

COMPONENTS OF ATTITUDES TOWARD THE INCLUSION OF STUDENTS WITH DISABILITIES IN PHYSICAL EDUCATION IN THE ATIPDPE-GR INSTRUMENT FOR GREEK PHYSICAL EDUCATORS

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BACKGROUND: Over the last decade the idea of the inclusion of students with disabilities and special educational needs (SEN) in general schools has become increasingly the focus of national and international policies in Greece. An important factor that affects the success of inclusion is attitude and the theory of planned behavior (TPB) provides a useful framework for the study of attitudes toward people with disabilities.

OBJECTIVE: The purpose of the study was to examine the structure of the attitudinal scale, modified for Greece, of the Attitudes Toward Inclusion of Individuals with Physical Disabilities in Physical Education – Greece (ATIPDPE-GR), an instrument based on the theory of planned behavior (TPB) of Ajzen (2000), aiming to measure Greek physical educators' attitudes.

METHODS: Participants were 155 physical educators (85 females and 70 males) with a mean age of 37.68 years teaching either the physical education (PE) course or the Olympic & Paralympic education (O & PE) course in seven different prefectures of Greece.

RESULTS: Based on the one way ANOVA, the attitudinal scale of ATIPDPE-GR measures two psychological properties (components). Two components, which come from a principal component analysis, explain more than 42% of the variance. The two components are: a) positive outcomes for students and b) negative outcomes for teachers and students.

CONCLUSION: Our present results indicate that the ATIPDPE-GR can be a reliable instrument that measures PE teachers' attitudes and that the theory of planned behavior can provide a sound theoretical framework for the study of the attitudes of physical educators.

Keywords: Adapted Physical Activity, Olympic/Paralympic education, theory of planned behavior.

INTRODUCTION

During recent years in Greece, the inclusion of students with special educational needs (SEN) and disabilities in physical education (PE) classes has been supported by being mandated by new educational policies as well as by adapting the physical education curriculum. Today, inclusive education has become a reality in most school districts due to the passage of public law 2817/2000 and a more recent one, the PL 3699/2008 (Greek Government Gazette, 2008). More specifically this last law mandates the inclusion of students with SEN in public schools and more specifically in general classes with or without support services from an adapted physical education teacher or a special education teacher. Only recently has the Greek Ministry of Education initiated some modifications of the physical education curriculum. In order to better infuse the ideas and the values of sports and specifically the Paralympic Games into the curriculum, the Greek Ministry of Education added an extra hour of PE to school schedules and

hired thousands of PE teachers to teach a new course entitled Olympic & Paralympic education. This course is an educational procedure that aims at a configuration of students' behavior according to the Olympic values and other elements of current civilization. The intention is to inspire students to learn about the development of cooperation, understanding and friendship and the reinforcement of autonomy, critical thought and responsibility. A part of the educational material that has been used to teach in this course was the educational kit entitled: "The Paralympic Games from 1960 to 2004", which may be used by PE teachers to plan their lesson to include students with SEN and disabilities (Evaggelinou, 2002), which was created by the Organizing Committee of the "Athens 2004" Paralympic Games (ATHOC).

Inclusion is guided by the fundamental principle of valuing diversity. Belonging, acceptance, and a sense of being supported are essentials of an inclusive environment. The most prevalent barriers to including students with disabilities are related to teacher preparation and teacher attitudes (Sherrill, 2004). Attitude is the key

to changing behaviors toward people who are different and is characterized not as a behavior, but a situation which comes before it. In the theory of planned behavior (TPB) (Ajzen, 2005), a central factor is the intention to perform a behavior. Attitude, a subjective norm and the perception of behavioral control, in combination, lead to the formation of a behavioral intention. As a general rule, the more favourable the attitude and subjective norm, and the greater the perceived control, the stronger should be the person's intention to perform the behaviour (Ajzen, 2002).

The most frequently studied component of planned behavior theory is behavioral beliefs, because this component is used to infer attitudes toward the intention to perform a specific behavior. One of the most important factors contributing to successful inclusion is the attitude of physical educators toward teaching students with disabilities, as it is believed to play a significant role in explaining physical educators' actions toward teaching students with disabilities in general classes (Downs & Williams, 1994; Folsom-Meek & Rizzo, 2002; Hodge & Jansma, 1999; Hutzler, 2003; Kozub & Lienert, 2003; Rizzo, 1985; Rizzo & Kirkendall, 1995).

