands, governments ought to eliminate legislative and constitutional barriers to inclusive education and must ensure that one school system is responsible for the education of all children.

This is clearly evident in the Portuguese Public Law 319/91, recently changed to Public Law 3/2008 which promotes the equality of opportunity and encourages improvements in the teaching quality, promoting and encouraging democratization school inclusion of all children and young people. In Portugal, policies require all students with disabilities to be included in regular school settings, even though most schools, teachers and students without disabilities do not seem to be ready for this new agenda. In 1997, 75% of the students with special education needs (SEN) in Portugal received their education in regular schools (Costa & Rodrigues, 1999) while in 2001 this percentage increased up to 93% (Ministry of Education, 2001). Clearly efforts by the Portuguese government and advocates for children with disabilities have resulted in the generalized inclusion of the majority of students with disabilities.

General physical education (GPE) is a subject where inclusion can take a vital role. As a result, inclusion in GPE has become an area of international interest (Block & Obrušnikova, 2007; O'Brien, Kudlacek, & Howe, 2009). Many professionals believe that students with disabilities should be included in all national educational curricula, including GPE (e.g. Block, 1995; Duchane & French, 1998). The inclusion of students with disabilities in GPE depends on many factors, but teachers' favorable attitudes is one of the key factors needed for successful inclusion (Conatser, Block, & Lepore, 2000; Downs & Williams,

1994; Hodge et al ., 2002; Palla & Mauerberg-deCastro, 2004, Patrick, 1987; Rizzo, 1984; Vispoel & Rizzo, 1991; Sherrill, 1998; Tripp & Sherrill, 1991). The GPE teacher is the main facilitator in the motor skills and sports teaching - learning process for students with and without disabilities in different environments, and in promoting successful learning for all students in their classes (Palla & Mauerberg-deCastro, 2004; Rizzo, 1995). Therefore attitudes of GPE teachers are critical to successful inclusion.

Schools can actively engage in challenging negative societal attitudes to disability, and teachers' attitudes towards students with disabilities have a significant impact on their educational experience (NDA, 2008). Several factors can affect teacher's attitudes regarding teaching of students with disabilities in regular school, such as beliefs, intentions, feelings, fears, prejudices and tendencies to act on behalf of past experiences (Fishbein, 1967). GPE teachers generally have favorable attitudes towards inclusion of students with disabilities in their classes (e.g. Pinheiro, 2001; Serrano, 1998; Zannadrea & Rizzo, 1998). According to Ajzen and Madden (2005) and Theodorakis, Bagiatis and Goudas (1995), the greater the number of requirements that a teacher has, and the fewer obstacles or impediments they foresee, the better their perceived competence.

The literature points out other significant variables affecting attitudes towards teaching students with disabilities in GPE classes (e.g. Avramidis & Norwich, 2002, Rizzo & Kirkendall, 1995; Obrusnikova & Block, 2007; Rizzo & Kirkendall, 1995). Variables related to students with a disability, such as grade level and type of disability can influence teacher's attitudes. Students with mild disabilities are viewed more favorably compared to students with more severe disabilities (Duchane & French, 1998; Rizzo, 1984; Rizzo & Vispoel; Tripp, 1988), although other authors have concluded otherwise (Downs & Williams, 1994; Zannandrea & Rizzo, 1998). There are also teacher-related variables, including perceived competence and perception of experience in teaching students with disabilities as well as academic training in special education or APE (Kowalski & Rizzo, 1996; Rizzo & Kirkendall, 1995; Vispoel & Rizzo, 1991, 1992; Zanandrea & Rizzo, 1998). Attitudes of GPE teachers are more likely to

be favorable towards working with students with disabilities if they have higher pedagogical preparation (Vispoel & Rizzo, 1991), higher academic training in APE and Special Education (Block & Rizzo, 1995, Kowalski & Rizzo, 1996; Vispoel & Rizzo, 1991, 1992; Theodorakis, Bagiatis & Goudas, 1995; Tripp, French & Sherrill, 1995) and more experience teaching students with disabilities (Avramidis & Norwich, 2002; Conatser, Block, & Lepore, 2000; Block & Rizzo, 1995; Folsom-Meek et al. 1999; Kowalski & Rizzo, 1996; Mauerberg-deCastro & Palla, 2004; Pinheiro, 2001; Vispoel & Rizzo, 1991, 1992; Tripp, French & Sherrill, 1995).

According to Folsom-Meek et al. (1999), the experience with individuals with disabilities, both qualitatively and quantitatively, is an important factor in the development of attitudes. Avramidis and Norwich (2002) noted that teachers who accept responsibility for teaching a wide diversity of students (recognizing the importance of the development of students) and who feel confident in their management skills and education (as a result of their practice), can easily implement inclusive programs. Rizzo (1984) also notes that the curriculum of PE can, by itself, influence the attitudes of teachers towards the education of students with disabilities. Thus, the author suggests the development and implementation of an alternative curriculum that can be adapted to PE, according to the varied needs of students with disabilities.

As seen, research shows that GPE teachers' attitudes tend to be positive, but factors such as disability type and perceived competence influence attitudes and the specific teaching training of physical educators also is a critical factor in both predicting attitudes and perceived competence. Although the profusion of quantitative studies related to teachers attitudes towards inclusion there is a limited number of studies using qualitative data to report teachers' perceptions on inclusive PE (e.g. Hodge et al., 2004; LaMaster, Gall, Kinchin, & Siedentop, 1998; Lienert, Sherrill, & Myers, 2001; Morley, Bailey, Tan and Cooke, 2005; Sato & Hodge, 2009; Sato, Hodge, Murata, & Maeda, 2007; Smith, 2004; Qi and Ha, 2012; Subban & Sharma, 2005). There is very little

information about attitudes and preparation of GPE teachers in Portugal, even though inclusion is now becoming common place. In this sense, the rationale for the present study emanated from the need to listen to teacher’s voices in order to ascertain Portuguese teacher’s perceptions about inclusion by understanding their points of view in PE classes.

## Method

Participants were five GPE teachers, four male and one female, ages between 25 and 32 years (mean age = 27.6). All completed an undergraduate program in physical education, with at least one APE course and one was also engaged in a workshop focusing teaching students with disabilities. Demographic data on the participants are presented on table 1.

	Gender	Age	Years of teaching experience (T.E.)	T.E. with students with disabilities	Workshop in APE
<b>1 – Michael</b>	M	28	4	3	N
<b>2 – John</b>	M	25	3	1	N
<b>3 - Peter</b>	M	27	2	2	N
<b>4 – Martin</b>	M	32	6	3	Y
<b>5 – Ana</b>	F	26	4	2	N

Table 1 – Summary of participant’s demographic information

The GPE teachers held a degree in physical education, and on average taught PE for 3.8 years, having on average 2.1 years of teaching students with disabilities. They all taught students with various disabilities (e.g. autism; physical disabilities; Down syndrome).

### *Data collection and procedures*

Data collected consisted of a focus group semi-structured interview. A script of interview questions (focus questions listed below) was developed which contained the thematic topics to be addressed throughout the session, as well as some key issues, that is, the interview guide questions were inductively generated and reflected thinking, feeling and knowing questions (van Manen, 1997 in Morphy & Goodwin, 2012). A draft interview was conducted by interviewing two PE teachers in order to organize the semi-structured format. The interview is the most common method of data collection in qualitative research and it is a collection method that is established between the researcher and participants, in order to collect information on the research questions formulated (Creswell, 2007). Ethical approval was obtained and informants were invited to voluntarily take part in the present research aiming at finding out their opinions about inclusion in PE.

#### *Focus questions:*

1. What is your opinion about the inclusion of students with disabilities in mainstream education? And particularly in PE class?
2. Do you find inclusion advantageous or disadvantageous?
3. How do you classify your attitudes toward inclusion in PE classes? Are you for or against this education policy?
4. What factors or variables can you point out as contributing to the improvement of attitudes and consequently your behavior towards inclusion?

All participants were seated around a table arranged in a U shape with the researcher sitting in the middle of the U facing the participants. Two voice recorders and digital cameras were used to capture the discussion as well as gestures made by participants. For this analysis, each participant was given an individual identification code and a pseudonym in order to enable the correct transcription of the verbatim for each interview, guaranteeing the anonymity. The interviews were transcribed including description of non-verbal reactions of



the interviewees, and afterwards analyzed and classified according to thematic topics defined.

### *Trustworthiness*

To establish trustworthiness the researchers used different strategies such as peer review (i.e. first and second author worked independently at first and later converged in analyzing and interpretation the data), member check (i.e. after the verbatim transcription we asked the participants to confirm or correct the reconstruction of their statements) and rich and thick description through verbatim transcription of the all interviews (Creswel, 2007) in order to bring plausibility to the data.

### *Data analysis*

The semiotic analysis emerged on several recurring themes. To isolate the emerging thematic statements, we conducted a line-by-line analysis and phrases that were conceptually similar were gathered together in thematic statements.

## **Results and Discussion**

The main purpose of this exploratory study was to hear to physical educator's voices, acceding to their opinions, values and expectations towards inclusion in GPE classes. In order to identify common threads from the thematic analysis of the data three themes were gleaned: a) attitudes towards inclusion, b) teaching challenges, and c) keys for inclusive PE. Each theme will be discussed in detail with several direct quotes to support it.

### ***Attitudes towards inclusion***

Participants were asked to talk about their opinions regarding the placement of individuals with and without disabilities in inclusive PE classes. Teachers hold favorable attitudes and there is a sense of predisposition to inclusion. Generally respondents expressed several advantages for all persons

involved, considering that inclusive PE improves social acceptance and social competence for both students with and without disabilities. John refers that “Being with other colleagues is absolutely advantageous to them [students with disabilities]”. All the interviewers shared that opinion.

*“I think it is more valuable to be with other colleagues considered as normal. Being integrated is extremely beneficial, even in the sense of mutual support that can occur between students, creating strong friendships for life.” (Martin)*

In analyzing the teachers’ statements, it was clear that they believed that students with disabilities, despite of their differences, must pursue a gradual, constant and progressive track in their neighborhood school where they belong. The testimony of Ana revealed a concern and as one referred, an “... ability to adapt to the barriers that each student has, being able to help them overcome their difficulties and shortcomings. If we introduce an exercise to a student, we should be concerned about explaining in a way that he can understand, and thus accomplish it.” Michael added that it is their responsibility to “... know how to receive and welcome the student the best way possible and include him in the class completely.”

All five teachers agreed that inclusive settings in GPE develop experiences of enormous benefits for students with and without disabilities in terms of social acceptance, and in regards to peers without disabilities, allows “... to put a student in charge, with its peer with disabilities, whose responsibilities are to help and to guide him along the class activities.” (Ana). Peter in this regard recalled that the interaction between students “... prepare them for life in terms of education and sensitivity to the future ... exploring ... their most human and social features.” It was also evident on John’s direct speech that being included “... is extremely beneficial, particularly in terms of mutual support between students ... and will enable all students to learn to work together”. On the other hand, the isolation and exclusion will result in lack of self-confidence regarding his situation;

*“He himself, will be questioned about it [exclusion], as well as colleagues might do this by creating habits / thoughts and discriminatory attitudes, that can erase him from the group, and this may be too complex for the child both at the present and in the future.” (Martin)*

Michael evoked “It prepares them for life in terms of education, on the future sensitivity to people who have more difficulties at all levels, not only to disability, but the level of poverty ... it develops them the more human and social side of life.”

Although inclusion is viewed as positive for students with and without disabilities, opinions were divided in terms of advantages to the educator. Regarding teaching students with disabilities in regular schools, on one hand some teachers consider that inclusive PE is also positive for teachers, as Peter recalled "... because the teacher will be able to learn from the child and their differences".

*“... to the teacher it can also be an advantage. By dealing with a child with disability you will gain experience for subsequent years, you find yourself better prepared and know-how to deal more effectively with these students. When you have a child with a disability during a whole year, you'll be able to learn from it regarding the differences she presents, and you'll grow with this situation. So, next year, if this situation repeats, you'll already know how to handle it, knowing how she reacts to certain stimuli, and so it is beneficial, and it is clear that the class will become more productive for all involved.” (Martin)*

On the other hand, some participants argue that inclusion only mean more work and will require additional time to plan the lesson “There is no advantage, for the teacher there is no advantages [in inclusion].” Ana shares that opinion in the matter of planning the lessons.

Generally teachers have a positive view regarding the placement of children with and without disabilities, expressing the opinion that both are not affected by inclusive classes, with respect to their overall development (Scruggs & Mastropieri, 1996; Villa et al., 1997). Overall present research findings support these assumptions. One explanation for this may be that inclusion is a recent process and it seems that teachers began to develop a greater sensitivity to issues of inclusion, meeting the most recent guidelines of educational policy established at national level. Another factor that appears to contribute to this trend is related with the academic curriculum of university courses, nowadays more appropriate to this reality and conveniently structured to train PE teachers. Participants in the present study are of a young age, which means they have received training on topics related with APE during their academic preparation.

### ***Teaching challenges***

We labeled the next theme as “teaching challenges” since all participants shared some worries about inclusive PE. The most common challenges and constraints discussed were: type and level of disability and lack of specific training in APE. Although participants advocate inclusive PE settings, they pointed out some challenges that significantly influence effective inclusion in their classes. Regarding to students related variables, type and level of disability were evoked and concerning teacher related variables emerged as relevant the lack of specific training in APE and the experience in teaching students with disabilities.

When asked to identify the differences between the type of disability in the matter of including students with disabilities in PE classes, participants were peremptory to say that they have more favorable attitudes toward hearing impairment, followed by intellectual disabilities, physical disabilities and visual impairment, respectively. The reasons they pointed out are related with practical implications in PE tasks, example comments about this include: "... because the student observes colleagues how to do the exercise, and does it after, overpassing easily the obstacle of the lack of hearing" (Peter) The opinions on this subject were consensual, and show that the strategy of demonstration not

only easily surpasses the hearing barrier, but also emerged as a "... way to monitoring the time ..." and "... so that all students understand easily what is asked of them." (John).

Martin argues that "... the physical disability turns out to be more complicated [than hearing impairment], because the student always ends up being dependent on others to perform the exercises ..." and Ana shares the same opinion. Though John said, "we always have the possibility to make changes in the games and adapt them to the demands of the students. There are even a number of games targeted to students with physical disabilities, which we teachers easily introduce in the classroom."

Participants relegate visual impairment as the most difficult disability to accommodate in PE classes, in John's words "visual impairment also seems to me as the most complex" although Martin argues that "we have always the opportunity with the blind students to put a peer to hold hands so that he can help and direct the blind colleague over the exercises," but Peter maintained his opinion saying "throughout the activities there are always stimuli that can only be apprehended through sight, and it becomes very problematic that a student cannot face the class as a whole. He will always be restricted and limited in his physical life experience in the classroom". Ana recalled "... there are always stimuli that can only be apprehended through sight, and this makes it very difficult for the student to face the class in its entirety. The student will always be conditioned and limited in their physical experiences ... Moreover, "blind children do not yet have autonomy and responsibility that allows them to face the class as a 20 years blind person."

The characteristics of a student with hearing impairment allows the same dynamic of a PE class, to the extent that it can easily overcome any constraints, by adopting one of the most common strategies used by teachers, the demonstration, observation and imitation. On the contrary, the specificities of the visual disability imposes various difficulties to the normal development of the class, demanding changes both in the classroom functioning and in the teaching-learning process implemented by the teacher. These assumptions are clear, seeming to direct us unequivocally to the way that different conditions of

disability are listed as challenges within the PE classes. Teachers through their speeches stated that "if we think about the types of disabilities that we have ahead of us, and if we analyze it considering its severity, it is logical that the hearing impairment comes across as less limiting. No doubt that I send to the last position the visual impairment" (Peter).

In our opinion, this is a challenge when it turns to effectively include students with visual impairments because it is very important that stereotypical barriers or fear of liability must not exclude students with visual impairments from participating in physical education activities (Tutt, Lieberman & Brasher, 2012). Practical and possible solutions to diminishing those negative feelings about this condition can be peer tutoring and awareness programs in PE classes. For example, Wiskochil and colleagues (2007), considering visual impairment referred that skilled peer tutors can be a resource to assist with games, fitness and other activities when needed. Another example is in a class with sighted peers, the entire class should learn blind sports providing sighted peers the opportunity to improve their disability awareness and the knowledge about the sports that students with visual impairment can participate in (Foley, Tindall, Lieberman, & Kim, 2007).

In this way, PE teachers clearly indicate hearing impairment as less disruptive in student's learning ability, followed by the remaining conditions of disabilities, more demanding when it comes to adjustments in the course of the lesson. The present findings are consistent with previous research carried out by Rizzo (1984), Rizzo and Vispoel (1991), Forlin (1995), Kowalski and Rizzo (1996), Serrano (1998), Block and Obrusnikova (2007) suggesting that the type of disability is an important variable about teacher's beliefs regarding inclusion in PE classes.

Participants reported that another barrier encountered in PE classes is the level of disability. "...The degree of the disability he has ..." (Michael) and "It also depends on the severity of the disability" (Peter). In relation to how the level of disability have impact on their classes, respondents pointed out that "... being with a kid who has a severe disability we cannot do anything with him,"

otherwise the teacher will be "... with him or with the class. If I pay attention to him, the class will lose concentration and the outcome will be poorer. If we pay more attention to the class, students with disabilities will be abstracted from the reality of the classroom."(Ana) "I think that at least one assistant is essential for most severe cases, for example autism."(John)

*"...students with physical disabilities may not have the ability to do a task without teacher's supervision ... We need an assistant who is devoted only to students with severe physical difficulties. Therefore, as we are just one PE teacher, it is not possible to include and integrate a student with these characteristics as desired. It is a very intricate situation for any of us."(Peter)*

Those comments reveal an obvious difficulty of PE teachers in dealing with students with severe physical disabilities. There is substantial evidence to support those feelings, for instance, Hodge et al. (2004) also stated that teachers' beliefs often are more favorable in teaching students with mild disabilities compared to teaching students with severe disabilities. Other researchers have extended this line of research, for example, Block & Rizzo (1995) looked at attitudes of PE teachers based on level of disability and they stated that they were undecided about teaching students with severe disabilities and disagreed with the teaching of students with profound disabilities in PE classes. Results showed that for severe disabilities attitudes were more favourable when quality of teaching experiences and APE training increase. Regarding profound disabilities, favourable attitudes were associated with an increase of both APE training and perceived competence.

Another variable that is assumed to be related with teacher's attitudes toward inclusion is specific training in APE. In inclusive settings it should be borne into account that teachers need specific knowledge and skills that promote pedagogical and educational practice. The training course fosters the development of new attitudes and approaches, binding changes in negative attitudes towards the inclusion of individuals with disabilities in regular classrooms. Although all the participants indicated they get training in academic

context, they did not have specific training in the professional context. Participant's worries were, in part, influenced by the lack of knowledge showing some reluctance in including the students with disabilities in a proper way. A few comments that support this view include: "... It always arise specific situations where if we had more preparation, more training in the area, we would respond better" (John) and that "... academic background appears to be a crucial factor in teacher's competence..."(Peter) Educators continue, emphasizing that "... there are times when you do not know if the response to the situation concerning the child with disabilities was the most appropriate ..." noting that "... those are issues that arise due to lack of specific training."(Michael) One participant summarized this emergent need by stating that "...Of course if I had more training in the area, I would be able to improve my performance as a teacher." (Ana)

Findings suggest that one of the major teacher's concerns is that the lack of specific knowledge about teaching student with disabilities makes teaching more difficult in an inclusive setting. As seen, participants mentioned the need for improved pedagogical competency, claiming the lack of coursework as an obstacle to include them properly. Many articles in the literature point out the importance of academic preparation and specific training in APE (Rizzo and Vispoel, 1991 and 1992, Block and Rizzo, 1995, Kowalski and Rizzo, 1996). Vaughn et al. al (1996), Villa et al. al. (1996), Leroy and Simpson (1996) and Correia (1999), and suggest that teachers who did not participate in inclusive education activities throughout their academic training and during their journey as educators, have negative opinions about the inclusive process in school. More recently, Obrusnikova (2008) found evidence that specific training in APE was a significant predictor of teachers' positive beliefs regarding inclusion in PE classes and positively correlated with their perceived competence. Casebolt and Hodge (2010) also interviewed five PE teachers that felt unprepared claiming the need for more professional training to develop the skills needed to feel competent in teaching students with disabilities. Avramidis and Norwich (2002), indicate that academic preparation combined with teaching experience with children with disabilities, contributes significantly to favorable attitudes



regarding inclusive settings. In a Greek study, Bekjari et al. (2004) teachers expressed their will to include students with disabilities in their classes however, they felt insufficiently prepared. A study carried out in Latvia, also revealed that PE teachers do not feel properly trained to work with students with disabilities (Klavina, Block & Larins, 2007). Teachers also echoed these ideas in a UK study (Morley et al., 2005) as it seems that experience is necessary although not sufficient for feelings of confidence and perceived competence. Experiences of training opportunities were limited and the exposure to different abilities can lead some to feel uncertain and inadequately prepared.

As seen, there has been a plethora of research supporting the importance of specific training in APE and it appears to be obvious that it might be necessary and crucial to develop specific training opportunities for PE teachers in order to give them pedagogical tools to implement in their classes. It is also crucial to rethink the preparation of future PE teachers and the need to learn about different disabilities and how to adapt PE activities to various disabilities.