Rizzo (1984) was the initiator of theoretically based research on attitudes toward teaching individuals with disabilities in GPE. Rizzo developed an instrument, now entitled "physical educators' attitudes toward teaching individuals with disabilities" (PEATID), which is based on the theory of reasoned action (Ajzen & Fishbein, 1980). PEATID uses a 5 point Likert-type scale to measure 12 behavioral beliefs about the outcomes of teaching children with disabilities in GPE.

The instrument, "Attitudes Toward the Inclusion of Individuals with Physical Disabilities into Physical Education" (ATIPDPE) was developed in the Czech Republic (Kudláček, Válková, Sherrill, Myers, & French, 2002) in order to assess intentions and belief systems and to use the results to personalize teacher preparation so that university students develop positive attitudes and strong intention of working toward inclusion. The results showed that 23% of variance in intentions can be explained by three belief components based on the TPB. Kudláček, Válková, and Sherrill (2002) explored the structure of the ATIPDPE instrument and found that it measures three psychological properties (components). The three components were: (a) a positive outcome for students; (b) a negative outcome for teachers; (c) a negative outcome for students. Each ATIPDPE item is accompanied by a 7 point scale, as recommended by Ajzen (2000). The scoring system required use of two 7 point scales: (a) 1 to 7 for the likelihood construct; (b) a -3 to +3 scale for the evaluation construct. Scores for each statement were then multiplied to create item belief scores. This questionnaire was used and modified

to measure the attitudes of Greek physical educators. Modified means that only one of the two 7 point scales was used and that was the one for the likelihood construct. The scale about the evaluation construct was not used.

The purpose of this study was to discover the structure of the modified attitudinal scale of ATIPDPE-GR by finding components of this scale using principal component analysis and compare these with components of the original ATIPDPE (Kudláček, Válková, & Sherrill, 2002). A second aim was the comparison of attitudes between males and females and between PE teachers and O & PE teachers.

METHOD

Participants

The 155 participants (85 females and 70 males) of the survey were PE teachers from seven different prefectures of Greece (14% of Greece). The mean age of the participants was 37.68 years ranging from 23 to 55 years old. Sixty-one teachers in the sample (31 males and 30 females) of an average of 39.26 years were teaching only the physical education course and ninety-four (55 females and 39 males) of an average age of 36.66 years were teaching only the Olympic and Paralympic education course. The sampling's goal was to obtain as many participants as possible. The sampling design was purposive, meaning to include all teachers who were teaching PE and O & PE courses.

Instrument

The instrument that was used was the 10 item modified attitudinal scale ATIPDPE-GR (attitudes toward inclusion of children with physical disabilities in physical education – for Greece) instrument. This questionnaire arose after the procedure of back translation. That is – the ATIPDPE by Kudláček, Válková, Sherrill, Myers, and French (2002) was translated into Greek and then it was back translated into English by experts, to establish that the questions in Greek had the same meaning as the questions in English of the original ATIPDPE.

This scale measures behavioral beliefs about the outcome of the inclusion of students with physical disabilities in physical education. The attitudinal scale was selected to compare the results of attitudes toward inclusion among Greek physical educators with the results of the previous study on the components of the original ATIPDPE scale (Kudláček, Válková, & Sherrill, 2002). Each ATIPDPE-GR item is accompanied by a 7 point scale, as recommended by Ajzen (2000): 1 to 7 for the likelihood construct (TABLE 1). The results from all items can be found in TABLE 2.

TABLE 1

Sample item from the attitudinal scale

Behavioral belief (outcome belief)
Likelihood
Including students with physical disabilities in my PE class will help students without disabilities to learn to interact with persons with physical disabilities.
Extremely unlikely outcome: _____ : _____ : _____ : _____ : _____ : _____ : _____ : Extremely likely outcome 1 2 3 4 5 6 7

TABLE 2

Description of the 10 items on the attitudinal scale of ATIPDPE-GR with means and standard deviations

Component			
Item Description	M	SD	
<i>Positive outcomes for students</i>			
1. Including students with physical disabilities in my PE class will help students without disabilities to learn to interact with persons with physical disabilities.	5.14	1.63	
3. Including students with physical disabilities in my PE class will encourage students to learn to help others.	5.48	1.72	
5. Including students with physical disabilities in my PE class will teach students greater tolerance.	5.35	1.61	
6. Inclusion will have a positive effect on the development of personalities of students with physical disabilities (e. g. self esteem, feeling of belonging, etc.).	5.23	1.85	
9. Inclusion will cause my students to have better knowledge about persons with disabilities.	5.68	1.73	
10. Including students with physical disabilities in my PE will teach students cooperation.	5.50	1.67	
<i>Negative outcomes for students and for teachers</i>			
1. Including students with physical disabilities in my PE class will make teaching physical education more difficult.	4.42	1.72	
4. Including students with physical disabilities in my PE class will make lesson planning and preparation much more difficult.	4.55	1.72	
7. Students with physical disabilities will experience discrimination in my regular physical education classes.	4.71	1.67	
8. Students with physical disabilities will slow down instruction and progress in my PE class.	4.36	1.67	

Legend:

The possible range of scores of every item is from 1 to 7.

A substantial amount of research has been also conducted outside of adapted physical education that uses this or a similar scoring system as well as this terminology (e.g. Baker, Morrison, Carter, & Verdon, 1996; Yordy & Lent, 1993). The scoring systems and logic of those studies that applied the recommendations of Ajzen (2000) were followed. The internal consistency of ATIPDPE-GR reported using Cronbach alpha was at the desirable level of 0.746.

DATA ANALYSIS

SPSS 16.0 software was used in treatment of the data. One way analysis of variance (one way ANOVA)

was used for the analysis regarding gender and the specialty of teachers. The level of statistical significance was set at $p < .05$.

RESULTS

One way ANOVA revealed that there were no significant differences between females and males nor between PE and O & PE teachers. This finding provided the justification for combining data for gender and year of study in the subsequent data analysis. Principal component analysis was used because this procedure analyzes all variance in shared variables and was used in a comparable study of attitudes by Folsom-Meek and Rizzo

(2002). Components were required to have eigenvalues above 1.0 to be included.

The analysis revealed the structure of the questionnaire, the attitudinal scale of ATIPDPE-GR, which measures two psychological properties (components). Detailed information on the means and standard deviations of each item can be found in TABLE 2. Two components, which came from the principal component analysis, explain more than 42% of the variance. The two components are: a) positive outcomes for students and b) negative outcomes for teachers and for students. The original scale of ATIPDPE measures three components, which are: a) positive outcomes for students and b) negative outcomes for teachers and c) negative outcomes for students. The difference is that in the original scale the negative outcomes of inclusion comprise two components, for teachers and students separately, whereas in the Greek version they constitute only one component.

TABLE 3 depicts the component loadings of the 10 items. Each of the items loaded higher than the .40 cut off point. Most items showed excellent loadings (above .70) with the exception of one item (item 7 = .67).

TABLE 3

Component loadings, eigenvalues and percentages of variance using principal components extraction with varimax rotation for total composite scores

Item #	Varimax components	
	1	2
<i>Positive outcomes for students</i>		
1	.72	
3	.84	
5	.82	
6	.85	
9	.85	
10	.87	
<i>Negative outcomes for students & for teachers</i>		
2		.82
4		.82
7		.67
8		.81
Eigenvalue	4.23	2.40
Percent variance	42.26	24.01

Six of the ten items of the ATIPDPE-GR showed higher loadings than the corresponding items of the original scale. Thus, we can conclude that the described attitudinal scale has a sound structure, which is comparable with the structure of the previously studied original instrument ATIPDPE.

DISCUSSION

The purpose of this study was to discover the structure of the Greek attitudinal scale of the ATIPDPE-GR by finding components of this scale using principal component analysis and to compare these to the components of the original ATIPDPE (Kudláček, Válková, Sherrill, Myers, & French, 2002) scale. PE teachers seem to know about the potential positive and negative outcomes of inclusion (Ajzen, 2000). Negative outcomes are not categorized in the same way as in the original study by Kudláček, Válková, and Sherrill (2002) regarding the outcomes of teachers (making teaching and preparation more difficult) and the outcomes of students (students with PD and students without disabilities). Negative outcomes in the ATIPDPE-GR comprise one of the two components, which includes negative outcomes for both students and teachers. It is interesting to notice that the results of negative outcomes for teachers and students were rated as being not so likely outcomes and the positive outcomes for students were rated as being likely outcomes in the same way as the original ATIPDPE scale was concerning the positive scores. This means that the participants were likely to have favourable behaviour regarding including students with disabilities in their classes.

Two instruments (ATIPDPE and ATIPDPE-GR) were used in two separate pilot studies, where researchers have asked respondents to list the possible outcomes of the inclusion of students with PD in general physical education classes, in two different countries, each with a different state of inclusion. The fact that a modified variant was used in Greece might explain the difference in the number of components. However, there are similarities between the component about positive outcomes for students and the more positive scores in the six questions of this component than there are among the other four questions and this is very good. In relation to the ATIPDPE-GR, the results showed that the explanation of variance was not the same as in the original ATIPDPE (Kudláček, Válková, & Sherrill, 2002), however the 42% Greek version is also sensitive to beliefs about the potential outcomes of inclusion. The Greek scale has a sound structure and an internal consistency of 0.746 and therefore it is recommended to use it with PE teachers of Greek teacher programs in physical education, adapted physical education, general education and special education.