According to data from our study, teaching experience with students with disabilities also seems to manifest itself as a decisive element in the formation and development of inclusive attitudes of PE teachers. It is the "... day-to-day, through our experience that we learn a lot of things. When we are alone with certain kids, that's where we experiment, and I think that's where we also grow a little bit and that bring a lot of experience to the area "(Peter), which indicates that respondents with experience with students with disabilities have more positive attitudes to the inclusive concept. Other participant refers that:

*"By dealing with a child with disability you will gain experience for subsequent years and you find yourself better prepared and having the know-how to deal more effectively with these students. When you have a child with a disability for a year, you'll be able to learn from her regarding the differences she has, and you'll improve with this situation. So, next year, you'll already know how to handle the situation, knowing how she reacts to certain stimuli, so it is*

*beneficial, and it is clear that the class will become more productive for all.” (Martin)*

As one of our respondent said "... an experience with a children with disabilities will certainly promote strategies and means to act more gainful in the teaching-learning process" (John), Michael added that "As experience is a process that happens gradually, I think five years from now I will have more experience and I have developed safer and more effective strategies that allow me to include with more quality students with disabilities in my classes." These findings were somewhat similar with results described in other studies by Rizzo and Vispoel (1991, 1992), Giangreco et. al. (1993) Block and Rizzo (1995), Janney et. al. (1995), Minke et. al. (1996), Keith and Ross (1998), Conatser et. al. (2000) and Rodrigues (2005). Overall, there is an agreement that teachers who have professional experience with students with disabilities, overcome many unfounded preconceptions concerning students with disabilities, presenting a more favorable and positive attitude about their inclusion in PE classes as well as they perceived themselves as more competent in teaching in inclusive settings. Also Leyser et. al. (1994) and Minke (1996), identify the most experienced teachers as being the most enthusiastic and advocates of inclusive principles. Results from the present study are in line with those reported by Pinheiro (2001), Vispoel and Rizzo (1991, 1992), Giangreco et. al. (1993), Leyser et. al. (1994), Rizzo and Block (1995), Janney et. al. (1995), Minke et. al. (1996), Keith and Ross (1998), Correia (1999), Conatser et. al. (2000) and Rodrigues (2005). Recent findings (Casebolt and Hodge, 2010) suggest that teachers with more experience have more confidence and a better understanding of teaching students with disabilities compared to less experienced colleague, corroborating present findings. They also found that teachers' self-efficacy in teaching students with disabilities was largely dependent on their experiences teaching students with disabilities, their knowledge, the student's disability type and severity, and resources and space for devising appropriate activities. Present findings also seem to link specific preparation in APE to self-efficacy and positive experiences in including students with disabilities in their PE classes.

### **Keys for inclusive PE**

*“Don't tell me there is a problem, tell me there is a solution”*

After ascertain the challenges encountered by teachers in an inclusive PE class, participants were asked to talk about strategies and ways to overcome those challenges. All of them were in agreement that the best solution was having an additional PE teacher with the students with disabilities, i.e. ideally the classes with students with disabilities should have two PE teachers. Several comments supported this notion such as "... the ideal situation would be teaching with the support of a teacher with specific training in the area ..." (Peter) or "under these conditions [two PE teachers] we would be facing a perfect educational system." (Martin). Participants stated that having an APE specialist teacher to assist their lessons and to help them is the best way. Likewise, "... if there are teacher assistants and special education teachers for other subjects, there should also be an APE teacher for PE classes." (Michael) Ana refers that "if we had the support of a PE teacher with some training and experience in the area it would be perfect." "I think the idea of having the support of a fellow expert is even more imperative when we have a severe disability in the class" (John). This means that according to the interviewees, having teacher assistants to help them in an inclusive environment would make teaching easier, although in Portugal, as in most European countries, formally there is no adapted physical education professional.

One hands-on solution pointed out was peer-tutoring, i.e., "... working in pairs. We could put a reliable student working with the peer with disabilities to help him and guide him through the activities and the PE class." John recalled "if we relegate some responsibility for certain students, they also will consider themselves more important and conscientious..." Ana also added that: "there is more involvement by students in the class". Peer tutoring seems to be well developed and a highly successful element of support in PE classes as confirmed in some body of research (e.g. Barfield et al., 1998; Lieberman et al, 2000; Block et al., 2001; Klavina & Block, 2008). For example, Klavina and Block (2008) studied the effect of peer tutoring on interaction behaviors in inclusive physical education with three elementary students with severe and

moderate disabilities and nine peer tutors. Findings indicated that instructional and physical interaction behaviors between students increased. Although social interaction remained low, the activity engagement time data increased for all students. Lieberman and colleagues (2000) analyzed the effects of trained peer tutors on the physical activity levels of deaf students, and they found an increase in moderate to vigorous physical activity in both the deaf students and the peer tutors in an inclusive physical education class. Both studies goes in line with the findings pointed out before by all participants in our study, peer-tutoring seems to be a practical and easy solution to implement inclusion in PE classes.

Findings also suggest that PE teachers are likely to be receptive to the idea of improving their skills, as a possible solution to effectively include students with disabilities. They made numerous comments that support the need for specific training program. This can be understood and complemented by the respondent's direct speech, stating that "... if our knowledge were more depth, we would be able to take best results of the intervention, and thus improve and enhance the effectiveness of our class." (Peter); "The Ministry of Education itself could promote training workshops targeted to the area"(John). It appears that it might be necessary and crucial to develop specific training opportunities for PE teachers in order to give them pedagogical tools to implement in their classes. Latvian teachers share the same concerns (Klavina, Block & Larins, 2007). Also Morley and colleagues (2005) reported that continuing professional development was seen by some of the teachers as the key factor to increase opportunities for students with disabilities, with formal and informal training opportunities.

One of the specific strands highlighted in the Background Note on Inclusive Education of the action plan of *The Task Force on Inclusive Education* (UNICEF, UNESCO, 2012) is investing in teacher training for disability-inclusive education:

*“Advocacy for the adoption [...] that all teacher training efforts include a module on disability-inclusive education. Overburdening teachers is not the aim of Inclusive Education for children with*

*disabilities, and therefore transformative efforts must be integrated into existing change agendas in teacher education and across education systems broadly. Preparation and orientation of educational staff for inclusion should happen through teacher training which, besides the child-centered pedagogy will also address attitudes towards children with disabilities, and how to prepare/support families for them to be encouraged to keep their children in school and informed about their children's potential."*

According to Qi and Ha (2012) the more teachers foster potential facilitating factors and deal with potential inhibiting factors in their inclusive teaching practices, the stronger are their intentions to include and to teach students with disabilities, conducting to inclusive behaviors.

## **Conclusion**

It is crucial that PE teachers' daily challenges must be acknowledged. Therefore, the present study used a qualitative approach in order to listen to Portuguese teachers' opinion regarding the inclusion in PE classes and to explore how attitudes and which attributes can contribute to implement inclusion in educational contexts. Our findings suggest that PE teachers advocate for inclusion in PE classes, although they arise some challenges that can be an obstacle to its effectiveness.

Regarding the students, the teacher's concerns are related to type and severity of the disability. Another challenged voiced by the participants was the lack of specific training in APE. They reinforced the importance of teaching experience with students with disabilities as it appears to influence teacher's perceived competence in dealing with students with different abilities. Present findings raise certain critical issues, especially concerning the need of specific training in APE, not only at academic level, but particularly at the professional level.

Therefore, the present study is noteworthy to Portuguese reality, as explores teachers' ideas and concerns about inclusion in PE classes and examines how those factors influence their attitudes, being a relevant

instrument for the development of future interventions. It also provides important information for a successful inclusion and provides some insight into the physical educators' experiences and attitudes regarding inclusion in PE. Further qualitative studies are needed to assess teacher's attitudes towards inclusion in order to evaluate how powerful PE can be regarding the inclusion of students with disabilities in Portugal.

Portugal have been trying to achieve inclusion since the middle 1990's, however schools are moving slowly. It is important to acknowledge that it taking as too long to get there, because of a considerable amount of restraints some of them pointed out in the present study. We believe that GPE can act as a compound to inclusive education. Using a metaphor of a car we need to go faster and there are different additives to improve efficiency to achieve inclusion, particularly in PE classes: a) the teacher can use peer tutoring as a hands on solution; b) implementing awareness programs also seem to be a good strategy to enhance attitudes; c) at school level administrators could include another PE teacher in classes with students with disabilities; and d) specific training in APE, for that matter universities and the ministry of education must promote workshops in APE. Although the ideal situation should have all these "additives," in the real situation the different stakeholders should embrace the strategies that are on their range in order to inclusive education become a reality at GPE level.

**Acknowledgements:** The authors also thank Carla Filomena Silva for her thoughtful review and insights on previous version of this manuscript.

# ON THE WAY TO INCLUSION

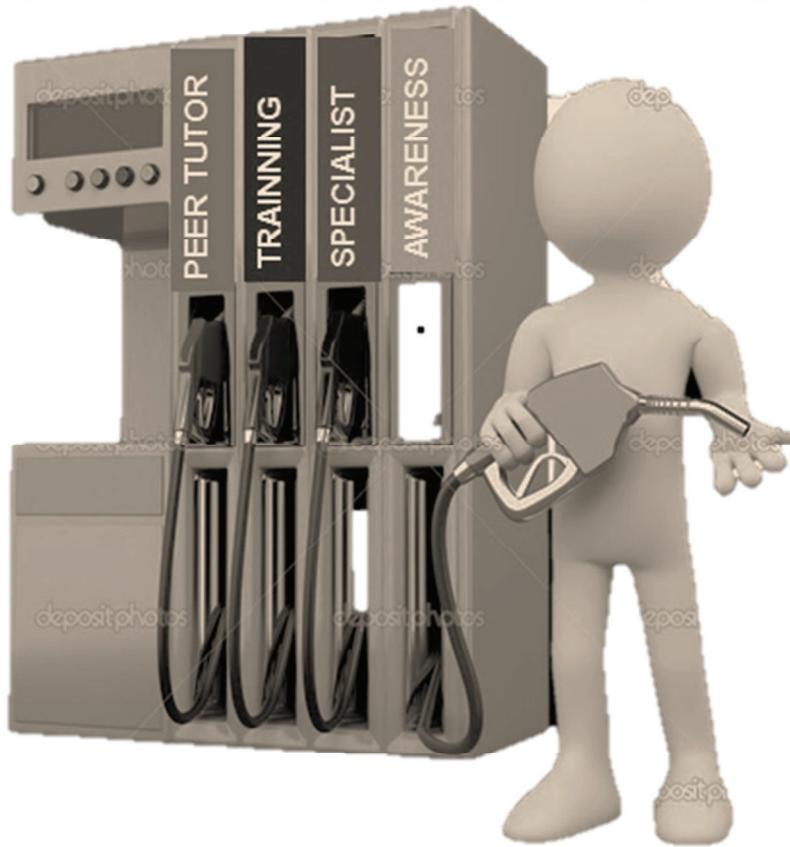


Figure 1 – Metaphor picture presented in an oral presentation at the ISAPA 2013 entitled: *Hearing teacher's voices - How Portuguese physical educators feel about inclusion of students with disabilities?*

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## **CHAPTER VIII – FINAL CONSIDERATIONS**



## CHAPTER VIII – FINAL CONSIDERATIONS

In the present chapter, a global view of the main results will be presented in order to clarify the thread of the thesis and to link the studies, since the Nordic model adopted does not provide an opportunity to discuss the results of the four studies altogether, as well as to elucidate how the data of each study influenced the methodological options, highlighting the theoretical framework. Limitations, futures recommendations and suggestions will also be sketched and discussed.

### **First steps:**

The main purpose of the present research was to understand the attitudes of Portuguese PE teachers and students towards inclusion of students with disabilities in PE and to ascertain the importance of an awareness program, the “Adapted Physical Education Week” on student’s changing attitudes toward their peers with disabilities in PE classes, using a multi-strategy research approach. In order to accomplish this goal several studies had to be accomplished and different steps had to be taken, since there were no valid and reliable Portuguese instruments available to be used. The first step was analyzing the psychometric properties of the most popular surveys regarding attitudes towards inclusion in PE classes. The Portuguese versions of the PEATID III (Rizzo, 1993) and the CAIPE-R (Block, 1995) were assessed for the PE teachers and for students without disabilities respectively.

It was also imperative to go beyond the survey and get more in-depth on PE teachers’ feelings, and concerns toward teaching student with disabilities, therefore we gathered those perceptions through a focus group interview.

### **First research question: Is PEATID III a valid and reliable instrument?**

After an overview of attitude studies we came across different questionnaires for measuring attitudes. For PE teachers, the most popular was PEATID III (Rizzo, 1993). This survey has been used across the world (e.g. USA, Brazil, Canada, Ireland). Although many studies demonstrated the reliability of Rizzo's instruments, none of them had been published using the confirmatory factor analysis with PE teachers, to assess the goodness-of-fit for the original three factors model. Even though the dissemination of the PEATID III worldwide, its psychometric properties have not been fully assessed to be used with physical education teachers. Therefore, in order to analyze those properties a Portuguese sample was used. The present findings do not support the usefulness of the PEATID III as a brief and psychometrically sound scale for measuring attitudes among Portuguese physical educators in relation to including students with disabilities (as discussed in Chapter III).

In sum, it is vital to develop proper and reliable instruments to measure physical educator's beliefs towards the inclusion of students with disabilities and teachers must be heard and seen. Thus, we decided to interview PE teachers in order to ascertain their concerns and opinions about inclusion in PE. This methodological decision derived from the fact that the PEATID III did not reveal to be a valid survey as the Portuguese PE teachers samples did not confirm the original structure of the survey.

### **Second research question: Is CAIPE-R a valid and reliable instrument?**

Regarding student's attitudes towards inclusion of peers with disabilities in PE, the CAIPE-R (Block, 1994) is the most used survey worldwide (e.g. USA, Brazil, Greece, Belgium, Israel, Czech Republic). In order to reach reliable and conclusive results, it is imperative that its psychometric properties are assured, but until now no study has been published concerning its validity and



reliability and the assessment of the goodness-of-fit for the original two factors model. Therefore there was the need in this study to analyze the structure, the validity and the reliability of the CAIPE-R. Results showed that indices of overall model fit moderately support the two factors structure for the attitudes scale with four out of six items reaching the cut off intervals acceptable to confirm the model fit, providing important evidence for the validity and reliability of the instrument and promoting additional interest and adequacy for the use of CAIPE-R in future research actions with this scope. Thus, CAIPE-R appears to be as a valid and reliable instrument to assess attitudes of students without disabilities toward including peers with disabilities in their PE classes, as showed on chapter V.

**Third research question: Which variables influence teachers and student's attitudes towards inclusion of peers with disabilities in PE?**

In order to develop strategies to improve the attitudes of physical educators and students toward inclusion in PE, researchers have studied the relationships between attitudes and a variety of student and teacher related factors.

Concerning students' perceptions it seems that girls have more positive attitudes than boys with regard to the inclusion of students with disabilities in PE, showing significant statistical differences in all dependent variables. Regarding family contact, results indicate that students who have a family member, friends or neighbours with disabilities have also significant more favourable attitudes for all dependent variables. Students who have peers with disability in PE reveal significantly higher levels on attitudes scores. Another student's related factor that have been reported as important was the level of competitiveness, suggesting that students without disabilities who have a more competitive nature have less positive attitudes toward inclusion of students with disabilities in PE. Overall, findings support the idea that attitudes correlate with gender; with previous contact with disability (having a family member or close

friend and in PE classes); with competitiveness and grade level. In depth results and discussion are presented on chapter VI.

After hearing physical educators' voices our findings suggest that PE teachers advocate for inclusion in PE classes, although they point out some challenges that can be obstacles to its effectiveness. The teacher's concerns are related to the type and severity of the student disability. Another challenge voiced by participants was the lack of specific training in APE. They reinforced the importance of teaching experience with students with disabilities as it appears that give teachers competence in dealing with all the possible spectrum of ability. Thus, these findings illuminate certain critical issues, especially concerning the need of specific training in APE, not only at academic level, but particularly and essentially at the professional level. Those variables were examined on chapter VII.

**Fourth research question: What is the effect of an awareness program in students' attitudes towards inclusion of peers with disabilities in PE?**

The results of the intervention study brought some interesting insights. The present research findings allows us to conclude on *How powerful Physical Education is* by ascertain the influence of an awareness program in student's attitudes and by identifying which attributes are associated with those attitudes. As previously mentioned, this research indicates that a disability sport awareness program can positively impact on students without disabilities' levels of general acceptance and knowledge of people with disabilities.

The one-week awareness program developed in which 509 students participated appeared to be significantly effective in increasing positive attitudes. The results revealed significant differences for global scale and for general attitude. Changes of attitudes from pre- to post-test were highly significant for global scale and for general subscale. The significant increase in

positive attitudes shown from pre to post-test is not surprising as it was revealed in other studies. Chapter VI presents these results in detail as well as its subsequent discussion.

### **8.5 How can we apply the findings into practice?**

There are numerous positive outcomes of inclusion in PE based on research conducted in the past ten years (Block & Obrusnikova, 2007) which indicated that students with disabilities (a) can be successfully included in PE when given proper support, (b) do not have any negative effect on peers without disabilities and (c) tend to have moderately positive attitudes toward peers with disabilities, but further research is needed to strengthen this conclusion. Also previous research (e.g., Block & Zeman, 1996; Murata & Jansma, 1997; Vogler et al, 2000; Obrusniková, Block & Kelly, 2007) suggest that the inclusion of students with disabilities does not adversely affect the participation and/or motor performance of students without disabilities, which is a major argument of the ones who are against full inclusion of people with disabilities in PE. However, are Portuguese students prepared to receive peers with disabilities in PE? Our results indicate that they are, particularly if they are involved in awareness programs with adapted physical activities in PE. It seems that students who have experienced a situation simulating the experience of impairment are more empathetic and understand better the conditions and limitations of their peers with disabilities. This fact has eventually led them to a more positive attitude. Our experience in the awareness program further corroborated that students' attitudes improved after the implementation of the program and that students became more aware of inclusion of peers with disabilities and more open to their participation in PE. Furthermore, these programs can also have positive effects on teachers' attitudes.

In addition to the implementation of these programs, included in curricular or extra-curricular activities, attention must also be paid to the teacher's training and awareness from the part of other students and parents. This way,

inclusion of students regardless of the ability level would be a success in PE and consequently, in schools. It is thus crucial to develop specific training in APE. Due to the role of attitudes in professional competence, it is of utmost importance to introduce theoretical and practical training at the undergraduate level. University teachers with initial teacher training responsibility need to incorporate the practical PE teachers concerns in their curricula, and it may be beneficial to provide practical contact with a variety of disability conditions. It is imperative to teach futures PE teachers and PE professionals how to deal with real challenges in their classes. The current findings suggest that if specific training in the APE provided is successful it will generate positive attitudes and subsequently positive outcomes in their classes.

The importance of the present multi-method research lies in its usefulness as a tool to incite discussion of strategies and policies for an effective inclusion of students with disabilities in PE, and furthermore in schools, in Portugal. We underline the need of expanding knowledge and consequently undertake more scientific research in order to obtain more conclusive results. These could be generalized and eventually help schools and teachers to define strategies that lead to a high-quality educational atmosphere. The outcomes should lead to more positive attitudes toward including students with disabilities in PE, and subsequently at school and in general society.

An optimal means to infuse these attitudinal changes would be altering the PE curricula and PE school books by including adapted sports and other awareness activities. Within this study, most of the participants who claimed to have previous contact to disability said it helped them to have more positive attitudes towards inclusion, therefore it may be of interest to have adapted sport at PE curricula and on PE school books so that students could acknowledge that there are a wide spectrum of sports and adapted activities that students with different abilities can do.

After listening to the teachers' voices we noticed that the lack of knowledge can be an obstacle for inclusion, for that reason it seems important to publish a book of good practices, for PE teachers, with specific and hands-on

strategies that will increase teacher's self-confidence in their own ability to include students with disabilities.

### **8.6 What have we already done?**

We felt the need to develop a project - the NEAFA, *Núcleo de Estudos de Atividade Física Adaptada* (Centre of Studies of Adapted Physical Education) - where we could, at one hand offer specific training in the field of special needs education, aiming to improve the skills and attitudes of professionals and students in the area of sport science and physical education and on the other hand to improve the psychomotor skills of special populations, promoting regular physical activity and enabling them to have PE right alongside their peers, for instance. The past two years we had the support of the *Fundação Calouste Gulbenkian* and thus having the opportunity to acquire specific equipment. Also, with this fund the activities provided were always free of charge for every participant. In the field of specific training we organize events every year, such as boccia referee, introduction to braille, workshops with international lecturers about strategies to equip professionals to deal with any student.

We also think that it is also our responsibility to empower students with disabilities to develop their skills in order to be included in PE and other in other contexts. Hence, we have partnerships with disability associations and their clients have adapted PE sessions in our facilities or in their facilities according to the needs. The sessions can also be private to any person with special needs. We started a new protocol with a public middle school, aiming to help PE teachers including students with disabilities in their classes. This is another concrete and practical implication of this research. Schools and teachers want to create a better environment for all and they are willing to reach for help in order to make inclusion a reality in their classes. In this particular context, I and some undergraduate students go to the school and help PE teachers to include students with disabilities within the PE tasks. This is a very hopeful reality to see

that teachers are eager to expose their fragilities, as they know that despite they aren't being successful in the inclusion process they are available to change their attitude and subsequently their practices regarding the inclusion of students with disability in their classes. Another outcome of this research arrives from the protocol with an association of parents of children with Down syndrome. I lectured a workshop about sport and physical education for children with Down syndrome where parents expressed their concerns and asked me to go to some schools to help PE teachers as well as to teach PE to their children in the NEAFA.

As a university teacher and supervisor I constantly encourage pre-service PE teachers to develop adapted activities in their PE curricula as well as to organize awareness programs at schools. As said earlier, the NEAFA FCDEF-UC was also developed to reinforce professional specific training skills in an inclusive pedagogy and philosophy for our university students as well as for other physical activity professionals in general.

The Faculty of Sport Science and Physical Education of the University of Coimbra has a master degree in Exercise and Health in Special Populations since 2005. More recently we felt the need to give the chance to professionals around the world to learn more about inclusive PE and an on-line specialization in Exercise and Health in Special Populations is available, by the umbrella of the University of Coimbra. Every year we also offer a 25h workshop in Inclusive Practices in Physical Education so that physical educators could have specific training in adapted physical education and the opportunity to learn new pedagogical tools as well as to gain the knowledge to understand and cope with the most common disabilities encountered in their classes.

## **8.7 What can we do better next time?**

As mentioned before, one of the present limitations of this study is the absence of other published studies in Portugal on this topic, which leaves us without any comparative benchmark. As such, we highly encourage other colleagues to adopt this theme for future research.

Another limitation that should be acknowledged is related to the pre/post-test design nature of the study, regarding the absence of a control group, since that all children in the schools participated in the intervention. A control group would have allowed the researcher to draw additional generalizations based on the outcomes of the data..

Regarding students participants, by completing the survey during class time, the respondents were among their peers and as such, the students may have felt indirectly pressured to answer with the more socially desirable responses.

Special care must in drawing generalizations from this thesis, as the convenience sample of institutions that agreed to participate in the data collection may not be reflective of the overall research sample.

Though applying surveys is important to collect more extensive data, it is even more crucial to follow up on the repercussions of the awareness programs implemented, such as the week of Adapted Physical Education. This sustained attention to the efficacy of such programmes will certainly be a crucial step along the path that seems to be the inclusion of students with disabilities in regular schools in general and in PE in particular. We believe our study is a key tool to identify barriers to inclusion and implement strategies to avoid negative attitudes of the students. In addition, some conclusions about the attitudes of students without disabilities towards the inclusion of peers with disabilities in PE classes can also be drawn. This concern could be a crucial contribution for future action and the success of inclusive education in Portugal.

Future research should include a more detailed analysis of this type of intervention programs as well as investigating the effectiveness of changes in the PE curricula and PE school books by including adapted sports and other awareness activities.

We also recommend doing some follow up qualitative work such as focus groups and interviews to understand why attributes such as gender, competitiveness, and previous exposure seems to make a difference. It should be interesting to interview students with and without disabilities as well since their opinions and concerns must also be listened.

### ***8.8 On the way to inclusion...***

Portugal have been trying to achieve inclusion since the middle 1990's, however the train is moving slowly. It is important to acknowledge that it is taking too long to arrive to the destination, because of the considerable amount of constraints, most of them pointed out in the present thesis. We believe that PE can act as a compound to achieve inclusive education. Using a metaphor of a train we need to go faster and there are different levels of concretization: at PE class level (wagon), the teacher can use peer tutoring as a hands-on strategy. Implementing awareness programs is also a good strategy to enhance positive attitudes among teachers and peers without disabilities. At the school level (wheels), administrators could also include another PE teacher in classes with students with disabilities. Another important strategy solution is specific training in APE, and for that matter universities and the ministry of education must promote workshops in APE. At national level (railways) PE curricula and PE school books must include information about the Paralympic movement and adapted sports. For instance in PE school manual for every sport it ought to have the adapted sport as well as pictures of students with different abilities. Although in an ideal world all these strategies should be in place, in a real situation the different stakeholders should embrace the strategies they feel are within their reach.



## **CHAPTER IX - REFERENCES**



## CHAPTER IX - REFERENCES:

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## **APPENDIX**



## **INSTRUMENTATION USED IN THE PRESENT THESIS:**

- PEATID- III
- CAIPE-R (middle school)
- CAIPE-R (secondary school)

## **PROCEEDINGS RELATED TO THE PRESENT THESIS:**

- Campos, M.J., Ferreira, J.P. & Block, M.E. (2013). *Hearing teacher's voices - How Portuguese physical educators feel about inclusion of students with disabilities?* International Symposium of Adapted Physical Activity, Istanbul, Turkey, July, 19-23. Oral presentation.
- Campos, M.J. & Ferreira, J.P. (2013). *A educação física como veículo de inclusão: O contributo do NEAFA FCDEF-UC*. INCLUDiT – Conferência Internacional para a Inclusão. Unidade de Investigação Acessibilidade e Inclusão em Ação, Instituto Politécnico de Leiria, 5 e 6 de Julho. Poster presentation.
- Campos, M. J.; Ferreira, J. P.; Teixeira, S. (2012). *Análise das propriedades psicométricas da versão portuguesa do PEATID-III*. XIII Jornadas da Sociedade Portuguesa de Psicologia do Desporto. Universidade Lusófona. 26 e 27 de Outubro. e-Book de Resumos. Poster presentation.

- Campos, M. J.; Ferreira, J. P.; Lebres, C.; Furtado, G. (2012). *Avaliando as atitudes face à inclusão - a voz dos professores de educação física*. XIII Jornadas da Sociedade Portuguesa de Psicologia do Desporto. Universidade Lusófona. 26 e 27 de Outubro. e-Book de Resumos. Poster presentation.
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UNIVERSIDADE DE COIMBRA  
FACULDADE DE CIÊNCIAS DO DESPORTO E EDUCAÇÃO FÍSICA

## ATITUDES DOS PROFESSORES DE EDUCAÇÃO FÍSICA FACE AO ENSINO DE INDIVÍDUOS COM DEFICIÊNCIA - (PEATID-III)

Tradução e adaptação efectuada por Campos, M.J., Ferreira, J.P e Gaspar, P. (2007), Laboratório de Psicologia do Desporto e do Exercício, Faculdade de Ciências do Desporto e Educação Física, Universidade de Coimbra, a partir do *Physical Educators Attitude Toward Teaching Individuals with Disabilities (PEATID-III)*, Rizzo, T.(1993).

### Orientações gerais

Este questionário contém uma série de afirmações que expressam crenças relativamente ao ensino de alunos com deficiência, nas aulas regulares de Educação Física. Não há respostas certas ou erradas. Assinale a resposta que melhor descreve as suas crenças acerca de cada afirmação, para cada uma das condições de deficiência.

Por favor responda a todas as questões, assinalando com uma cruz em cada uma das condições de deficiência, na que melhor corresponder ao seu grau de concordância. Por favor, não salte nenhuma pergunta. Assinale apenas uma resposta por condição de deficiência.

CHAVE:                      Discordo Completamente (DC)      Discordo (D)      Nem Discordo nem Concordo (NCND)      Concordo (C)      Concordo Completamente (CC)

		DC	D	NCND	C	CC
		1	2	3	4	5
1. Uma vantagem de ensinar alunos com deficiência, na minha aula de EF com alunos sem deficiência, é que todos os alunos irão aprender a trabalhar em conjunto, para alcançar os objectivos.	Deficiência Motora					
	Deficiência Visual					
	Deficiência Auditiva					
	Deficiência Intelectual					
2. Ensinar alunos com deficiência nas minhas aulas de EF vai motivar os alunos sem deficiência a aprender as habilidades motoras.	Deficiência Motora					
	Deficiência Visual					
	Deficiência Auditiva					
	Deficiência Intelectual					
3. Os alunos com deficiência aprenderão mais rapidamente se forem ensinados nas minhas aulas de EF com os alunos sem deficiência.	Deficiência Motora					
	Deficiência Visual					
	Deficiência Auditiva					
	Deficiência Intelectual					
4 - Os alunos com deficiência irão desenvolver um autoconceito mais favorável, em resultado da aprendizagem de habilidades motoras na minha aula de EF com seus colegas sem deficiência.	Deficiência Motora					
	Deficiência Visual					
	Deficiência Auditiva					
	Deficiência Intelectual					

5 - Os alunos com deficiência não serão aceites pelos seus colegas sem deficiência nas minhas aulas de EF.	Deficiência Motora					
	Deficiência Visual					
	Deficiência Auditiva					
	Deficiência Intelectual					
6 - Os alunos com deficiência irão perturbar a harmonia nas minhas aulas de EF regular.	Deficiência Motora					
	Deficiência Visual					
	Deficiência Auditiva					
	Deficiência Intelectual					
7 - O facto de ter de ensinar conjuntamente alunos com e sem deficiência implica numa sobrecarga acrescida aos professores.	Deficiência Motora					
	Deficiência Visual					
	Deficiência Auditiva					
	Deficiência Intelectual					
8 - Como professor de EF, não tenho formação suficiente para ensinar, em conjunto, alunos com e sem deficiência nas minhas aulas de EF.	Deficiência Motora					
	Deficiência Visual					
	Deficiência Auditiva					
	Deficiência Intelectual					
9 – Ensinar, em conjunto, alunos com e sem deficiência, nas minhas aulas de EF, significa mais trabalho para mim.	Deficiência Motora					
	Deficiência Visual					
	Deficiência Auditiva					
	Deficiência Intelectual					
10 - Os alunos com deficiência não deviam ter aulas de EF com os meus alunos sem deficiência porque eles exigem demasiado do meu tempo.	Deficiência Motora					
	Deficiência Visual					
	Deficiência Auditiva					
	Deficiência Intelectual					
11 - Como professor de EF, preciso de mais estudo e formação para me sentir mais à-vontade para ensinar EF, em simultâneo, a alunos com e sem deficiência.	Deficiência Motora					
	Deficiência Visual					
	Deficiência Auditiva					
	Deficiência Intelectual					
12 - Sempre que possível, os alunos com deficiência deveriam ter aulas com os alunos sem deficiência, nas minhas aulas de EF.	Deficiência Motora					
	Deficiência Visual					
	Deficiência Auditiva					
	Deficiência Intelectual					
		DC	D	NCND	C	CC
		1	2	3	4	5

CHAVE:

Discordo  
Completamente  
(DC)

Discordo  
(D)

Nem Discordo  
nem Concordo  
(NCND)

Concordo  
(C)

Concordo  
Completamente  
(CC)





UNIVERSIDADE DE COIMBRA  
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(INFORMAÇÃO CONFIDENCIAL)

DADOS PESSOAIS:

1. Género: Masculino \_\_\_ Feminino \_\_\_
2. Idade: \_\_\_ anos. Data de Nascimento: \_\_\_ / \_\_\_ / \_\_\_\_\_
3. Há quanto tempo é professor(a) de Educação Física? \_\_\_ anos / Estagiário(a) \_\_\_
4. Que níveis (anos de escolaridade) lecciona actualmente? 1º CEB \_\_\_ 2º CEB \_\_\_ 3º CEB \_\_\_ Secundário \_\_\_
5. Quais as suas habilitações académicas? Bacharelato: \_\_\_ Licenciatura \_\_\_ Mestrado \_\_\_ Doutoramento \_\_\_
6. Teve formação académica sobre NEE/ Actividade Física Adaptada? Sim \_\_\_ Não \_\_\_ Se sim, Qual? \_\_\_\_\_
7. Teve alguma formação em NEE/ Actividade Física Adaptada, fora do contexto académico? Sim \_\_\_ Não \_\_\_ Se sim, Qual? \_\_\_\_\_
8. Já teve alunos com deficiência na aula de EF? Sim \_\_\_ Não \_\_\_. Se sim, em que níveis? 1º CEB \_\_\_ 2º CEB \_\_\_ 3º CEB \_\_\_ Secundário \_\_\_
9. Se acompanhou ou trabalhou com alunos com deficiência, que condição de deficiência tinham? \_\_\_\_\_
10. Indique o número de anos em que teve alunos com deficiência. \_\_\_ anos.
11. Classifique a qualidade da sua experiência de ensino a alunos com deficiência.
  - a. Sem experiência
  - b. Nada positiva
  - c. Satisfatória
  - d. Muito positiva
12. Como se sente ao ensinar alunos com deficiência?
  - a. Nada competente
  - b. Com alguma competência
  - c. Muito competente

**Muito Obrigado pela sua colaboração!**





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## ATITUDES DOS ALUNOS FACE À EDUCAÇÃO FÍSICA INCLUSIVA

Tradução efectuada por Campos & Ferreira (2008), Faculdade de Ciências do Desporto e Educação Física da Universidade de Coimbra, a partir do questionário *Children's Attitudes Towards Integrated Physical Education - Revised* (CAIPE - R), Block (1995).

### INSTRUÇÕES PARA O MONITOR:

Preciso de informações tuas que levarão aproximadamente 15 minutos a responder.

Primeiro vê a folha de respostas. Vê onde consta “Nome do Aluno” e escreve o teu nome e sobrenome no espaço em branco (*Espera um momento e certifique-se de que foi feito*).

Agora desenha um círculo indicando se és menino ou menina (*pausa*).

Agora escreve a tua idade – provavelmente tens --- anos, correcto? (*pausa*).

Agora escreve em que ano estás na escola – vocês todos devem estar na --- ano, correcto? (*pausa*).

Agora desenha um círculo indicando se tens ou não uma pessoa na família ou um amigo íntimo com uma deficiência, alguém como um irmão ou um primo ou alguém que mora perto de ti que usa cadeira de rodas, ou alguém que não vê ou ouve, ou alguém que tenha deficiência intelectual? (*pausa*)

Agora desenha um círculo indicando se já tiveste um colega de turma, com deficiência, assim como alguém que veio de uma classe especial ou que não via ou não ouvia, ou que necessitasse de cadeira de rodas para se locomover. (*pausa*)

Agora desenha um círculo indicando se já tiveste, ou não, uma pessoa com deficiência nas tuas aulas de Educação Física. (*pausa*)

Finalmente desenha um círculo indicando se te consideras como sendo ou não:

muito competitivo (Quero dizer, queres sempre ganhar e ficas triste quando perdes),

mais ou menos competitivo (Gostas de ganhar e esforças-te muito, mas vencer ou perder não significa o fim do mundo),

não competitivo (Só gostas de jogar para te divertir)

OK, agora podes virar a página para a folha de respostas. Vou pedir-vos que ouçam algumas frases e quero que me digam o que pensam acerca delas. Essas questões são sobre um menino chamado João, que possivelmente venha a frequentar a vossa aula de Educação Física. Vocês podem ver uma lista de números na folha, onde consta sim, provavelmente sim, provavelmente não e não. Eu vou ler uma frase em voz alta para cada número. Alguns de vocês concordarão com a frase e deverão desenhar um círculo em sim, se concordarem. Alguns de vocês não concordarão com a frase e deverão desenhar um círculo em não, se não concordarem. Se acharem que concordam, mas não têm certeza, deverão desenhar um círculo em provavelmente sim. Se acharem que não concordam, mas não têm certeza, então coloquem um círculo em provavelmente não.

Realmente não há respostas “certas” para estas frases: tudo depende de como cada um de vocês se sente sobre o que estou a dizer. Deixem-me dar um exemplo: Suponhamos que a frase que li é: “Basquetebol é o meu desporto favorito.” Se isso é verdadeiro para ti porque o basquetebol é o teu desporto favorito, deverás desenhar um círculo em volta da palavra sim. Se o teu desporto favorito é o futebol, não concordas e desenhavas um círculo em volta da palavra não. Se achar que basquetebol é o teu desporto favorito, mas não tens a certeza (talvez gostes de outro desporto também), desenhavas um círculo em volta das palavras provavelmente sim. Se achares que basquetebol não é o teu desporto favorito, mas não tens certeza (gostas de futebol, mas também gostas de basquetebol), desenhavas um círculo em volta das palavras provavelmente não.

Lembra-te que a resposta para cada pergunta depende de ti e que as tuas respostas provavelmente serão diferentes das respostas de outros alunos. Quando terminares, algumas das tuas respostas presumivelmente serão “sim,” algumas “provavelmente sim,” algumas “provavelmente não,” e algumas “não,” ou as tuas respostas podem ser todas de uma só opção. Alguém tem alguma pergunta? (*Ver se há alguém que queira fazer perguntas*)

Muito bem, vamos começar, mas antes, deixem-me falar um pouco sobre o João. O João tem a mesma idade que vocês, mas não consegue andar e usa uma cadeira de rodas para se deslocar. O João gosta de participar dos mesmos jogos que vocês, mas não o faz muito bem. Apesar de conseguir impulsionar a cadeira de rodas, ele é mais lento que vocês e cansa-se facilmente. Ele consegue lançar uma bola, mas não muito longe. Ele consegue pegar nas bolas que são jogadas directamente para ele, e consegue acertar numa bola com uma raquete, mas não consegue arremessar uma bola de basquetebol com altura suficiente para encestá-la. Pelo facto das suas pernas não funcionarem, ele não consegue chutar uma bola. Pensem no João ao ouvirem as frases.

Procurem o número 1 na folha de resposta e eu irei ler a primeira frase. (*Inicie. Leia cada número e frase, uma por uma, e aguarde até que todos tenham desenhado um círculo em volta da resposta antes de prosseguir para o próximo item. Após ter lido algumas frases, verifique se todos os números têm um círculo em volta da resposta. Repita todas as instruções conforme indicado na lista de frases. Faça sempre uma pausa após ter lido cada frase e leia as instruções antes de passar para a frase seguinte*).

- 1- Eu vivo em Portugal;
- 2- Geralmente almoçamos entre o meio-dia e as 13h30;  
(agora pensem no João e lembrem-se, desenhem um círculo em volta da palavra sim se concordarem com a frase, provavelmente sim se acham que concorda mas não têm certeza, provavelmente não, se acham que não concordam mas não tem certeza, e não, se não concordam).
- 3- Seria bom ter o João na tua aula de Educação Física?
- 4- Uma vez que o João não consegue jogar muito bem, achas que ele iria tornar o jogo mais lento para todos?
- 5- Se estivéssemos a praticar um jogo de equipa como o basquetebol, seria bom ter o João na equipa?
- 6- A Educação Física seria divertida se o João estivesse nas tuas aulas de EF?

Não te esqueças de pensar no João. Deverás marcar o que sentes: sim se concordares com a frase, provavelmente sim se achas que concordas mas não tem certeza, provavelmente não, se achas que não concordas mas não tens certeza, e não, se não concordas.

- 7- Se o João estivesse na tua aula de Educação Física, conversarias com ele e serias seu amigo?
- 8- Se o João estivesse na tua aula de Educação Física, gostarias de ajudá-lo, treinar e jogar com ele?

Não te esqueças de pensar no João. Deverás marcar o que sentes: sim se concordares com a frase, provavelmente sim se achas que concordas mas não tem certeza, provavelmente não, se achas que não concordas mas não tens certeza, e não, se não concordas.

9 – 13. Que mudanças de regras do basquetebol, durante as aulas de Educação Física, vocês achariam boas no caso de uma criança como o João participar dos jogos? Lembrem-se, desenhem um círculo em volta do sim se concordarem com a sentença, provavelmente sim se acham que concordam mas não tem certeza, provavelmente não, se acham que não concordam mas não têm certeza, e não, se não concordas.

- 9- Se estivesses a jogar basquetebol, estarias disposto a passar a bola ao João?
- 10- Seria bom permitir que o João lançasse a bola para um cesto mais baixo?
- 11- Se vocês estivessem a jogar basquetebol e o João estivesse na área restritiva (“garrafão”), permitirias que ele permanecesse por mais tempo (cinco segundo em vez de três)?
- 12- Seria bom deixar o João fazer passes livremente para um colega de equipa (ou seja, ninguém poderia roubar a bola ao João)?
- 13- Se estivesses a jogar basquetebol e o João pegasse na bola, ajudarias e cooperarias para que ele marcasse um cesto (o João está na tua equipa)?