This instrument can be used to measure impacts of different courses and educational programs on the attitudes of the above mentioned PE and O & PE teachers toward the inclusion of students with disabilities in general physical education. The results didn't reveal any differences between teachers who taught physical

education and those who taught Olympic & Paralympic education. This might be explained because of barriers that PE and O & PE teachers found in trying to implement both of the programs. For example, the lack of either support services, educational materials or an adapted physical education teachers, could be a factor that led both of the groups to see the practical difficulties of inclusion. This statement is in agreement with Papadopoulou et al. (2004), who infers that inclusion, without the appropriate support services, is not workable and does not promote positive attitudes. Another important barrier is the number of students in the class (Ammah & Hodge, 2005), which is large and this makes the work of the PE and O & PE teacher to follow the guidance of the programs harder, especially in classes attended by students with SEN.

ATIPDPE-GR is an instrument that can give information about the attitudes of PE teachers and the factors that affect them. In the present study, the aim was the comparison between the influences that the two courses had on the attitudes of teachers who taught the courses. These findings are significant for the development of courses and seminars for PE teachers and a PE curriculum that will give them better preparation and skills to teach children with disabilities in inclusive classes and affect their attitudes to make them more positive. The lack of scales in Greece, which measure PE teachers' attitudes and have a theoretical framework like the theory of planned behaviour make these findings important for the progress of studies about attitudes toward the inclusion of children with disabilities and SEN in PE classes.

CONCLUSION

The inclusion of children with disabilities and SEN in general in PE classes represents the most important goal of the program of Adapted Physical Activity. Through this practice, children with disabilities and SEN will be led into a more active way of life, which is going to affect not only their health, but also the development of their personalities. Children without disabilities and SEN are going to acquire knowledge about people with disabilities and develop understanding and acceptance of them, thus they will learn how to behave towards them. A fundamental factor that can greatly influence the success of inclusion is the attitude of PE teachers. Therefore, studies about the attitudes of PE teachers toward the inclusion of children with disabilities are important. The present results indicate that the ATIPDPE-GR can be a reliable instrument that measures PE teachers' attitudes and that the theory of planned behavior can provide a sound theoretical framework for the study of the attitudes of physical edu-

cators. More studies about attitudes and inclusion are suggested, so we can observe the ongoing participation of children with disabilities and SEN in PE classes in general schools.

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NÁZORY NA ZAČLENĚNÍ STUDENTŮ S POSTIŽENÍM DO HODIN TĚLESNÉ VÝCHOVY V NÁSTROJI ATIPDPE-GR PRO ŘECKÉ UČITELE TĚLOCVIKU (Souhrn anglického textu)

VÝCHODISKA: Za poslední dekádu myšlenka začlenění studentů s postižením a speciálními vzdělávacími potřebami (SVP) do všeobecných škol v Řecku nabývá na významu v rámci národní a mezinárodní politiky. Důležitý faktor, který podmiňuje úspěch tohoto začlenění, je postoj k této otázce a teorie plánovaného chování (TPCH) poskytuje užitečný rámec pro studium postojů k lidem s postižením.

CÍL: Účelem studie bylo posoudit strukturu postojevé škály, modifikované pro Řecko, dle nástroje Attitudes Toward Inclusion of Individuals with Physical Disabilities in Physical Education – Greece (ATIPDPE-GR),

založeného na teorii plánovaného chování (TPCH) Ajzena (2000). Škála je určena pro měření postojů řeckých učitelů tělocviku.

METODY: Zúčastnilo se 155 učitelů tělesné výchovy (85 žen a 70 mužů) v průměrném věku 37,68 let, kteří vyučují buď tělesnou výchovu (TV) nebo olympijskou a paralympijskou výchovu (OPV) v sedmi různých prefekturách Řecka.

VÝSLEDKY: Na základě jednocestné ANOVA postojové škály ATIPDPE-GR měří dvě psychologické charakteristiky (komponenty). Dva komponenty, jež pocházejí z analýzy hlavních komponentů, objasňují více než 42 % rozptylu. Jedná se o: a) pozitivní výsledky pro studenty a b) negativní výsledky pro učitele a studenty.

ZÁVĚRY: Naše závěry indikují, že ATIPDPE-GR lze považovat za spolehlivý nástroj pro měření postojů učitelů TV a že teorie plánovaného chování může poskytnout solidní teoretický rámec pro studium postojů učitelů tělocviku.

Klíčová slova: aplikovaná pohybová aktivita, olympijská/paralympijská výchova, teorie plánovaného chování.

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