*Terminaste! Muito Obrigado por teres preenchido este questionário para nós. Por favor, entrega a tua folha de respostas ao professor.*



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**FOLHA DE RESPOSTA**

Escola: \_\_\_\_\_ Data: \_\_\_\_/\_\_\_\_/\_\_\_\_

Professor: \_\_\_\_\_ Nome do Aluno: \_\_\_\_\_

Idade: \_\_\_\_\_ Data de nascimento \_\_\_\_/\_\_\_\_/\_\_\_\_ Ano de escolaridade: \_\_\_\_\_

.....  
Desenha um círculo em volta de uma das opções:

**RAPAZ**

**RAPARIGA**

Desenha um círculo em volta de uma das opções:

**SIM**, alguém da minha família ou um amigo íntimo meu tem uma deficiência.

**NÃO**, eu não tenho nenhum membro da minha família, nem amigos com deficiência.

Desenha um círculo em volta de uma das opções:

**SIM**, na minha turma de ensino regular, havia um aluno com deficiência.

**NÃO**, eu nunca tive um colega na escola de ensino regular com deficiência.

Desenha um círculo em volta de uma das opções:

**SIM**, numa das minhas aulas de Educação Física havia um aluno com deficiência.

**NÃO**, eu nunca tive um colega na aula de Educação Física, com deficiência.

Desenha um círculo em volta de uma das opções:

**MUITO COMPETITIVO**  
(Eu gosto de vencer, e fico frustrado quando perco).

**MAIS OU MENOS COMPETITIVO**  
(Eu gosto de vencer, mas não importa se perco algumas vezes).

**NÃO COMPETITIVO**  
(Realmente não importa se ganho ou perco, eu só jogo para me divertir).

**- POR FAVOR, VIRA A PÁGINA -**

**AGORA OUVES O MONITOR E DESENHA UM CÍRCULO EM VOLTA DA TUA RESPOSTA.**

- |     |            |                          |                          |            |
|-----|------------|--------------------------|--------------------------|------------|
| 1.  | <b>SIM</b> | <b>PROVAVELMENTE SIM</b> | <b>PROVAVELMENTE NÃO</b> | <b>NÃO</b> |
| 2.  | <b>SIM</b> | <b>PROVAVELMENTE SIM</b> | <b>PROVAVELMENTE NÃO</b> | <b>NÃO</b> |
| 3.  | <b>SIM</b> | <b>PROVAVELMENTE SIM</b> | <b>PROVAVELMENTE NÃO</b> | <b>NÃO</b> |
| 4.  | <b>SIM</b> | <b>PROVAVELMENTE SIM</b> | <b>PROVAVELMENTE NÃO</b> | <b>NÃO</b> |
| 5.  | <b>SIM</b> | <b>PROVAVELMENTE SIM</b> | <b>PROVAVELMENTE NÃO</b> | <b>NÃO</b> |
| 6.  | <b>SIM</b> | <b>PROVAVELMENTE SIM</b> | <b>PROVAVELMENTE NÃO</b> | <b>NÃO</b> |
| 7.  | <b>SIM</b> | <b>PROVAVELMENTE SIM</b> | <b>PROVAVELMENTE NÃO</b> | <b>NÃO</b> |
| 8.  | <b>SIM</b> | <b>PROVAVELMENTE SIM</b> | <b>PROVAVELMENTE NÃO</b> | <b>NÃO</b> |
| 9.  | <b>SIM</b> | <b>PROVAVELMENTE SIM</b> | <b>PROVAVELMENTE NÃO</b> | <b>NÃO</b> |
| 10. | <b>SIM</b> | <b>PROVAVELMENTE SIM</b> | <b>PROVAVELMENTE NÃO</b> | <b>NÃO</b> |
| 11. | <b>SIM</b> | <b>PROVAVELMENTE SIM</b> | <b>PROVAVELMENTE NÃO</b> | <b>NÃO</b> |
| 12. | <b>SIM</b> | <b>PROVAVELMENTE SIM</b> | <b>PROVAVELMENTE NÃO</b> | <b>NÃO</b> |
| 13. | <b>SIM</b> | <b>PROVAVELMENTE SIM</b> | <b>PROVAVELMENTE NÃO</b> | <b>NÃO</b> |

Muito Obrigado pela colaboração! Vocês terminaram!



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ATTITUDES DOS ALUNOS FACE À EDUCAÇÃO FÍSICA INCLUSIVA

Tradução efectuada por Campos & Ferreira (2008), Faculdade de Ciências do Desporto e Educação Física da Universidade de Coimbra, a partir do questionário *Children's Attitudes Towards Integrated Physical Education - Revised* (CAIPE - R), Block (1995).

**Orientações gerais:**

Este questionário contém uma série de afirmações sobre as aulas de Educação Física. Não há respostas certas ou erradas, apenas se pretende saber a tua opinião sobre a possível participação de um aluno, a quem vamos chamar João, que poderia vir a frequentar a tua aula de Educação Física. As respostas são anónimas e confidenciais.

O João tem a mesma idade que tu, mas não consegue andar e usa uma cadeira de rodas para se deslocar. O João gosta de participar nos mesmos jogos que tu, mas não o faz muito bem. Apesar de conseguir impulsionar a cadeira de rodas, ele é mais lento que tu e cansa-se facilmente. O João consegue lançar uma bola, mas não muito longe. Ele consegue segurar as bolas que são jogadas directamente para ele, e consegue acertar numa bola com uma raquete, mas não consegue lançar uma bola de basquetebol com altura suficiente para encestá-la. Pelo facto das suas pernas não se moverem, ele não consegue chutar uma bola.

Pensa no João ao ler as frases e assinala com uma cruz a resposta que melhor descreve a tua opinião.

	SIM	PROVAVEL- MENTE SIM	PROVAVEL- MENTE NÃO	NÃO
1) Seria bom ter o João na minha aula de Educação Física.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2) Uma vez que o João não consegue jogar muito bem, ele iria tornar o jogo mais lento para todos.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3) Se estivéssemos a praticar um jogo de equipa como o basquetebol, seria bom ter o João na equipa.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4) A Educação Física seria divertida se o João estivesse nas minhas aulas.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5) Se o João estivesse na minha aula de Educação Física, eu conversaria com ele e seria seu amigo.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6) Se o João estivesse na minha aula de Educação Física, gostaria de ajudá-lo a jogar.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7) Se estivéssemos a jogar basquetebol, eu estaria disposto a passar a bola ao João.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Que alterações nas regras acharias correcto fazer, para que um aluno como o João pudesse jogar basquetebol?				
8) Durante as aulas de basquetebol, seria bom permitir que o João lançasse a bola para um cesto mais baixo.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9) Se estivéssemos a jogar basquetebol e o João estivesse na área restritiva ("garrafão"), permitiria que ele permanecesse por mais tempo (cinco segundo em vez de três).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10) Se estivéssemos a jogar basquetebol e o João pegasse na bola, permitiria que ele pudesse "driblar", agarrar a bola e voltar a driblar.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11) Seria bom deixar o João fazer passes livremente para um colega de equipa (ou seja, ninguém poderia roubar a bola ao João).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12) Se estivéssemos a jogar basquetebol e o João pegasse na bola, ajudaria e cooperaria para que ele marcasse um cesto (estando o João na minha equipa).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

INFORMAÇÃO CONFIDENCIAL

Escola: \_\_\_\_\_ Data: \_\_\_\_/\_\_\_\_/\_\_\_\_

Iniciais do Nome: \_\_\_\_\_ Ano/ Turma \_\_\_\_\_

Idade: \_\_\_\_\_ Data de nascimento \_\_\_\_/\_\_\_\_/\_\_\_\_

Género: Masculino  Feminino

.....

Desenha um círculo em volta de uma das opções:

**SIM**, alguém da minha família ou um amigo íntimo meu tem uma deficiência.

**NÃO**, eu não tenho nenhum membro da minha família, nem amigos com deficiência.

Se sim, que condição de deficiência tem? \_\_\_\_\_

Desenha um círculo em volta de uma das opções:

**SIM**, na minha turma havia um aluno com deficiência.

**NÃO**, eu nunca tive um colega na turma com deficiência.

Desenha um círculo em volta de uma das opções:

**SIM**, numa das minhas aulas de Educação Física havia um aluno com deficiência.

**NÃO**, eu nunca tive um colega na aula de Educação Física, com deficiência.

Se tiveste um colega com deficiência na turma, que condição de deficiência tinha? \_\_\_\_\_

Desenha um círculo em volta de uma das opções:

**MUITO COMPETITIVO(A)**  
(Eu gosto de vencer, e fico frustrado(a) quando perco).

**MAIS OU MENOS COMPETITIVO(A)**  
(Eu gosto de vencer, mas não importa se perco algumas vezes).

**NÃO COMPETITIVO(A)**  
(Realmente não importa se ganho ou perco, eu só jogo para me divertir).

Já alguma vez experimentaste alguma modalidade desportiva para pessoas com deficiência? Sim  Não

Se sim, onde: \_\_\_\_\_

Já alguma vez assististe a alguma modalidade desportiva ou a algum evento desportivo para pessoas com

deficiência? Sim  Não

Se sim, onde: \_\_\_\_\_

*Muito Obrigado pela colaboração!*



# **HEARING TEACHER'S VOICES - HOW PORTUGUESE PHYSICAL EDUCATORS FEEL ABOUT INCLUSION OF STUDENTS WITH DISABILITIES?**

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## **ABSTRACT**

### **PURPOSE**

Given the importance to educator's role in the implementation of inclusion, it is imperative to explore teacher's concerns and opinions about including students with disabilities in their physical education classes. The purpose of the present study is to examine Portuguese physical educator's attitudes towards inclusion using a qualitative research.

### **METHODS**

Participants were 6 PE teachers, 5 male and 1 female, ages between 25 and 32 years. All of them had academic preparation in their undergrad studies and none had any coursework in APE.

Data were collected using one focus group using a semi-structured interview. Interviews were audiotaped and transcribed verbatim. Content analysis and constant comparative method were used to analyze the data.

### **RESULTS**

Teachers pointed out that although all of them agree with inclusion, they face some challenges in an inclusive PE class, the lack of specific preparation and coursework in Adapted Physical Education, the type and severity of the disability and peer acceptance.

Results confirm the importance of academic and coursework preparation and they all were peremptory to indicate that the solution for their concerns is having a specialized PE teacher in their classes.

## CONCLUSIONS

It's important to listen to teacher's voices in order to understand their daily concerns towards including students with disabilities in physical education classes.



## A093 - A educação física como veículo de inclusão: O contributo do NEAFA – FCDEF UC (PT)

**Campos,** Maria João & José Pedro Ferreira

Portugal, Faculdade de Ciências do Desporto e Educação FísicaUC

**Palavras-chave/Keywords:** NEAFA, inclusão, atividade física, práticas inclusivas

### Resumo:

O NEAFA é o Núcleo de Estudos de Actividade Física Adaptada da Faculdade de Ciências do Desporto e Educação Física da Universidade de Coimbra, cofinanciado pela Fundação Calouste Gulbenkian (FCT). O NEAFA é um projecto promotor de inclusão escolar e social, através da prática de actividade física adaptada, que oferece a) formação especializada no âmbito das necessidades especiais, visando a melhoria das competências e atitudes dos profissionais face à inclusão nas aulas de EF e b) a melhoria das competências psicomotoras de populações especiais através da promoção de actividade física regular e adaptada. A coordenação do projeto NEAFA está a cargo dos docentes Maria João Campos e José Pedro Ferreira, coadjuvados por estudantes dos 1º e 2º ciclos da FCDEF-UC. As atividades realizadas passam pela organização de eventos anuais (Meeting Sénior; Encontro desportivo para pessoas com deficiências intelectuais; Comemorações desportivas do dia internacional da pessoa com deficiência); de atividades ocasionais que incluem cursos breves para técnicos e futuros profissionais (Curso de iniciação ao Braille, curso de árbitro de boccia, ciclo de conferências Trevor Williams, com preletores internacionais e formação contínua de professores) e atividades semanais (que compreendem sessões de atividade física adaptada e regular a diferentes grupos especiais ou utentes individuais). O NEAFA tem parcerias com instituições da região centro (e.g. APPDA, ATENEU, Agrupamento de Escolas Martim de Freitas) de forma a levar a atividade física regular e adaptada aos utentes dessas entidades. No caso particular da escola, os monitores intervêm diretamente no contexto da aula de Educação Física Inclusiva, coadjuvando o professor na lecionação dos conteúdos programáticos. Todas as atividades são gratuitas, garantindo que qualquer pessoa pode participar nas atividades. As sessões práticas são realizadas em grupo ou individualmente e todas elas são organizadas por 2 ou mais monitores. O NEAFA pretende celebrar a diversidade e promover uma comunidade mais inclusiva, através da prática de atividade física regular, contribuindo para a melhoria da qualidade pedagógica dos profissionais e para a ocupação saudável dos tempos livres, através de atividade física adaptada às necessidades de cada utente, usufruindo dos seus benefícios fisiológicos, sociais e psicológicos, sendo um exemplo de boas práticas inclusivas.

### Abstract:

The NEAFA is the Center for Studies of Adapted Physical Activity, of the Faculty of Sport Sciences and Physical Education, University of Coimbra, co-funded by the Calouste Gulbenkian Foundation (FCT). The NEAFA is a project that promotes educational and social inclusion through adapted physical activity, offering a) specialized training in the field of special needs, improving skills and attitudes of professionals towards inclusion in PE classes and b) psychomotor skills enhance of special populations

[Escreva texto]



Comunicações Paralelas (A) /Posters (P) - Resumos  
Abstracts - Parallel Presentations (A) / Posters (P)

by promoting regular and adapted physical activity. NEAFA's coordination is the responsibility of professors Maria João Campos and José Pedro Ferreira, assisted by students of the 1st and 2nd cycles of FCDEF-UC. The activities are carried out by the organization of annual events (Senior Meeting; Sport meeting for people with intellectual disabilities; Sport Commemoration of the International Day of people with disabilities); occasional activities including short courses for technicians and future professionals (Introductory course to Braille, bocce referee course, Trevor Williams cycle of conferences with international speakers and coursework for PE teachers) and weekly activities (adapted physical activity sessions to different special groups or individual participants). NEAFA has partnerships with institutions of the central region (e.g. APPDA, ATENEU, Martim de Freitas public school) in order to have regular adapted physical activity to the users of those entities. In the particular case of school, monitors intervene directly in the context of Inclusive Physical Education class, by assisting PE teachers. All activities are free of charge, ensuring that anyone can participate in the activities. The practice sessions are held in groups or individually and they are all organized by two or more monitors. The NEAFA want to celebrate diversity and to promote a more inclusive community through the practice of regular physical activity, improving the pedagogical quality of teachers and sport technicians and contributing to improve a healthy leisure, through physical activity tailored to the needs of each participant, enjoying its physiological, social and psychological benefits, being an example of good inclusive practice.

### **Bionota:**

Maria João Carvalheiro Campos exerce funções docentes na Universidade de Coimbra desde 2002. É licenciada em Ciências do Desporto e Educação Física (2002) pela Faculdade de Ciências do Desporto e Educação Física da Universidade de Coimbra (FCDEF-UC), tendo frequentado um ano letivo na Charles University, em Praga, República Checa (2000/2001). Mestre em Atividade Física Adaptada, na Faculdade de Desporto da Universidade do Porto (2005). Em 2008 inscreveu-se no doutoramento na FCDEF-UC e no âmbito dos seus estudos de doutoramento, deslocou-se 3 meses para a Universidade da Virgínia, nos Estados Unidos da América (2010), sob a supervisão do Professor Doutor Martin E. Block. É coordenadora do NEAFA - Núcleo de Estudos de Atividade Física Adaptada, projeto financiado pela Fundação Calouste Gulbenkian. As suas áreas de investigação relacionam-se com as perceções da comunidade escolar face à inclusão nas aulas de EF e com a educação física inclusiva.

### **Bionote:**

Maria João Carvalheiro Campos belongs to University of Coimbra teaching staff since 2002. She has a degree in Sport Science and Physical Education (2002) from the Faculty of Sport Sciences and Physical Education, University of Coimbra (FCDEF-UC), attending a school year at Charles University in Prague, Czech Republic (2000/2001). Master in Adapted Physical Activity, Faculty of Sport, University of Porto (2005). In 2008 she enrolled in the doctoral program at FCDEF-UC and within her doctoral studies, she went to the University of Virginia, United States of America (2010), under the supervision of Martin E. Block PhD. She is the coordinator of NEAFA - Center for the Study of Adapted Physical Activity, project funded by Calouste Gulbenkian Foundation. Current research interests focus on PE teacher's and student's perceptions towards inclusion of students with disabilities in Physical Education as well as adapted physical activity.

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Comunicação Poster - 26/10 às 11:00-12:30

Avaliando as atitudes face à inclusão - a voz dos professores de educação física

Maria João Campos<sup>1\*</sup>, José Pedro Leitão Ferreira<sup>1</sup>, Carlos Lebres<sup>1</sup> & Guilherme Furtado<sup>1</sup>

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## Resumo

A educação inclusiva assume-se cada vez mais como um tema fulcral na sociedade contemporânea visível actualmente não apenas no discurso político e nas tendências pedagógicas, como também nas consignações legislativas internacionais e nacionais. Esta realidade confere responsabilidades acrescidas às instituições educativas e em particular aos professores, nomeadamente no que concerne ao desenvolvimento de práticas que potenciem um processo de ensino-aprendizagem vocacionado para as particularidades de cada aluno. Nesta perspectiva, a Educação Física, contemplada no programa curricular desde o 1.º ciclo do ensino básico, pode manifestar-se como um veículo privilegiado na implementação efectiva da inclusão educativa, dependendo em sobremaneira da atitude do docente perante esta filosofia inclusiva. Assim, o presente estudo tem como objectivo apurar as atitudes dos professores de Educação Física face à inclusão de alunos com deficiência e averiguar quais as variáveis preditoras dessas percepções.

A amostra foi constituída por 6 professores de Educação Física do ensino básico (5 do género masculino e 1 do género feminino), com idades compreendidas entre os 25 e os 32 anos. Utilizou-se uma metodologia de natureza qualitativa, sendo a recolha de dados efectuada através de uma entrevista semi-estruturada em grupo - focus group.

Os resultados revelam que os professores de Educação Física evidenciam atitudes favoráveis face ao ensino de alunos com deficiência. As variáveis relacionadas com os alunos que influenciam as atitudes reportam-se para o tipo e a severidade da condição de deficiência. Relativamente às variáveis relacionadas com o professor, a experiência com alunos com deficiência e a formação na área são factores preponderantes para percepções e comportamentos mais inclusivos no processo ensino-aprendizagem.

Os participantes apontam como situação ideal para uma efectiva inclusão na aula de EF, a existência de um professor de EF com formação especializada na área, todos eles referindo que essa situação seria um sistema de ensino perfeito.

Os docentes expressam uma atitude entusiasta e positiva face à inclusão de alunos com deficiência nas aulas de Educação Física, manifestando-se como profissionais que defendem os princípios da inclusão. No entanto, confirma-se a importância da formação especializada no âmbito da Educação Física Adaptada, não só ao longo da formação académica, mas também no decorrer do percurso profissional. A formação apresenta-se assim como um factor fundamental para que os professores se sintam competentes, depreendendo-se, que quanto mais os professores se auto-percebem como competentes, mais positivas serão as suas atitudes. A par da formação especializada, também a variável qualidade da experiência assume uma importância crucial no ensino de alunos com deficiência, influenciando a percepção de competência dos docentes de Educação Física.

Numa sociedade que cada vez mais se pretende proclamar de inclusiva, é imperativo verificar se no contexto escolar, os professores, como principais agentes educativos, respondem de forma efectiva e positiva à inclusão na aula de Educação Física.

Comunicação Poster - 26/10 às 16:30-17:00

Análise das propriedades psicométricas da versão portuguesa do PEATID-III

Maria João Campos<sup>1\*</sup>, José Pedro Leitão Ferreira<sup>1</sup> & Susana Teixeira<sup>1</sup>

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## Resumo

Apesar das políticas governamentais progredirem no sentido da inclusão dos alunos com necessidades educativas especiais no ensino regular, muitas vezes assiste-se a barreiras criadas pela comunidade escolar em geral e pelos professores em particular, que são um entrave ao sucesso desejado. Dado o papel que os professores desempenham no processo de inclusão, as suas percepções e atitudes face à deficiência constituem variáveis de grande interesse para a compreensão deste fenómeno. Desta forma, é importante centrarmos a nossa atenção no conhecimento das atitudes dos professores de EF, através da auscultação dessas percepções, com a utilização de instrumentos de avaliação válidos e fiáveis. O objectivo do presente estudo é analisar as propriedades psicométricas Physical Educators' Attitude Toward Teaching Individuals with Disabilities - PEATID-III (Folsom-Meek & Rizzo, 1993), traduzida e adaptada por Campos, Ferreira e Gaspar (2007).

A amostra foi constituída por 413 professores de Educação Física, 253 do género masculino e 160 do género feminino, com idades compreendidas entre os 21 e os 58 anos (M=32.43; DP=9.01). Para estimar a consistência interna da escala foi calculado o alfa de Cronbach, após a qual foi realizada uma análise factorial confirmatória para analisar a validade e fiabilidade da escala e as suas características multidimensionais. As medidas utilizadas para verificar a adequabilidade do modelo foram: ratio chi square statistics/degrees of freedom ( $\chi^2/df$ ), comparative fit index (CFI), goodness of fit index (GFI) e root mean square error of approximation (RMSEA).

As subescalas “resultados” ( $\alpha=.89$ ) e “efeitos” ( $\alpha=.93$ ) demonstraram uma boa consistência interna, no entanto a subescala “necessidade de mais preparação académica” revela claramente a existência de problemas ( $\alpha=-1.40$ ), apresentando valores inaceitáveis.

A análise à estrutura original demonstrou uma inadequabilidade do modelo, pelo que os resultados indicam que o PEATID III não é um instrumento de avaliação fiável para medir as atitudes dos professores de educação física face à inclusão de alunos com deficiência.

Apesar de ser um instrumento de avaliação muito popular, sendo utilizado em diversas pesquisas internacionais, as suas propriedades psicométricas ainda não tinham sido analisadas, pelo que os estudos de validação revestem-se de um interesse fulcral para a aferição das atitudes dos professores de educação física face à inclusão de alunos com deficiência.

## **Attitudes of Portuguese Physical Educators towards inclusion of students with disabilities in elementary schools**

Maria J. CAMPOS<sup>1</sup>, José P. FERREIRA<sup>1</sup> & Carlos LEBRES<sup>1</sup>

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Considering the importance of the teacher's role as an agent of change, it is crucial to study physical educator's attitudes regarding inclusion of students with disabilities in Physical Education classes. **PURPOSE:** This study aims to report physical educators' attitudes toward teaching students with disabilities in Portuguese elementary schools and to determine which attributes (previous experience in teaching students with disabilities, quality of experience, perceived competence, academic preparation and training in special education), may account for the total variance explained. **METHODS:** Participants were 159 physical educators (n = 89 male and n = 70 females), age between 22 and 46 years (M = 25.70, SD = 3.11). The PEATID III - *Physical Educators' Attitude Toward Teaching Individuals with Disabilities III* (Rizzo, 1993), translated and adapted to the Portuguese reality by Campos, Ferreira and Gaspar (2007) was administered, using standardized conditions. The PEATID-III consists of a series of twelve statements which requires teachers to express their beliefs about teaching individuals with disabilities in Physical Education classes. Variables like "gender", "years of experience", "special education coursework", "perceived competence" and "perceived quality of experience" were analyzed. **RESULTS:** The results disclose the existence of significant statistical differences, for training in special education, for quality of experience and for perceived competence in relation to the attitudes of physical education teachers towards the inclusion of students with disabilities. Results also suggest that

training in special education and the teaching experience with young people with disabilities are identified by teachers as crucial vectors in the evolution of their perceived competence, promoting the success of an inclusive education in physical education classes. It is also clear that the greater their perception of competence, the more comfortable they feel about dealing with students with disabilities in physical education classes. **CONCLUSIONS:** The results provide evidence that there is a need to promote positive attitudes among physical education teachers since elementary schools for inclusion became a reality. It is important to have training and coursework in special education for physical educators feel more competent in teaching students with disabilities. In future studies it would be very interesting to include qualitative research to better understand teacher's perceptions about inclusion and which attributes contribute for an effective inclusion in their physical education classes. The most important implication of this study concerns to the institutions responsible for graduate PE teachers: although the great majority provide coursework in special education needs, universities should restructure their programs to infuse information and experience about disabilities throughout the curriculum (Rizzo & Kirkendall, 1995). Academic and non-academic training will be reflected not only on teacher's attitudes, competences and motivation, but also in the lives of children with disabilities.



# ATITUDES DOS PROFESSORES DE EDUCAÇÃO FÍSICA DO 1º CICLO FACE À INCLUSÃO DE ALUNOS COM DEFICIÊNCIA

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**Palavras-chave:** inclusão; atitudes; professores; educação física; deficiência

## **Objetivos:**

O presente estudo tem como objetivo averiguar quais as variáveis (qualidade da experiência, competência percebida, formação especializada), que predizem as atitudes dos professores de educação física, face à inclusão de alunos com deficiência nas suas aulas.

## **Métodos e resultados:**

A amostra foi constituída por 159 professores de educação física, que desempenham funções nas Atividades de Enriquecimento Curricular de Expressão Físico Motora, no 1º ciclo do ensino básico (n=89 do género masculino e n=70 do género feminino), com idades compreendidas entre os 22 e os 46 anos (M=25,70; DP=3,11).

Foi aplicado o PEATID III – *Physical Educators' Attitude Toward Teaching Individuals With Disabilities III* (Rizzo, 1993), traduzido e adaptado para a realidade portuguesa por Campos, Ferreira e Gaspar (2007).

Apuramos a existência de diferenças estatisticamente significativas, em função da formação em ensino especial, da perceção da qualidade e competência relativamente às atitudes dos professores de educação física face à inclusão de alunos com deficiência nas suas aulas.

**Conclusões:**

Podemos afirmar que a formação em educação especial e a experiência com jovens com deficiência são vetores tidos pelos docentes como fundamentais na evolução da sua competência, promovendo um ensino inclusivo de sucesso, nas aulas de Educação Física, parecendo manifestarem-se como fatores importantes na formação e desenvolvimento das atitudes dos docentes. É também evidente que quanto maior é o seu sentido de competência, mais à vontade estes se encontram para lidar com os alunos com deficiência, beneficiando todos os intervenientes do processo ensino-aprendizagem e elevando as atitudes a um patamar mais favorável à inclusão.

## The Effect of an Awareness Program on Attitudes of 9<sup>th</sup> Grade Portuguese Student's towards Inclusion in Physical Education Classes

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### PURPOSE

The research on pupils' attitudes towards inclusion of peers with disabilities in Physical Education (PE) has recently become an area of international interest since attitudes may be decisive for a successful inclusion. However, these studies haven't been carried out in Portugal. The purpose of this study was to assess the effect of an awareness program on attitudes of 9th grade students towards the inclusion of students with disabilities in PE classes and to analyse some variables, such as gender, previous contact to a disability and level of competitiveness.

### METHODS

The study involved 156 students (84 boys and 72 girls, age between 13 and 17 years old, mean age 14,32 ±0,835) attending the 9th grade in Portugal. We used the CAIPE-R questionnaire - Children's Attitudes Towards Integrated Physical Education-revised Block, (1995), translated and adapted for the Portuguese population by Campos and Ferreira (2008). The awareness intervention consisted in one-week program (two PE lessons: 90' and 45').

### RESULTS

Results showed statistically significant differences for gender (girls have more positive attitudes) and previous contact with a person with a disability (students who have a family member or friends with disabilities and students who have peers with disability in PE have significant more positive attitudes). Results obtained also suggest that students without disabilities who have a more competitive nature have less positive attitudes toward inclusion of students with disabilities in PE classes.

Results also showed that, attitudes of students without disabilities towards the inclusion of peers with disabilities in PE classes were significantly higher after the awareness intervention.

### CONCLUSIONS

In accordance to literature the awareness programs can play a central role in changing attitudes towards students with disabilities. We believe that our study can be a key tool to draw some conclusions about the attitudes and the positive effects of this kind of programs of Portuguese students without disabilities towards the inclusion of peers with disabilities in PE classes. The results of the present study corroborate the fact that students attitudes improved after the implementation of the program and the students became more aware of inclusion of peers with disabilities and more open to their participation in PE.

# UM EXEMPLO DE BOAS PRÁTICAS INCLUSIVAS: O NEAFA – FCDEF UC

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## INTRODUÇÃO

O NEAFA – FCDEF-UC é o Núcleo de Estudos de Actividade Física Adaptada da Faculdade de Ciências do Desporto e Educação Física da Universidade de Coimbra, co-financiado pela Fundação Calouste Gulbenkian.

## OBJETIVO

O NEAFA é um projecto promotor de inclusão escolar e social, através da prática de actividade física adaptada, que, por um lado, oferece formação especializada no âmbito das necessidades educativas especiais, visando a melhoria das competências e atitudes dos profissionais da área das ciências do desporto e da educação física face à inclusão nas aulas de EF e por outro, a melhoria das competências psicomotoras de populações especiais através da promoção de actividade física regular e adaptada.

## (MÉTODOS E MATERIAIS)

A coordenação do projecto NEAFA está a cargo dos docentes José Pedro Ferreira e Maria João Campos, coadjuvados por estudantes voluntários da FCDEF-UC, que semanalmente operacionalizam as sessões desportivas e os eventos realizados durante o ano lectivo.

## RESULTADOS E DISCUSSÃO

As actividades realizadas passam pela realização de eventos anuais (*Meeting Sénior; Movimento Especial; Comemorações desportivas do dia internacional*

*da pessoa com deficiência*); de actividades ocasionais - cursos breves para técnicos e/ou futuros profissionais (Curso de iniciação ao Braille, curso de árbitro de boccia, ciclo de conferências Trevor Williams, formação contínua de professores) e actividades semanais (sessões de actividade física adaptada a diferentes grupos especiais)

## **CONCLUSÃO**

O NEAFA pretende celebrar a diversidade e promover uma comunidade mais inclusiva, através da prática desportiva, contribuindo para a melhoria da qualidade pedagógica dos profissionais na área do desporto e da educação física e a ocupação saudável e activa dos tempos livres, através de actividade física adaptada às necessidades especiais de cada utente, usufruindo dos benefícios fisiológicos, sociais e psicológicos do exercício físico regular.

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## **Validity and reliability of the *Children's Attitudes towards Integrated Physical Education-revised (CAIPE-R)***

### **PURPOSE OF STUDY:**

The main purpose of this study is to test validity and reliability of the Portuguese version of *Children's Attitudes Towards Integrated Physical Education - CAIPE-R* (Block, 1995) as well as to focus on the psychometric properties of the instrument, as the validity of the original factorial structure was never tested before, using confirmatory factor analysis to analyse the goodness of fit indices that suggested factor model.

### **METHOD:**

Participants were 683 students without disabilities, (n=316 females and n=367 males, between 11 and 16 years, mean age  $13.31 \pm 1.102$ ), who attended middle schools in Portugal. The CAIPE-R (Block, 1995) was selected to measure students' attitudes toward including students with a disability in Physical Education (PE). This instrument measures global attitudes and is composed by two subscales: general attitude toward inclusion in PE and attitudes toward sport-specific modifications.

### **RESULTS:**

The values of alpha ( $\alpha$ ) Cronbach found in 2 subscales are 0,72 and 0,48 respectively. Exploratory factor analysis revealed a different factorial organization to that reported with the original instrument. The internal consistency and the validity of the CAIPE-R have been adequately tested, replying consistently the original structure presented by Block (1995).

### **CONCLUSIONS:**

The Portuguese version of the CAIPE-R is a valid instrument to assess attitudes of students without disabilities toward including peers with disabilities in PE. We underline the need of more knowledge and consequently more scientific research. Future studies should assess the influence of an awareness program in attitudes of students without disabilities towards inclusion of peer with disabilities in PE.

# **ATTITUDES OF 14 TO 16 YEARS OLD STUDENTS WITHOUT DISABILITIES TOWARDS INCLUSION IN PHYSICAL EDUCATION**

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## **INTRODUCTION:**

The investigation of attitudes of students without disabilities towards inclusion of students with disabilities in Physical Education (PE) classes is an area of great importance and the understanding of their perceptions is a key element in the implementation of inclusive philosophies in regular classes of Physical Education.

The main purpose of this study focuses on examining the effects of an inclusive sport intervention in attitudes of students without disabilities towards inclusion in PE classes.

## **METHODS:**

The sample consisted of N=126 students, n=77 females and n=49 males, aged between 17 and 20 years (M=15.35, SD=0.570). There were two groups (N=20 experimental group and control group N=106). The inclusive intervention included Paralympic sports and other adapted activities. The experimental group received a one-day program.

We used the Children's Attitudes Towards Integrated Physical Education-revised - CAIPE-R (Block, 1995) translated and adapted by Campos and Ferreira (2008). The questionnaire measures global attitudes on PE class, and then subdivided into two subscales: specific attitudes towards integration in PE class and sport specific attitudes. The CAIPE-R was applied in 2 different times. We applied the pre-test, then we organized the inclusive sport intervention and, after a week, we applied the posttest.

## **RESULTS:**

Although no statistically significant differences were found in gender, we can observe that girls have higher values in attitude (global attitudes and attitude toward PE class).

We can conclude that, after the inclusive intervention, the average values of attitudes (in global attitudes, attitudes towards integration in PE class and sport specific attitudes) are higher in girls with significant results for global attitudes scale and for the sport specific subscale.

After the inclusive intervention, experimental group have slightly higher attitudes to the control group.

## **CONCLUSION:**

We found that the inclusive sport intervention had a positive influence on the attitudes of students. These results indicate that the implementation of adapted activities in PE classes can influence in a positive way the attitudes of students without disabilities in the educational environment and consequently in social life. However, there is a need for more research in this area to generalize the results.



# ESTUDO EXPLORATÓRIO DAS ATITUDES DE ALUNOS SEM DEFICIÊNCIA DOS 17 AOS 20 ANOS FACE À INCLUSÃO NAS AULAS DE EDUCAÇÃO FÍSICA – (RESULTADOS PRELIMINARES)

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## RESUMO:

**INTRODUÇÃO:** A investigação das atitudes dos alunos sem deficiência face à inclusão de alunos com deficiência nas aulas de Educação Física (EF) é uma área de grande importância, e compreender as suas percepções reveste-se como um elemento-chave na implementação das filosofias inclusivas nas classes regulares de Educação Física. Em Portugal, este estudo apresenta-se mesmo como pioneiro.

**OBJECTIVOS:** O objectivo principal do presente estudo, centra-se em examinar os efeitos de uma intervenção inclusiva (aula de EF adaptada) nas atitudes dos alunos sem deficiência face à inclusão de alunos com deficiência nas aulas de Educação Física.

**MATERIAL E MÉTODOS:** A amostra foi constituída por N=80 alunos, sendo n=47 do género feminino e n=33 do género masculino, com idades compreendidas entre os 17 e os 20 anos (M=17,33; DP= 0,652). Foram formados dois grupos (experimental N=37 e de controlo N=43). O grupo experimental realizou três aulas de EF adaptada, dedicadas a modalidades paralímpicas e outras actividades adaptadas.

Este estudo apresenta um carácter exploratório, uma vez, que foi utilizado o instrumento de recolha de dados *Children`s Attitudes Towards Integrated Physical Education* - CAIPE-R (Block, 1995) traduzido e adaptado por Campos e Ferreira (2008), nunca antes aplicado à população Portuguesa. O questionário mede atitudes globais na aula de EF, sendo subdividido posteriormente em duas subescalas: atitudes específicas face à integração na aula de EF e atitudes face à alteração de regras. O CAIPE-R teve 2 momentos distintos de aplicação. Aplicou-se o pré-teste, de seguida foram realizadas as aulas de EF adaptada e, após uma semana, aplicou-se novamente o questionário (pós-teste).

**RESULTADOS:** Apesar de não haver diferenças estatisticamente significativas podemos observar que a) o género feminino apresenta valores médios superiores nas atitudes (global na EF, específica na EF e atitude face à alteração de regras) em comparação com o género masculino; b) após a intervenção inclusiva, os valores médios das atitudes (globais na EF, Específica na EF e face à alteração de regras) são ligeiramente superiores no grupo experimental comparativamente com o grupo de controlo; c) no grupo experimental, e após a intervenção inclusiva, o género feminino apresenta atitudes com valores médios ligeiramente superiores em comparação com o género masculino; d) os alunos que possuem familiares ou amigos no seu meio social apresentam atitudes com valores médios superiores em comparação com os alunos que nunca tiveram essa experiência.

**CONCLUSÕES:** podemos constatar que a intervenção inclusiva teve uma influência positiva nas atitudes dos alunos. Estes resultados apontam para que a implementação de aulas de EF adaptada influencia de um modo positivo as atitudes dos alunos sem deficiência, no meio educativo e conseqüentemente no meio social. Contudo, existe uma necessidade de mais investigação nesta área para generalizar os resultados obtidos.

## ESTUDO EXPLORATÓRIO DAS ATITUDES DOS PROFESSORES DE EDUCAÇÃO FÍSICA FACE À INCLUSÃO DE ALUNOS COM DEFICIÊNCIA AUDITIVA

Maria João Campos  
Mafalda Cortez

### RESUMO

As atitudes dos professores são um factor chave na inclusão de alunos com deficiência no ensino regular. O objectivo do presente estudo é aferir as atitudes dos professores de EF face ao ensino de alunos com deficiência auditiva.

A amostra foi constituída por 254 professores de EF (N=164 do género masculino e N=90 do género feminino), com idades entre os 21 e os 58 anos (M=36,64; DP=8,94). Foi aplicado o PEATID III (Rizzo, 1993).

Conclui-se que os docentes com formação em ensino especial apresentam atitudes mais favoráveis, bem como uma melhor qualidade da experiência e uma maior percepção de competência.

Palavras-chave: Atitudes; Inclusão; Professores De Educação Física; Deficiência Auditiva

### ABSTRACT

Teachers' attitudes are a key factor in the inclusion of students with disabilities in regular education. The purpose of this study is to assess the attitudes of teachers of Physical Education toward teaching students with hearing disability. The sample was 254 PE teachers (N=164 males and N=90 females), aged 21 to 58 years (M=36.64, SD=8.94). It was applied PEATID III (Rizzo, 1993). We can concluded that teachers with training in special education have more positive attitudes and a better quality of experience and a greater perception of competence.

Key words: Attitudes, Inclusion, Physical Educators Physical Disability, Hearing Disability

### RESUMEN

Las actitudes de los docentes son un factor clave en la inclusión de estudiantes con discapacidad en la educación regular. El objetivo de este estudio es evaluar las actitudes de los profesores de EF en contra de la enseñanza de alumnos con deficiencia auditiva.

La muestra consistió de 254 profesores de EF (N=164 hombres y N=90 mujeres), de 21 años de edad a 58 años (M=36,64, SD=8,94). Se aplicó PEATID III (Rizzo, 1993). Se concluye que los profesores con formación en educación especial tienen actitudes más favorables y una mejor calidad de experiencia y una mayor percepción de competencia.

Palabras clave: Actitudes; Inclusión; Profesores De Educación Física, Discapacidad Auditiva

## INTRODUÇÃO:

A problemática da deficiência tem sofrido inúmeras alterações ao longo dos anos. Desta forma, nos dias de hoje assiste-se a uma tentativa de propiciar cada vez mais e melhores condições de ajustamento de vida a esta população, com o intuito de lhes proporcionar o mesmo tipo de oportunidades que os indivíduos ditos normais. Assim, passa também por garantir um ensino de Educação Física de qualidade a estes alunos no ensino regular, visto este ser, um dos objectivos da política educativa portuguesa.

Deste modo, a importância do papel do professor de Educação Física enquanto agente de mudança, favorecendo a compreensão mútua e a tolerância, nunca foi tão evidente como hoje em dia. Os professores têm um papel determinante na formação de atitudes, positivas e negativas, face ao processo de ensino-aprendizagem (Nunes, 2007). As pesquisas sobre as atitudes dos professores de Educação Física face à deficiência têm revelado grande importância para o processo educativo. Muitos educadores confirmam este facto ao reconhecerem o seu papel fundamental na formação destes alunos.

Muitos factores influenciam o sucesso da assimilação de estudantes com deficiência na corrente principal das aulas de Educação Física. Deste modo, a atitude do professor de Educação Física é crucial. Recentes investigações mostram-nos que as atitudes de professores de Educação Física variam de acordo com o professor, o estudante e as suas variáveis relacionadas (Rizzo & Vispoel, 1991).

Como tal, consideramos pertinente estudar as atitudes dos professores de Educação Física com o intuito de compreender que factores influenciam as suas atitudes (favoráveis ou desfavoráveis) em relação ao ensino de alunos com deficiência auditiva nas suas classes de ensino regular. Este estudo é inédito em Portugal, pelo que é um estudo exploratório.

O maior objectivo deste estudo é averiguar as atitudes dos professores de Educação Física face à deficiência auditiva. Propomo-nos ainda a tentar compreender quais das características dos professores de Educação Física (idade, género, tempo de serviço, ano de escolaridade que leccionam, habilitações académicas, formação em Necessidades Educativas Especiais, experiência no ensino de indivíduos com deficiência, qualidade de experiência e competência) estão relacionadas com atitudes face ao ensino de alunos com deficiência.

A escola ambiciona, cada vez mais, incluir no seu seio todos os alunos, sejam quais forem as suas características ou carências. Deste modo, é necessário estruturar ambientes de aprendizagem com o objectivo de promover a inclusão dos alunos com necessidades educativas especiais (Nunes, 2007).

A escola é um espaço privilegiado para a apropriação e construção de conhecimento. O seu papel fundamental é instrumentalizar os seus estudantes e professores para pensarem de forma criativa em soluções, tanto para os antigos mas principalmente para os desafios emergentes. O paradigma da escola ao serviço da preparação de elites foi sendo substituído pelo da escola universal e “para todos” (Nunes, 2007). Ainda a mesma autora afirma que, não podemos esquecer uma realidade com que a escola de hoje se vê confrontada, que é o de abertura das suas “portas” aos

“excluídos”, sobretudo aos que num passado recente não a frequentavam por serem considerados “deficientes”.

Este contexto de profundas modificações na visão do “ensino regular” e do “ensino especial”, além das discussões por elas geradas, vem motivando muitos projectos de pesquisa na área, especialmente no âmbito da Educação Física escolar, visto que, na maioria das vezes, mesmo o aluno tendo acesso à escola, ele é dispensado das aulas de Educação Física (Gorgatti et al, 2004). Os mesmos autores afirmam que, talvez por confundir deficiência com doença, talvez por comodismo ou total falta de informação, o facto é que muitos professores privam seus alunos “especiais” da oportunidade crucial de vivenciarem experiências motoras e recreativas, o que fatalmente trará consequências por vezes irreparáveis.

Em muitos países, uma contínua mudança face à educação inclusiva para crianças com deficiência tem sido observada (DePauw & Doll-Tepper, 2000; Lienert, Sherril & Myers 2001) citado por Kozub & Lienert (2003). Incluir estudantes com deficiência nas aulas de ensino regular de Educação Física por professores de Educação Física num caminho seguro, bem sucedido, e satisfatório requer adaptações no planeamento, implementação e avaliação os próprios professores que se põem à parte dos estudantes, estes são os mais afectados por adoptar filosofias inclusivas nas escolas ( Kozub & Lienert, 2003). Os professores são também a ligação entre os pais, e em alguns casos a fronteira da sociedade e as expectativas de aprendizagem (Lienert et al. , 2001), citado por Kozub & Lienert (2003). Dando o papel que os educadores desempenham no processo da inclusão, as atitudes dos professores são uma variável de grande interesse.

Muitos factores influenciam o sucesso da assimilação de estudantes com deficiência na corrente principal das aulas de Educação Física. Deste modo, a atitude do professor de Educação Física é crucial. Recentes investigações mostram-nos que as atitudes de professores de Educação Física varia de acordo com o professor, o estudante e as suas variáveis relacionadas (Rizzo & Vispoel, 1991).

A importância do papel do professor enquanto agente de mudança, favorecendo a compreensão mútua e a tolerância, nunca foi tão evidente como hoje em dia. Os professores têm um papel determinante na formação de atitudes, positivas e negativas, face ao processo de ensino-aprendizagem (Nunes, 2007). A mesma autora declara que, devem despertar a curiosidade, desenvolver a autonomia e criar as condições necessárias para o sucesso da educação formal e da educação permanente. Will (1986) e Stainback & Stainback (1987) citados por (Nunes, 2007) referem que os professores, nas suas classes de ensino regular, podem e devem providenciar adaptações instrucionais e curriculares adequadas para todo e qualquer aluno.

A forma como os docentes utilizam as estratégias varia muito consoante os alunos, as suas características e a forma como esses alunos se inserem (Nunes, 2007). Esta autora ainda defende que, qualquer uma das estratégias tem implicações no processo de ensino-aprendizagem, facilitando e promovendo o desenvolvimento cognitivo e a aprendizagem dos alunos de forma geral e dos alunos com necessidades educativas especiais em particular. Sabemos como é difícil e complexo o desafio de responder com qualidade às diferenças entre os alunos e como frequentemente nos faltam as condições, apoios e conhecimentos (Nunes, 2007).

De facto não é suficiente apenas a criação de instrumentos legais que assegurem o ingresso de “todos” à escola. Mais do que isso, é preciso que se modifiquem atitudes, comportamentos, visões estigmatizadas (Gorgatti et al, 2004).

Ainda estes autores afirmam que, até há pouco tempo atrás, acreditava-se que as crianças e jovens portadores de deficiência teriam melhores resultados caso tivessem

sido atendidos por um sistema especial de ensino, inclusive no que se refere á Educação Física. Considerava-se que, em função das limitações, os estudantes com necessidades especiais não poderiam se engajar irrestritamente, de forma segura e com sucesso, em atividades vigorosas de um programa de Educação Física convencional. Exigia-se que houvesse mudanças ou ajustes de metas, objetivos e instruções. Tal preceito, nos dias de hoje, não é premissa para a implementação e implantação de programas, dada a tendência de convivência e inclusão social manifestada pela sociedade, com base no modelo de direitos humanos e direitos sociais (Gorgatti et al, 2004).

Estes autores dizem ainda que a área da educação e aqui se inclui a Educação Física, não pode ser limitada a ponto de afastar uma criança da convivência de outra por questões irrelevantes. A convivência com pessoas diferentes deveria ser uma grande ferramenta em educação, preparando pessoas mais conscientes para a vida e as suas possibilidades. O ensino especial deve ser uma saída quando o progresso do aluno estiver seriamente comprometido em uma classe regular e não uma questão de conveniência para os professores e directores da escola (Gorgatti et al, 2004).

## METODOLOGIA

### Caracterização da Amostra

O presente estudo teve por base uma amostra de 254 professores de Educação Física do género masculino (N=165) e feminino (N=90), com idades compreendidas entre os 21 e os 58 anos, sendo a média de idades e desvio padrão 36,64 e 8,94, respectivamente.

### Instrumento de Avaliação

O instrumento PEATID III consiste em duas secções básicas. Uma secção considera as atitudes face ao ensino de estudantes com deficiência em aulas de Educação Física no ensino regular medindo as suas crenças. A outra secção atenta aos atributos (demográficos e descritivos) dos participantes (Folsom-Meek & Rizzo, 2002). A utilidade do PEATID III é que permite os investigadores especificarem tipos de deficiência e o número de deficiências que eles querem avaliar. Isto, também, permite que os investigadores avaliem atributos que eles considerem que podem contribuir para a variância nas atitudes face ensinar alunos com deficiência (Folsom-Meek & Rizzo, 2002). O PEATID III é suficientemente versátil para avaliar atitudes em futuros profissionais como professores com anos de experiência (Folsom-Meek & Rizzo, 2002). A primeira parte do PEATID III consiste em 12 afirmações, cada uma das afirmações está marcada com as condições de deficiência (deficiência visual, deficiência auditiva, deficiência intelectual e deficiência motora) juntamente com uma 5- point Likert scale ( 1= discordo completamente, 2= discordo, 3= nem discordo nem concordo, 4= concordo, 5= concordo completamente). Cinco itens são positivamente fraseados e sete itens são negativamente fraseados (Folsom-Meek & Rizzo, 2002). Nos itens negativos terá de haver uma modificação das pontuações para positivas. A pontuação variará entre os 12 e os 60 pontos.

## RESULTADOS

Com base nos resultados obtidos, através da análise descritiva das variáveis deste estudo, verificamos que o tempo de serviço da amostra varia entre 1 ano e 36 anos de serviço, sendo a média de 11,74 e o desvio padrão de 8,85, distribuídos pelos diferentes anos lectivos.

Em relação à variável habilitações académicas a maioria dos participantes da amostra é licenciado apresentando um valor percentual de 76%. Seguidamente, com uma percentagem de 13% encontram-se os inquiridos com mestrado, e finalmente, os bacharéis com 4,7%.

No que toca à formação em Ensino Especial /NEE verificamos que 61,4% dos participantes afirma ter esta formação e 38,6% considera que não tem formação neste âmbito. Na variável experiência, 60,6% dos participantes afirma já ter leccionado aulas a indivíduos com deficiência e 39% considera que não tem experiência nesta vertente.

Relativamente ao número de anos de ensino a alunos com deficiência desta amostra o valor mínimo é de 1 ano, o valor máximo é de 30 anos, sendo a média de 5,44 e o desvio padrão de 5,54.

No que refere à variável qualidade de experiência podemos observar que a maioria dos participantes da amostra pensa que a sua qualidade de experiência é Satisfatória apresentando uma percentagem de 46,1%. Seguidamente, com uma percentagem de 34,6% encontram-se os inquiridos Sem Experiência. A qualidade de experiência Muito Positiva um valor percentual de 10,6%. Por fim, a qualidade de experiência Nada Positiva com 8,7% de percentagem.

Referente à competência percebida, a maioria dos inquiridos considera-se Com Alguma Competência apresentando uma percentagem de 53,1%. Seguidamente, com um valor percentual de 35,0% apresentam-se os participantes que se percebem como Nada Competentes. Finalmente, Muito Competente manifesta uma percentagem de 3,5%.

Tabela 1 – Estudo estatístico relativo à variável Formação em Ensino Especial em função das variáveis dependentes

	Formação em NEE	<i>Estatística descritiva</i>		<i>Teste t de student</i>	
		Média	DP	t	Sig (2-tailed)
Atitude face à DA	Sim	40,62	6,29	-5,30	0,000
	Não	36,53	7,05		
Competência Percebida	Sim	1,87	0,54	-4,12	0,000
	Não	1,55	0,56		
Qualidade de Experiência	Sim	2,69	0,97	-2,11	0,036
	Não	2,27	1,05		

Nesta tabela notamos que relativamente à variável Atitude face à DA, a média mais alta encontra-se nos sujeitos que tiveram formação em NEE (M=40,62 e DP=6,29) relativamente aos que não tiveram formação (M=36,53 e DP=7,05). Na competência percebida a média mais alta (M=1,87 e DP=0,54) verifica-se nos com formação em NEE e a média mais baixa (M=1,55 e DP=0,56) está nos professores que não tiveram formação neste âmbito. Relativamente à qualidade de experiência os sujeitos que tiveram formação em NEE apresentam uma média mais elevada (M=2,69 e DP=0,97) do que os sujeitos sem essa formação (M=2,27 e DP=1,05).

Observamos que há diferenças estatisticamente significativas em relação à Formação em NEE relativamente às variáveis Qualidade de Experiência ( $p=0,036$ ), Competência percebida ( $p=0,000$ ) e Atitude face à DA ( $p=0,000$ ).

Tabela 2 – Estudo estatístico relativo à variável Experiência de docência com alunos com deficiência em função das variáveis dependentes

		<i>Estatística descritiva</i>		<i>Teste t de student</i>	
Experiência		Média	DP	t	Sig (2-tailed)
Atitudes face à DA	Sim	38,50	6,99	-	-
	Não	37,51	7,12		
Competência Percebida	Sim	1,80	0,532	-4,951	0,000
	Não	1,43	0,567		
Qualidade de Experiência	Sim	2,78	0,831	-7,761	0,000
	Não	1,80	1,079		

De acordo com a tabela 2, verificamos que os sujeitos que tiveram experiência no ensino de indivíduos com deficiência relativamente têm valores médios superiores (M=38,50 e DP=6,99) das atitudes face à DA relativamente aos sujeitos sem experiência de ensino com alunos com deficiência (M=37,51 e DP=7,12). No que toca à competência percebida a média mais alta (M=1,80 e DP=0,532) é observada nos sujeitos que tiveram experiência no ensino de indivíduos com deficiência e a média mais baixa (M=1,43 e DP=0,567) no grupo sem experiência. Em relação à qualidade de experiência o grupo dos sujeitos que tiveram experiência no ensino de indivíduos com deficiência mostra a média mais alta (M=2,78) com o desvio padrão de DP=0,831, apresentando a média mais baixa (M=1,80) com desvio padrão de DP=1,079 o grupo de professores sem experiência.

Observamos que há diferenças estatisticamente significativas em relação à Formação em NEE relativamente às variáveis Qualidade de Experiência ( $p=0,000$ ) e Competência percebida ( $p=0,000$ ). Relativamente à Atitude face à DA não se encontraram diferenças estatisticamente significativas.

Tabela 3 – Valores de média, desvio padrão e nível de significância das Atitudes dos professores face à Deficiência Motora em função da qualidade da experiência

	Qualidade de Experiência	<i>Estatística descritiva</i>		<i>Anova</i>	
		Média	DP	F	Sig.
Atitudes face à DA	Sem experiência	35,97	6,31	17,35	0,000
	Nada positiva	35,14	5,10		
	Satisfatória	38,54	6,81		
	Muito positiva	45,67	6,22		

No que diz respeito à variável das atitudes dos professores face à deficiência motora em função da qualidade da experiência, foram encontradas diferenças estatisticamente significativas ( $p \leq 0,01$ ), com os professores com uma qualidade da experiência muito positiva a apresentarem valores médios das atitudes mais elevados ( $M=45,67$  e  $DP=6,22$ ).

Tabela 4 – Valores de média, desvio padrão e nível de significância das Atitudes dos professores face à Deficiência Motora em função da competência percebida

	Competência	<i>Estatística descritiva</i>		<i>Anova</i>	
		Média	DP	F	Sig.
Atitudes face à DA	Nada competente	34,337	5,433	33,627	0,000
	Com alguma competência	39,614	6,660		
	Muito competente	48,100	5,646		

Em relação à competência percebida, os professores que se percebem como muito competentes apresentam valores médios mais elevados na variável das atitudes ( $M=48,10$  e  $DP=5,646$ ). As diferenças são estatisticamente significativas ( $p \leq 0,01$ ) para a variável das atitudes dos professores face à deficiência auditiva em função da competência percebida.

Tabela 5 - Correlações entre as variáveis dependentes

<i>Competência percebida</i>	<i>Atitudes face à deficiência auditiva</i>



<i>Qualidade da experiência</i>	Correlação de Pearson	0,689(**)	0,341(**)
	Sig. (2-tailed)	0,000	0,000
<i>Competência percebida</i>	Correlação de Pearson		0,464(**)
	Sig. (2-tailed)		0,000

\*\* Correlação significativa para  $p \leq 0,01$

No que diz respeito à análise da relação entre as variáveis e os valores relativos aos níveis de significância encontrados, existe uma relação entre as variáveis qualidade da experiência e competência percebida ( $r=0,689$ ); entre as variáveis qualidade da experiência e atitudes dos professores de Educação Física face à deficiência auditiva ( $r=0,341$ ) e entre as variáveis competência percebida e atitudes dos professores de Educação Física face à deficiência auditiva ( $r=0,464$ ). Todas estas relações têm uma significância  $\leq 0,01$ .

## DISCUSSÃO

Tendo por base a análise da estatística inferencial das variáveis, relativamente à variável gênero não foram encontradas diferenças estatisticamente significativas nesta investigação. Este resultado vai de encontro a alguns estudos já realizados (DePauw & Goc Karp, 1990; Hodge & Jansma, 1999; Hodge et al. 2002; Patrick, 1987; Kudlacek et al. 2002; Rizzo & Vispoel, 1991; Rizzo & Wright, 1988; Rowe & Stutts, 1987; citado por Kozub & Lienert, 2003). Por outro lado, Aloia et al. (1980); Downs & Williams (1994); Folsom-Meek, Nearing, Groteluschen & Krampf (1999) e Schmidt-Gotz et al. (1994) citado por Kozub & Lienert (2003), confirmam que as mulheres têm atitudes significativamente mais favoráveis, face ao ensino de alunos com deficiência, em relação aos homens. Esta diferença pode dever-se à maior sensibilidade que as mulheres apresentam em relação à problemática da deficiência.

Na variável formação em NEE, os professores que declaram ter esta formação apresentam atitudes significativamente positivas em relação ao ensino de alunos com deficiência nas suas aulas de Educação Física no ensino regular. Isto vai de encontro a muitos estudos que afirmam que a formação em ensino especial é um predictor de atitudes (Block & Rizzo, 1995; Kowalski & Rizzo, 1996; Rizzo, 1985; Rizzo & Kirkendall, 1995) citado por Kozub & Lienert (2003). Também Schmidt-Gotz et al. (1994) descobriram que professores que recebem formação sobre inclusão têm atitudes mais favoráveis. Kowalski & Rizzo (1996) citados por Kozub & Lienert (2003) afirmam que o trabalho prático das suas significâncias estatísticas é fiável, embora haja baixas correlações entre formação em ensino especial e atitudes. Rizzo & Kirkendall (1995) citado por Kozub & Lienert (2003) dizem que dois predictores significativos das atitudes são a competência percebida e formação em Ensino Especial. Por seu lado,

alguns autores, i.e. Rizzo & Wright (1988) e Zanandrea & Rizzo (1998) citado por Kozub & Lienert (2003) não descobriram correlações significativas entre formação em Ensino especial ou Educação Física adaptada, na previsão das atitudes dos professores.

Questionando o efeito da formação em ensino especial em Educação Física nas atitudes, Folsom-Meek et al. (1999) e Schmidt-Gotz et al. (1994) citado por Kozub & Lienert (2003) descobriram que os sujeitos com maior formação além da Educação Física (e.g. educação especial, educação elementar) mostram atitudes mais positivas do que os que têm uma formação só em Educação Física. Estes estudos indicam a necessidade de examinar a formação em ensino especial na formação em Educação Física. O presente estudo exploratório pretendeu estudar esta variável e concluímos que os sujeitos que tiveram formação em EE têm atitudes significativamente mais favoráveis ( $p=0,000$ ) que os sujeitos que sem essa formação. Este resultado poderá ter implicações muito importantes, pois leva-nos a afirmar que apostar na formação dos professores de Educação Física é essencial para a mudança de atitudes dos mesmos.

Do mesmo modo, na presente investigação, os professores que admitem ter experiência no ensino de alunos com deficiência e se percebem com uma qualidade de experiência muito positiva demonstram atitudes mais positivas em relação aos professores que nunca tiveram contacto com alunos com deficiência e se percebem sem experiência neste âmbito. Isto vai de encontro a estudos realizados anteriormente, que afirmam que um contacto prévio com alunos com deficiência está relacionado com atitudes favoráveis (Rizzo, 1985; Gorgatti e al., 2004). Professores com mais experiência no ensino de alunos com deficiência demonstram nitidamente atitudes mais favoráveis do que professores com menos experiência (Block & Rizzo, 1995; Kozub & Porretta, 1998; Rizzo & Vispoel, 1991; Schmidt-Gotz et al. 1994; Folsom-Meek et al. 1999; Hodge & Jasma, 1999). Também Block & Rizzo (1995) revelaram que a qualidade de experiência de ensino e o trabalho em Educação Física adaptada estão mais fortemente relacionadas com atitudes face à deficiência. Outros estudos não apoiam a relação entre experiência e atitudes (Rizzo & Wright, 1988; Zanandrea & Rizzo, 1998) citado por Kozub & Lienert (2003). Downs & Williams (1994) citado por Kozub & Lienert (2003) também reportam descobertas ambíguas no que toca à experiência e atitudes.

Vários estudos demonstram que a competência com que os professores se autopercebem está relacionada com as atitudes, sugerindo que atitudes favoráveis estão mais ligadas a professores que têm uma alta percepção de competência (Block & Rizzo, 1995; Kowalski & Rizzo, 1996; Rizzo & Kirkendall, 1995; Rizzo e Vispoel, 1991; Rizzo & Wright, 1998; Schmidt-Gotz et al. 1994), citado por Kozub & Lienert, 2003). Assim, de acordo com estas investigações e com o presente estudo podemos afirmar que quanto mais os professores de Educação Física se autopercebem com uma boa competência, mais favoráveis serão as suas atitudes face ao ensino de alunos com deficiência, nas suas aulas de EF. A competência percebida é a variável mais vezes mencionada para explicar e prever as atitudes dos professores de Educação Física face ao ensino de alunos com deficiência (Kozub & Lienert, 2003). Schmidt-Gotz et al. (1994) citado por Kozub & Lienert (2003) descobriram correlações positivas entre competência percebida na previsão dos professores de Educação Física face ao ensino de alunos com deficiência, experiência inclusiva, experiência pessoal no ensino de indivíduos com deficiência e trabalhos inclusivos. Block & Rizzo (1995) encontraram correlações positivas entre a competência percebida e o ensino de alunos com deficiência nas aulas de Educação Física adaptada e educação especial, tempo de serviço e qualidade de experiência de ensino. A relação mais forte existe entre a

competência e a qualidade de experiência no ensino, esta descoberta é apoiada por um estudo de Zanandrea & Rizzo (1998) citado por Kozub & Lienert (2003) com professores brasileiros. Rizzo & Vispoel (1991) encontram correlações significativas entre as seguintes variáveis e a competência percebida: idade, formação em Ensino Especial, gênero, número de anos no ensino a alunos com deficiência e atitudes face ao ensino de indivíduos com deficiência. Estes resultados indicam que a competência percebida face ao ensino de alunos com deficiência é o melhor predictor das atitudes.

Assim, com esta investigação, compreendemos que quanto mais os professores se perceberem como competentes, mais positivas serão as suas atitudes face ao ensino de indivíduos com deficiência, sendo este o melhor predictor de atitudes. Para que os professores se sintam competentes é necessário que tenham formação na área do Ensino Especial e Educação Física adaptada, não só na sua formação académica mas ao longo de toda a sua vida profissional.

Conforme o exposto, é clara a evidência da importância da aposta na formação dos professores de Educação Física e na sua experiência de leccionação a alunos com deficiência. Será pois, crucial a realização de ajustamentos curriculares nos cursos de formação inicial e contínua dos professores de Educação Física, na área do ensino inclusivo, para que os docentes se percepcionem como tendo uma melhor qualidade da experiência de ensino e conseqüentemente aperfeiçoar a sua aptidão pedagógica, que levarão a atitudes mais favoráveis face ao ensino de alunos com deficiência.

Se incidirmos nestes pilares, a filosofia inclusiva que se pretende implantar no nosso país poderá ser efectivamente um sucesso e uma realidade!

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Recurso tecnológico: *Data show*

## Exploratory study of attitudes of Portuguese physical educators toward individuals with disabilities

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Teacher's positive attitudes and perceived competence towards students with disabilities are key factors needed for successful inclusion (DePauw & Doll-Tepper, 2000; Duchane & French, 1998; Heikinaro-Johansson & Sherrill, 1994, In Hodge et al., 2002). Considering the importance of teacher's role as an agent of change, it is crucial the formation of attitudes regarding inclusion of students with disabilities in Physical Education.

**PURPOSE:** This exploratory study aims to ascertain attitudes of Portuguese Physical Education (P.E.) teachers concerning the inclusion of students with disabilities in regular school.

**METHODS:** We used the Physical Educators' Intention toward Teaching Individuals with Disabilities (PEITID-III), Folsom-Meek & Rizzo (1993), translated and adapted for the Portuguese population. The sample was constituted by 254 Physical Educators, N=164 male and N=90 female, with ages between 21 and 58 years old (M=36,64; SD=8,94).

**RESULTS:** We can highlight that: 1) younger teachers have more positive attitudes than older colleagues; 2) teacher's who have coursework in special education / adapted physical activity have more positive attitudes and higher perceived competence than those without this academic preparation; 3) as greater is the quality of experience, more favourable are attitudes and perceived competence; 4) the more competent teachers felt, the more positive were attitudes towards inclusion of students with disabilities in the P.E. class.

**CONCLUSIONS:** It is required to implement strategies, in particular at specific training in adapted physical activity, so that P.E. teachers have greater knowledge regarding teaching students with disabilities and, thus, better perceived competence, which leads to more favourable attitudes toward teaching students with disabilities.

## **Exploratory Study of Physical Educators' Attitudes Towards Inclusion of Students with Physical Disability**

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### **Abstract**

Teacher's attitudes toward teaching students with disabilities key factor in the improvement of disability students' inclusion on the regular classes. The purpose of this research is to explore Physical Educators' attitudes toward teaching students with physical disabilities. The sample was constituted by 254 Physical Educators, N= 164 male and N=90, age between 21 and 58 years old (M=36,64; SD=8,943). We used the PEATID III – Physical Educators' Attitude Toward Teaching Individuals With Disabilities III (Rizzo, 1993), which had never been administrated in this population. The results suggest that teacher's who have coursework in special education have more positive attitudes than those without academic preparation as well as a better quality of experience and perceived competence. The greater the quality of experience, the better are the attitudes and perceived competence. It is necessary to implement strategies, in particular at specific training level in inclusive education, so that teachers have higher quality of teaching experience and consequently better perceived competence and attitudes in teaching students with disabilities.

**Key-words:** Attitudes, Physical Disability, Inclusion, Physical Educators.

## **Estudo Exploratório das Atitudes dos Professores de Educação Física Face a Inclusão dos Alunos com Deficiência Motora**

### **Resumo**

As atitudes dos professores são um factor chave na inclusão de alunos com deficiência nas classes regulares. O objectivo deste trabalho é averiguar as atitudes dos professores de Educação Física (EF) face ao ensino de alunos com deficiência motora. A amostra foi constituída por 254 professores de EF, (N=164 do género masculino e N=90 do género feminino), com idades entre os 21 e os 58 anos (M=36,64; DP=8,94). O instrumento de avaliação utilizado foi o PEATID III – Physical Educators' Attitude Toward Teaching Individuals With Disabilities III (Rizzo, 1993), o qual nunca foi utilizado para a população portuguesa. Podemos concluir que os docentes com formação em ensino especial apresentam atitudes mais favoráveis, bem como uma melhor qualidade da experiência e uma maior percepção de competência. Quanto maior a qualidade da experiência, mais favoráveis as atitudes e a percepção de competência. Torna-se necessária a implementação de estratégias, nomeadamente a nível da formação em ensino inclusivo, para uma melhor qualidade da experiência de ensino e consequente melhorias da aptidão pedagógica e das atitudes face ao ensino de alunos com deficiência.

**Palavras-chave:** Atitudes, Inclusão, Professores de Educação Física, Deficiência Motora.

## INTRODUÇÃO

No dia-a-dia somos confrontados com diversas opiniões, que nos remetem para as mais variadas posições face aos mais diversos assuntos. Todas as divergências de opinião são sustentadas por valores, sentimentos, crenças ou experiências anteriores, pelo que é difícil determinar qual a posição correcta ou verdadeira face a esse assunto, inviabilizando a existência de uma “verdade absoluta”. Frequentemente somos sujeitos a tentativas de dissuasão de determinadas opiniões, ou de alteração das mesmas. Segundo a Psicologia Social, estas divergências são suportadas pelas atitudes, que Allport (1935, cit. por Ajzen & Fishbein, 2005) considerou como “o conceito mais distinto e indispensável na psicologia social contemporânea”. No contexto educativo, as atitudes assumem uma importância extrema, na medida em que influenciam a abordagem dos agentes educativos face aos diversos problemas colocados na e pela Escola, como por exemplo o ensino de alunos com deficiência. Muitos agentes educativos crêem que a integração destes jovens no meio escolar é desajustada, outros tem extrema dificuldade em lidar com alunos com deficiência, havendo também quem se mostre totalmente a favor da sua plena integração no meio escolar. Os problemas levantados com a inclusão destes alunos aumentam quando falamos de disciplinas com uma componente prática fundamental. Para os alunos, não basta analisar, compreender e interpretar; é imprescindível executar. É neste contexto que se enquadra a disciplina de Educação Física, pelo que faz todo o sentido analisar as atitudes destes professores face à inclusão de alunos com deficiência nas classes regulares.

A necessidade de estudar as atitudes dos professores de Educação Física surgiu a partir do momento em que um largo número de alunos com deficiência foram integrados nas classes regulares (Sideris & Chandler, 1996, cit. por Nunes, 2004). A integração de alunos com deficiência no ensino regular aumentou consideravelmente desde a regulamentação do Decreto de Lei nº 319/91 (revogado pelo Decreto de Lei nº 3/2008) e da Declaração de Salamanca (UNESCO, 1994). As atitudes têm um papel fulcral na explicação da actuação dos professores de Educação Física para com os alunos com deficiência (Folsom-Meek & Rizzo, 2002). Atitudes favoráveis dos professores são consideradas factores-chave para um processo integrativo de sucesso (Conatser, Block & Lepore, 2000) constituindo, por isso, uma variável de grande interesse (Kozub & Lienert, 2003). Dos diferentes estudos realizados no âmbito



das atitudes dos professores de Educação Física face à deficiência, emerge a ideia de que o sucesso do processo integrativo está dependente da atitude do professor de Educação Física, na medida em que este é o principal facilitador do processo ensino – aprendizagem (Palla & Mauerberg-deCastro, 2004; Rizzo, 1995). Vários investigadores sugeriram que as atitudes dos professores eram mais favoráveis face aos alunos com deficiência quando o contexto de aprendizagem era mais integrador do que segregador. Nas aulas de Educação Física, para que se atinja esse objectivo, é consensual que a preparação dos profissionais deve centrar-se no desenvolvimento de intenções, crenças e atitudes positivas face ao ensino de alunos com deficiência (Kowalski e Rizzo, 1996). É mediante esta directriz, voltada para a realidade escolar, aliada ao escasso número de estudos realizados neste domínio, que pretendemos estudar a atitude dos professores de Educação Física face ao ensino de alunos com deficiência motora. Este tema parece-nos pertinente, na medida em que são escassos os estudos realizados em Portugal nesta área, não tendo sido verificado o efeito de algumas variáveis cruciais sobre este importante constructo.

A realização de investigações neste âmbito pretendem contribuir para a consolidação de um processo integrativo de sucesso, pois a avaliação da atitude dos professores de Educação Física face à deficiência, da percepção das suas competências e qualidade da sua experiência no ensino de alunos com deficiência permite-nos retirar informações sobre cada um destes domínios, identificando problemas e intervindo especificamente sobre os parâmetros que contribuem para atitudes menos favoráveis. Estes estudos podem constituir-se como instrumentos relevantes para o desenvolvimento de futuras intervenções, possibilitando informações importantes para o sucesso da integração e, conseqüentemente, para o sucesso da inclusão. Permite-nos, também, conhecer o estado das atitudes dos professores de Educação Física sobre a integração de alunos com deficiência no nosso país. Procuraremos, ainda, determinar a influência que a “idade”, “género”, “tempo de serviço”, “nível de ensino”, “formação em ensino especial”, “percepção de competência” e “qualidade da experiência percebida” exercem nas atitudes dos professores de Educação Física face à deficiência motora.

#### **METODOLOGIA:**

O presente estudo é de natureza quantitativa, sendo uma investigação quantitativa. Esta investigação exploratória e pioneira em Portugal, no âmbito das atitudes dos professores de Educação Física face à deficiência.

### **Amostra**

A amostra é constituída por professores de Educação Física, N=254 dos quais 164 são do género masculino e 90 do género feminino, com idades compreendidas entre os 21 e os 58 anos (M=36,64; SD=8,943). Leccionam desde o 1º Ciclo ao Ensino Secundário, nas escolas de Ensino Regular.

### **Instrumento de medida**

Na realização do presente estudo foi utilizado o PEATID III – Physical Educators' Attitude Toward Teaching Individuals With Disabilities III (Rizzo, 1993), tendo sido igualmente aplicado uma ficha de caracterização individual.

Foi aplicada a versão portuguesa do PEATID III (Rizzo, 1993), traduzida e adaptada por Campos, Ferreira e Gaspar (2007). Este instrumento foi desenvolvido com base na Teoria da Acção Reflectida de Fishbein e Ajzen (1980) e é apoiado pela suposição que as crenças podem ser utilizadas para inferir as atitudes (Rizzo, 1984).

Com o PEATID III, a atitude face ao comportamento é inferida através da resposta a 12 afirmações sobre o comportamento em questão, i. e. ensinar alunos com deficiência numa classe regular (Folsom-Meek & Rizzo, 2002). Estas expressam crenças relativamente ao ensino de alunos com deficiência nas classes regulares de Educação Física, sobre quais os participantes expressam os seus níveis de concordância a respeito de quatro condições de deficiência: deficiência motora, deficiência visual, deficiência auditiva e deficiência intelectual. Cinco itens expressam crenças positivas e outros sete indicam crenças negativas.

Ao lado de cada condição de deficiência, encontra-se uma Escala de Lickert de 5 pontos (em que 1= Discordo Completamente; 2= Discordo; 3= Não Discordo Nem Concordo; 4= Concordo; 5= Concordo Completamente). No tratamento estatístico há reversão dos itens negativos. A competência percebida no ensino de alunos com deficiência foi avaliada utilizando três níveis de resposta: 1= Nada competente; 2= Com alguma competência e 3= Muito competente. Estas questões são fundamentais

para se ter um conhecimento mais profundo da população em estudo, bem como obter alguma informação sobre variáveis pertinentes para o estudo, como é o caso dos dados biográficos (idade, data de nascimento e género); dos dados relativos à profissão (tempo de serviço, nível escolar que lecciona e habilitações académicas), dos dados relativos ao ensino de alunos com deficiência em classes regulares (formação em educação especial/actividade física adaptada, experiência em ensino de indivíduos com deficiência e respectivos níveis de ensino, condição de deficiência e número de anos de ensino) e dos dados de competência percebida (experiência de ensino e competência). A utilidade do PEATID III é que permite aos investigadores especificar as condições de deficiência e o número de condições de deficiência que querem avaliar. Este instrumento de pesquisa permite, também, que os investigadores avaliem os atributos que estes consideram que possam contribuir para a variância das atitudes face ao ensino de alunos com deficiência (Folsom-Meek & Rizzo, 2002). O instrumento original, Physical Educators' Attitude toward Handicapped (PEATH), foi minuciosamente examinado no que respeita à sua validade e fidelidade. A validade do seu conteúdo foi determinada por seis investigadores, todos eles com especialização em Educação Física Adaptada (Rizzo, 1988; cit. por Folsom-Meek & Rizzo, 2002; Folsom-Meek et al., 1999). O PEATH sofreu já duas revisões. O instrumento foi revisto para o Physical Educators' Attitude toward Teaching the Handicapped-II (PEATH II, Rizzo, 1986) para reflectir se a nomenclatura consistia com a lei americana em vigor e com a prática profissional. Foi também alterado o número de afirmações presentes no instrumento, passando de 20 para 12. O PEATID III - Physical Educators' Attitude Toward Teaching Individuals With Disabilities III (Rizzo, 1993) é idêntico ao PEATH II, à excepção da terminologia. Nesta revisão foi necessário proceder a uma reflexão actual da terminologia utilizada na descrição de indivíduos com deficiência.

### **Variáveis**

Para este estudo estipulámos como variáveis independentes: o Género; o Grupo Etário; o Nível de Ensino leccionado; o Tempo de Serviço e a Presença/ ausência de Formação em Ensino Especial.

As variáveis dependentes apresentadas foram: a Percepção de Competências: Variável organizada por três categorias – Nada competente, com alguma competência, muito competente; a Qualidade da Experiência: Variável constituída por quatro

categorias – sem experiência, nada positiva, satisfatória e muito positiva e a Atitude dos professores de Educação Física face ao ensino de alunos com Deficiência Motora.

## **Procedimentos**

Depois de concluído o processo de adaptação e tradução do instrumento, seguiu-se a recolha de dados com a aplicação do instrumento de avaliação em várias zonas da região centro. Aos inquiridos foi sempre explicado todos os processos para uma boa condução na aplicação destes, o âmbito e objectivos do questionário e todas as instruções necessárias para o preenchimento do instrumento. O preenchimento durou, em média, cerca de 7 a 10 minutos por indivíduo, tendo o instrumento um carácter anónimo e de informação confidencial.

## **RESULTADOS**

Os resultados da análise estatística de natureza descritiva e inferencial das variáveis em estudo serão apresentados de forma a compreender os resultados sobre as atitudes dos professores face à inclusão de alunos com deficiência motora nas aulas regulares de Educação Física.

Verificamos que as atitudes dos professores de Educação Física face ao ensino de alunos com deficiência motora são moderadamente favoráveis (M= 36,728 DP=7,043).

Quanto ao género, não foram encontradas diferenças estatisticamente significativas nas variáveis qualidade da experiência (M feminino = 2,430, DP=1,073; M masculino = 2,430, DP= 1,020), competência percebida (M feminino = 1,650, DP=0,589; M masculino = 1,680, DP= 0,534) e atitudes face à deficiência motora (M feminino = 37,011, DP = 7,135; M masculino = 36,573, DP= 7,009).

**Tabela 1** – Estudo estatístico relativo à variável Formação em Ensino Especial em função das variáveis dependentes

Variáveis Dependentes	Formação em Ensino Especial		Desvio Padrão (SD)	p
		Média		
Qualidade da Experiência	Não	2,27	1,047	0,003
	Sim	2,69	0,972	
Competência Percebida	Não	1,57	0,561	0,000
	Sim	1,83	0,503	
Atitudes face à Deficiência Motora	Não	35,141	6,842	0,000
	Sim	39,255	6,638	

Relativamente à variável formação em ensino especial (tabela 1), verificamos que os professores que possuem formação nesta área apresentam médias mais elevadas no que concerne à qualidade da experiência, à competência percebida e às atitudes face à deficiência motora. Foram ainda encontradas diferenças estatisticamente significativas entre os professores de Educação Física que possuem formação em ensino especial e os que não possuem, em todas as variáveis analisadas – qualidade da experiência ( $p \leq 0,01$ ), competência percebida ( $p \leq 0,01$ ) e atitudes face à deficiência motora ( $p \leq 0,01$ ).

**Tabela 2** – Estudo estatístico relativo à variável Experiência no Ensino de Alunos com Deficiência em função das variáveis dependentes

Variáveis Dependentes	Experiência		Desvio Padrão (SD)	p
		Média		
Qualidade da Experiência	Não	1,80	1,079	0,000
	Sim	2,78	0,831	
Competência Percebida	Não	1,45	0,567	0,000
	Sim	1,79	0,509	

Relativamente à experiência no ensino de alunos com deficiência, verificamos a existência de diferenças estatisticamente significativas relativamente à qualidade da experiência ( $p \leq 0,01$ ), e à competência percebida ( $p \leq 0,01$ ), sendo que os professores que apresentam experiência no ensino de alunos com deficiência se percebem

como mais competentes e naturalmente, mais experientes do que os professores que nunca leccionaram a alunos com deficiência.

Tabela 3 – Valores de média, desvio padrão e nível de significância das Atitudes dos professores face à Deficiência Motora em função da qualidade da experiência

Variável Dependente	Qualidade da Experiência	Média	Desvio Padrão (SD)	f	Sig
Atitudes face à Deficiência Motora	Sem Experiência	34,977	6,600	19,183	0,000
	Nada Positiva	33,864	4,549		
	Satisfatória	36,650	6,471		
	Muito Positiva	45,111	6,565		

No que diz respeito à variável das atitudes dos professores face à deficiência motora em função da qualidade da experiência, foram encontradas diferenças estatisticamente significativas ( $p \leq 0,01$ ), com os professores com uma qualidade da experiência muito positiva a apresentarem valores médios das atitudes mais elevados.

Tabela 4 – Valores de média, desvio padrão e nível de significância das Atitudes dos professores face à Deficiência Motora em função da competência percebida

Variável Dependente	Competência Percebida	Média	Desvio Padrão (SD)	f	Sig
Atitudes face à Deficiência Motora	Nada Competente	33,708	5,849	22,625	0,000
	Com Alguma Competência	38,092	6,807		
	Muito Competente	45,600	5,211		

Em relação à competência percebida, os professores que se percebem como muito competentes apresentam valores médios mais elevados na variável das atitudes. As diferenças são estatisticamente significativas ( $p \leq 0,01$ ) para a variável das

atitudes dos professores face à Deficiência Motora em função da competência percebida.

**Tabela 5** – Correlações entre as variáveis dependentes

		Qualidade da Experiência	Competência Percebida	Atitudes face à Deficiência Motora
Qualidade da Experiência	Correlação de Pearson		0,689(**)	0,315(**)
	Sig. (2-tailed)		0,000	0,000
Competência Percebida	Correlação de Pearson			0,394(**)
	Sig. (2-tailed)			0,000
Atitudes face à Deficiência Motora	Correlação de Pearson			
	Sig. (2-tailed)			

\*\* Correlação significativa para  $p \leq 0,01$

No que diz respeito à análise da relação entre as variáveis e os valores relativos aos níveis de significância encontrados, verificámos a existência de uma relação positiva entre as variáveis qualidade da experiência e competência percebida ( $r=0,689$  e  $p \leq 0,01$ ); entre as variáveis qualidade da experiência e atitudes dos professores de Educação Física face à deficiência ( $r=0,315$  e  $p \leq 0,01$ ) e entre as variáveis competência percebida e atitudes dos professores de Educação Física face à deficiência ( $r=0,394$  e  $p \leq 0,01$ ).

## DISCUSSÃO

O principal objectivo deste estudo era a averiguação das atitudes dos professores de Educação Física face à deficiência motora, analisando algumas variáveis que parecem ter influência nessas percepções, tais como: género, idade, tempo de serviço, nível de ensino, formação em ensino especial, experiência no ensino de alunos com deficiência, qualidade da experiência e percepção de competência.

Verificamos que, de uma forma global, as atitudes dos professores de Educação Física face ao ensino de alunos com deficiência motora são moderadamente

favoráveis. Este resultado vai de encontro aos estudos efectuados por Nunes (2004), Pinheiro (2001), Serrano (1998) e Zannandrea e Rizzo (1998), considerando que os docentes de Educação Física apresentam atitudes favoráveis face à inclusão de alunos com deficiência. Como será analisado posteriormente, existem vários factores passíveis de influenciar a atitude do professor de Educação Física face ao ensino de alunos com deficiência motora mas, quanto maiores forem as capacidades dos docentes para o trabalho com estes alunos, melhor será a sua competência percebida e, logo, mais favoráveis serão as suas atitudes face ao ensino de alunos com deficiência motora.

Para a variável género, verificamos que não existem diferenças estatisticamente significativas em relação à percepção de competência, qualidade da experiência percebida e atitudes dos professores de Educação Física face à deficiência motora. Este resultado vai de encontro aos estudos realizados por Hodge et al. (2002), Rizzo e Vispoel (1991), Rizzo e Wright (1988, cit. por Zanandrea & Rizzo, 1998, p. 700), Patrick (1987), Kowalski e Rizzo (1996), Rizzo e Kirkendall (1995) e Serrano (1998), demonstrando não existirem diferenças estatisticamente significativas entre docentes do género masculino e feminino. No entanto, outros estudos apresentaram conclusões distintas, como o de Aloia et al. (1980, cit. por Rizzo & Kirkendall, 1995, p. 206), Conatser, Block e Lepore (2000), Downs e Williams (1994), Folsom-Meek et al. (1999) e Hutzler, Zach e Gafni (2005), que confirmaram a presença de atitudes mais positivas em professoras do que em professores.

Apesar de não haver diferenças estatisticamente significativas nas atitudes face ao ensino de alunos com deficiência motora em função do género, verificamos que o género feminino apresenta atitudes ligeiramente mais positivas que o género masculino, sendo consistente com os estudos de Kowalski e Rizzo (1996) e Pinheiro (2001). A inconsistência entre os resultados dos estudos referidos anteriormente, relativamente ao género e atitude face à deficiência, parece necessitar de novas abordagens no sentido de perceber que factores estão subjacentes à existência desta inconsistência.

Assim como nas atitudes, também na percepção de competências e qualidade da experiência percebida, não se verificaram diferenças estatisticamente significativas entre o género masculino e feminino, ainda que, para a competência percebida, é o género masculino que apresenta valores médios superiores e para a variável



qualidade da experiência percebida, verificamos que os valores médios para ambos os gêneros são idênticos.

No que respeita à variável idade, verificamos que existem diferenças estatisticamente significativas relativamente à percepção de competência, qualidade da experiência percebida e atitudes dos professores de Educação Física face à deficiência motora. Os professores mais novos apresentam atitudes mais favoráveis face à deficiência motora mas são, no entanto, os professores mais velhos que apresentam uma percepção mais elevada da qualidade de experiência e de competência. Estes resultados são suportados pelos estudos de Rizzo e Vispoel (1991, 1992), Kowalski e Rizzo (1996) e Rizzo e Kirkendall (1995), que referem que quanto mais velho o professor, menos favorável a atitude. Vayer e Roncin (1992, cit. por Pinheiro, 2001), referem ainda que quanto mais jovens são os professores, mais consideram a inclusão. No nosso estudo, verificamos resultados semelhantes, talvez porque a inclusão de alunos com deficiência no ensino regular está já consignada na legislação portuguesa e poucos professores tenham relutância em aceitar e reconhecer esta filosofia inclusiva.

Em relação à variável tempo de serviço, concluímos que existem diferenças estatisticamente significativas relativamente à percepção de competência, qualidade da experiência percebida e atitudes dos professores de Educação Física face à deficiência motora. Verificamos ainda que os professores que apresentam um tempo de serviço até 5 anos possuem atitudes mais favoráveis face ao ensino de alunos com deficiência motora, em relação aos professores que apresentam um tempo de serviço de 6 a 10 anos, de 11 a 15 anos e com mais de 21 anos. Estes resultados são suportados pelos estudos de Rizzo (1984), Rizzo e Vispoel (1991), Clough e Lindsay (1991, cit. por Avramidis e Norwich, 2002), mostrando que professores com poucos anos de experiência de ensino são considerados mais entusiastas da integração do que os seus colegas mais velhos.

O nível de ensino leccionado pelos professores da amostra apresentou diferenças estatisticamente significativas em função da variável atitudes dos professores face à deficiência motora.

Para a variável formação em ensino especial, verificamos a existência de diferenças estatisticamente significativas face à percepção de competência, qualidade da experiência percebida e atitudes dos professores de Educação Física face à

deficiência motora. Relativamente à experiência no ensino de alunos com deficiência, não existem diferenças estatisticamente significativas em função da variável atitudes dos professores de Educação Física face à deficiência motora. Verificamos ainda que, os professores que apresentam experiência no ensino de alunos com deficiência possuem atitudes mais positivas face ao ensino de alunos com deficiência motora do que os professores que nunca leccionaram aulas de Educação Física a estudantes com deficiência.

Os resultados mostram que, no que diz respeito à variável formação em ensino especial, verificou-se que os professores com maior formação académica nesta área possuem atitudes mais favoráveis face ao trabalho de alunos com deficiência do que professores sem formação académica em ensino especial. Este resultado é consistente com os estudos efectuados por Rizzo e Vispoel (1991, 1992), Block e Rizzo (1995), Kowalski e Rizzo (1995), Rizzo e Kirkendall (1995), Theodorakis, Bagiatis e Goudas (1995), Tripp, French e Sherrill (1996) e Zanandrea e Rizzo (1998), que concluíram que os professores com formação na área da Educação Física Adaptada tinham atitudes significativamente mais positivas face à inclusão de alunos com deficiência nas classes regulares do que os professores sem formação. Estes dados levam-nos a perceber a necessidade de desenvolver estratégias, nomeadamente ao nível do ensino universitário, através da preparação dos futuros professores para o trabalho de inclusão de indivíduos com deficiência e da implementação de acções e cursos de formação especializada em ensino especial para os docentes de Educação Física, preparando-os para o ensino de alunos com deficiência, na medida em que a formação académica adequada leva a uma maior competência percebida no ensino de alunos com deficiência, o que se traduz em atitudes mais favoráveis e experiências positivas de ensino inclusivo.

Os resultados do nosso estudo também demonstram que professores que possuem formação académica em ensino especial percebem-se como mais competentes e com maior qualidade de experiência do que professores sem formação em ensino especial. Estes resultados confirmam as conclusões dos estudos de Rizzo e Kirkendall (1995) e Rizzo e Vispoel (1991), que revelaram que a preparação académica, no que diz respeito ao ensino de alunos com deficiência, estava positivamente correlacionada com a competência percebida, resultando em atitudes mais favoráveis por parte dos professores. Estes resultados não são surpreendentes, uma vez que professores que tenham oportunidade de adquirir formação específica na área do ensino especial,

apresentam uma maior qualidade da experiência percebida e, conseqüentemente, uma melhoria da percepção de competência, o que revela maior probabilidade do desenvolvimento de atitudes favoráveis face ao ensino de alunos com deficiência motora. Assim, finalizando a análise da variável formação, torna-se crucial a necessidade de formação acadêmica em ensino especial, de forma a aumentar a competência percebida o que, por sua vez, pode favorecer a disposição e a competência para ensinar alunos com deficiência motora nas classes regulares.

No que respeita às variáveis qualidade da experiência percebida e competência percebida em função da idade, verificamos a existência de diferenças estatisticamente significativas.

No que respeita à qualidade da experiência percebida, verificamos a existência de diferenças estatisticamente significativas em função da variável atitudes dos professores de Educação Física face à deficiência motora e à competência percebida.

Quanto à competência percebida, foram encontradas diferenças estatisticamente significativas entre esta variável, em função das atitudes dos professores de Educação Física face à deficiência motora. Os resultados do nosso estudo são suportados pelos estudos de Downs e Williams (1994) e Rizzo e Vispoel (1991), referindo que quanto maior é a qualidade da experiência no ensino de alunos com deficiência, maior a competência percebida.

Os resultados do nosso estudo sugerem, então, que as atitudes e competência percebida são directa ou indirectamente influenciadas pela formação académica e qualidade da experiência percebida no ensino de alunos com deficiência motora. Estes resultados são suportados pela Teoria da Acção Reflectida (Ajzen & Fishbein, 1980) e pela Teoria do Comportamento Planeado (Ajzen, 1985, 1991) que sugere que o comportamento é fortemente influenciado pela confiança que o sujeito tem nas suas capacidades. Esta teoria especifica que o factor pessoal e social influenciam a atitude do sujeito. É o factor pessoal que facilita a compreensão da atitude do professor de Educação Física face ao ensino de alunos com deficiência motora. Fishbein e Ajzen (1975) sugerem também que o comportamento voluntário é influenciado pela percepção que o sujeito tem da pressão exercida pelos diversos grupos sociais. A legislação em vigor refere que os alunos com deficiência devem ser incluídos nas classes regulares, logo os professores de Educação Física têm a obrigatoriedade de ensinar estes alunos, não lhes restando outra opção de escolha. Este factor é passível

de influenciar a atitude do docente de Educação Física. Por esta razão, Ajzen (1985) reformulou a Teoria da Acção Reflectida para a Teoria do Comportamento Planeado, passando a incluir a avaliação do controlo comportamental percebido. Esta teoria parece ser mais adequada para examinar os antecedentes das intenções dos docentes de Educação Física no ensino de alunos com deficiência motora. Assim, é mais provável que professores com atitudes mais favoráveis e mais consistentes leccionem e incluam de forma mais efectiva os alunos com deficiência motora, do que os professores que não têm atitudes favoráveis face ao ensino destes alunos.

Tendo como referência os resultados obtidos devem ser equacionadas algumas implicações deste estudo.

## **CONCLUSÕES**

Em jeito de conclusão, poderemos afirmar que as atitudes dos professores de Educação Física face ao ensino de alunos com deficiência motora são moderadamente favoráveis verificando, no entanto, que determinadas variáveis contribuem para a melhoria dessas percepções e conseqüente inclusão dos alunos com deficiência motora na aula de Educação Física.

A par da formação especializada em ensino especial, também a variável qualidade da experiência assume uma importância fundamental no ensino de alunos com deficiência motora, influenciando a percepção de competência dos docentes de Educação Física, o que se traduz em atitudes mais favoráveis dos professores, contribuindo em grande escala para o sucesso da implementação das políticas inclusivas.

Os resultados obtidos levam-nos a inferir que, apesar de as atitudes dos professores de Educação Física face ao ensino de alunos com deficiência motora se verificarem moderadamente favoráveis, é necessária a fomentação de estratégias de intervenção dos profissionais especializados, com vista à criação de estruturas conducentes à melhoria das atitudes dos professores de Educação Física face à deficiência motora. Assim, será crucial a realização de ajustamentos curriculares nos cursos de formação inicial e a necessidade de formação contínua dos professores de Educação Física na área do ensino especial. Esta formação especializada fará com que os professores se

sintam mais capacitados para o desempenho profissional no âmbito da escola inclusiva. Uma consistente formação acadêmica na área do ensino especial traduz-se numa maior segurança no ensino de alunos com deficiência e, logo, maior qualidade da experiência percebida e conseqüente melhor competência percebida, o que leva a atitudes mais favoráveis no ensino de alunos com deficiência motora e a uma conseqüente e real Educação Física Inclusiva.

Este estudo exploratório surge no âmbito da tentativa de melhoria e aprofundamento da prática pedagógica dos professores de Educação Física face ao ensino de alunos com deficiência motora, tendo ficado confirmada a importância da formação especializada no âmbito do ensino especial. Configura-se, assim, a importância de investir em mais formação especializada, quer ao nível da formação inicial, quer da formação contínua, pois é fundamental que todos os professores de Educação Física se sintam competentes para o ensino de alunos com deficiência motora, garantindo o respeito pela diferença, cumprindo o consignado na legislação sobre a inclusão nas classes regulares.

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## ATTITUDES OF PORTUGUESE PHYSICAL EDUCATORS TOWARDS STUDENTS WITH INTELLECTUAL DISABILITIES

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### ABSTRACT

Physical Educators' attitudes toward teaching students with disabilities are an important area of research. Not many studies about this topic have been conducted in Portugal and those that exist did not confirm the effects of a crucial group of variables identified on the review of literature as providing an important contribution to the development of future interventions in the global context of inclusion in Physical Education classes.

**Aims:** The main purpose of this research is to analyze Physical Educators' attitudes toward teaching students with intellectual disabilities (ID) and assess the hypothetical influence of age, gender, years of professional experience, grade level, special education coursework, perceived competence and perceived quality of experience over those attitudes.

**Materials and Methods:** Participants were 254 Portuguese Physical Educators, N= 164 male and N=90 female, age between 21 and 58 years old (M=36,64; SD=8,943). A Portuguese version of the PEATID III - Physical Educators' Attitude toward Teaching Individuals with Disabilities Questionnaire (Rizzo, 1993) was used in this study.

**Results:** The results showed that teachers express a positive attitude towards teaching students with intellectual disabilities in regular Physical Education classes. No differences were found between male and female teachers. Teachers with a specific academic coursework in special education have more positive attitudes towards students than those colleagues without it. Greater levels of quality of experience were highly correlated with positive attitudes and higher levels of perceived competence. Teachers with experience on teaching students with disability have higher levels of perceived competence and perceived quality of experience. **Conclusion:** In spite of positive attitudes for Physical Educators' towards teaching students with ID, a strong educational effort is needed to create an enlightened attitude towards inclusion in regular Physical Education classes. This effort will be reflected not only in the lives of children with disability, but also within the teacher's motivation. It was visibly clear the evidence of the importance of specific academic preparation to Physical Educators' attitudes towards teaching students with disability.

**Keywords:** ATTITUDES, PHYSICAL EDUCATORS, INCLUSION, INTELLECTUAL DISABILITIES

## INTRODUCTION:

Physical Educators' attitudes toward teaching students with disabilities are an important area of research. Not many studies about this topic have been conducted in Portugal and those that exist did not confirm the effects of a crucial group of variables identified on the review of literature as providing an important contribution to the development of future practical interventions in the global context of inclusion in Physical Education classes. Given the role that educators play in the inclusion process, teacher attitudes are a variable of great interest (Kozub & Lienert, 2003).

This exploratory study is an attempt to look for more information, on the situation of Physical Education (PE) teachers attitudes toward teaching students with intellectual disabilities (ID) in Portugal.

As part of the school curriculum, Physical Education can be a collaborator or an additional obstacle for an inclusive school. The success of this inclusion is dependent on, among other things, the teacher attitude toward this policy. Attitudes are important and in need of continued study to determine the best methods to facilitate inclusive physical education for individuals with disabilities (Kozub & Lienert, 2003). The inclusion of students with disabilities into regular PE classes has provided a tremendous challenge to Physical Educators who have strived to meet the needs of the included children without neglecting the needs of the other children.

Recent laws and legislations in Portugal indicate that schools are mandated to provide students with disabilities equal educational opportunities. So, physical educators have to include children with special needs educations in their regular classes. Students who have mild or moderate intellectual disorders such as intellectual disabilities, learning disabilities, and emotional / behavioral disorders are generally placed into regular Physical Education classes.

However, PE teachers face some barriers to inclusion of students with disabilities in general PE class. Some of these are the huge class size, the lack of equipment and support personnel, the inadequate professional preparation at the university level, the lack of information regarding students with disabilities and the lack of teaching and coaching method courses and special training about safety aspects (Sherrill, 1998).

Attitude research in education and particularly in PE has grown increasingly popular over the past twenty years (Folsom-Meek & Rizzo, 2002). This increase has been driven by the belief that teacher's attitudes can have a direct influence on the successful inclusion of children with disabilities into regular classes (Rizzo & Vispoel, 1992).

The purpose of this exploratory study was to ascertain attitudes of Portuguese Physical Education teachers toward the inclusion of students with intellectual disabilities in regular education settings.

## MATERIALS AND METHODS:

The sample was constituted by 254 Physical Educators, of which 164 are male and 90 female. Their ages varied between 21 and 58 years old ( $M=36,64$ ;  $SD=8,94$ ).

From the lot, N=156 teachers had Special Education coursework during their graduate studies and N=98 didn't. About teaching experience with students with disability, N=100 teachers have no experience, and N=154 had already taught students with disabilities.

Variables like "age", "gender", "ages of experience", "grade level", "special education coursework", "perceived competence" and "perceived quality of experience" were analyzed.

The *Physical Educators' Attitude Toward Teaching Individuals With Disabilities* (PEATID III) (Rizzo, 1984, 1988) was used in the present study. This instrument was translated and adapted to the Portuguese population by Campos, Ferreira e Gaspar (2007), and had never been administrated in this population.

The PEATID-III consists of a series of twelve statements which requires teachers to express their beliefs about teaching individuals with disabilities in their regular Physical Education classes. The validity and reliability of this instrument was reported by Folsom-Meek and Rizzo (2002). A 5-point Likert scale (i.e., 1=strongly disagree, 2=disagree, 3=undecided, 4=agree, 5=strongly agree) was used for the participants to answer each question. To derive proper scale means, scores for negatively phrased items were reversed. The total score could go from 12 to 60 points. The study was delimited to investigating attitudes towards students with intellectual disabilities.

## RESULTS:

The results showed that teachers express a positive attitude towards teaching students with intellectual disabilities in regular Physical Education classes (Mean value= 36, 08 ± 7, 11).

No differences were found between male and female teachers.

Table 1. T-student for coursework in special education

	<b>Coursework in special education</b>	<b>M</b>	<b>SD</b>	<b>F</b>	<b>t</b>	<b>Df</b>	<b>Sig. (2- tailed)</b>																	
<b>Quality of Experience</b>	Yes	2,69	0,972	8,696	-3,055	196,764	0,003																	
	No	2,27	1,047					<b>Perceived Competence</b>	Yes	1,84	0,544	15,886	-3,753	188,364	0,000	No	1,56	0,563	<b>Attitudes toward ID</b>	Yes	38,41	6,874	0,010	-4,267
<b>Perceived Competence</b>	Yes	1,84	0,544	15,886	-3,753	188,364	0,000																	
	No	1,56	0,563					<b>Attitudes toward ID</b>	Yes	38,41	6,874	0,010	-4,267	206,604	0,000	No	34,62	6,891						
<b>Attitudes toward ID</b>	Yes	38,41	6,874	0,010	-4,267	206,604	0,000																	
	No	34,62	6,891																					

Teachers with a specific academic coursework in special education have more positive attitudes (M=38,41 ± 6,874) towards students with intellectual disabilities than those colleagues without this academic preparation (M=34,62 ± 6,891). These are significant differences (sig=0,000).

As we can be observed on table 1, the quality of experience is significantly higher (sig=0,003) for teachers with academic coursework in special education (M=2,69 ± 0,972) compared with physical educator's without this coursework (M=2,27 ± 1,047). We obtained similar results for perceived competence (sig=0,000).

Table 2. T-student for teaching experience with students with disabilities

	Experience	M	SD	F	t	Df	Sig. (2-tailed)
<b>Quality of Experience</b>	Yes	2,78	0,831	30,323	-7,197	136,006	0,000
	No	1,80	1,079				
<b>Perceived Competence</b>	Yes	1,80	0,532	7,330	-4,855	157,044	0,000
	No	1,43	0,567				
<b>Attitudes toward ID</b>	Yes	36,53	6,720	-	-	-	-
	No	35,39	7,667	-	-	-	-

Teachers with experience on teaching students with disability have significant higher levels of perceived competence (sig=0,000) and perceived quality of experience (sig=0,000), as we can see on table 2. Although mean values of attitudes are higher for teachers with experience, there are no statistically significant differences for attitudes toward ID.

Table 3. ANOVA on perceived quality of experience

	Quality of Experience	M	SD	F	Sig.
<b>Attitudes toward ID</b>	No experience	34,318	6,568	17,224	0,000
	Not good	33,227	5,597		
	Satisfactory	36,094	6,633		
	Very good	44,111	6,500		

Significant differences were observed (sig=0,000) between levels of quality of experience and attitudes toward teaching students with intellectual disabilities, as we can observe on table 4. Teachers who rated themselves as having a very good experience (M=44,111 ± 6,500) in teaching disability students, have higher perceptions toward intellectual disability compared to those who have satisfactory experience (M=36,094 ± 6,633), not good experience (M=33,227 ± 5,597) and even no experience at all (M=34,318 ± 6,568).

Greater levels of quality of experience were highly correlated with positive attitudes and higher levels of perceived competence.

Table 4. ANOVA on perceived competence

	Perceived Competence	M	SD	F	Sig.
<b>Attitudes toward ID</b>	Not at all	32,910	5,547	23,132	0,000
	Somewhat	37,529	6,941		
	Very	44,600	6,310		

Statistically significant differences ( $\text{sig}=0,000$ ) exist between physical educators with feelings of perceived competence and attitudes toward teaching students with intellectual disabilities. Very competent teachers show higher beliefs toward ID ( $M=44,600 \pm 6,310$ ) than teachers somewhat competent ( $M= 37,529 \pm 6,941$ ) and than educators who feel not competent at all teaching students with disabilities ( $M=32,910 \pm 5,547$ ).

## DISCUSSION:

The present research ascertains the opinions of PE teachers concerning inclusion of students with intellectual disabilities. The findings of this study provided answers that indicate that, despite teachers' attitudes presents favorable, the results allow us to conclude that an educational effort is imperative to enhance attitudes towards the process of inclusion of students with intellectual disabilities in regular classes of Physical Education.

No significant differences were found between male and female teachers, and these results were similar other studies: Hodge et al. (2002), Rizzo & Vispoel (1991), Rizzo & Wright (1988), Patrick (1987), Kowalski & Rizzo (1996), Rizzo & Kirkendall (1995). However some studies confirmed that female teachers have higher attitudes towards inclusion of students with ID (Aloia et al., 1980; Conatser, Block & Lepore, 2000; Downs & Williams, 1994; Folsom-Meek et al., 1999 and Hutzler, Zach & Gafni, 2005).

One important finding of this study was that teachers with more experience and academic preparation with people with disabilities had greater perceived competence and higher attitudes toward students with intellectual disabilities. Our results are consistent with Rizzo e Vispoel (1991, 1992), Block & Rizzo (1995), Kowalski & Rizzo (1995), Rizzo & Kirkendall (1995), Theodorakis, Bagiatis & Goudas (1995), Tripp, French & Sherrill (1996) e Zanandrea & Rizzo (1998) studies.

Teachers who perceived themselves as more competent had more academic preparation that resulted in favorable attitudes. Similar results were found in Rizzo & Wright (1988), Gorgatti et al. (2004), Santomier (1985), Semmel et al., (1995) studies.

This finding suggests that quality experiences and academic preparation contribute to perceived self-competence about teaching individuals with disabilities, and some studies reveal that experience and coursework in adapted physical education (Jansma & Shultz, 1982; Marston & Leslie, 1983) and special education (Rizzo, 1985) enhance attitudes.

It was visibly clear the evidence of the importance of specific academic preparation to Physical Educators attitudes towards teaching students with disability. It is then, required to implement strategies, in particular at the level of specific teaching preparation in special education, so that teachers have more learning skills in teaching students with disabilities and, thus, higher perceived quality of the experience and consequent better perceived competence. This finding was also evidenced in previous researches (Block & Rizzo, 1995; Hodge et al. 2002; Hutzler, Zach & Gafni, 2005; Rizzo & Vispoel, 1991 and Zanandrea & Rizzo, 1998) found similar results.

Due to the fact that PE teachers continue to play a critical role in the lives of children and youth (Auxter *et al.*, 2001), their attitudes toward the inclusion of students with disabilities in regular classes is important and needs to be further examined.

The present survey was an attempt to explore the trend of Portuguese Physical Education teachers toward the inclusion of students with intellectual disabilities in regular classes and to make further recommendations to develop inclusion in our country. The most important implication of this study concerns to the institutions responsible for preparing PE teachers: although the great majority provide coursework in special needs education, universities should restructure their programs to infuse information and experience about disabilities throughout the curriculum (Rizzo & Kirkendall, 1995). This training will be reflected not only on teacher's attitudes and motivation, but also in the lives of children with intellectual disabilities all the way through the school community and thus society in general.

Acknowledgment: This research has been supported by Centro de Estudos Biocinéticos, FCT.

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