Can an Intervention Program Affect Students’ Attitudes Toward Inclusive Physical Education? An Application of the “Theory of Planned Behavior”

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Abstract

The aim of this study was to examine if an intervention program would change students’ attitudes and intentions towards inclusion of disabled students in a mainstream physical education class. The participants, 180 children without disabilities (M=11.15, SD=0.70), completed the revised version of the Theory of Planned Behavior Theory questionnaire (TPB), twice (pre and post-test). After the implementation of the intervention program, results revealed significant statistical differences in almost all factors between control and experimental groups. These findings could assist PE teachers in educating students to understand, develop and perform appropriate behaviors towards their peers in order to facilitate their co-existence, and their mutual development and learning, within a PE class.

Keywords: Attitudes; Intention; Perceived behavioral control; Information; Morality

Introduction

Freedom of movement is one of human rights. Children with special educational needs are a reality of modern society and their condition is in a continuous claim of life by parents, teachers and specialists. Any attempt to educate these children towards their autonomous or semi-autonomous life is vital [1]. Learning life skills in knowledge, and attitudes - such as learning basic exercise rules - is a key priority in the educational integration of children with special needs [2].

The integration of children with disabilities into general schools represents a new relative phenomenon in Greece. Until March 2000, most disabled children were trained in separate special schools. With the Public Law 2817/2000, Greek Government turned towards the adoption of the philosophy of inclusive education. According to the above law, “education of persons with disabilities is general, technical and professional, provided at primary and secondary school, which, if necessary, are organized, staffed, equipped and supported appropriately to ensure the necessary teaching and psycho-pedagogical support of these individuals” (Law 2817 No. 1). Starting from school, it is now supported that people with disabilities participate in all areas of their lives on equal terms and conditions. And as Campbell and Gilmore [3] indicated, formal schools are the best way to combat discrimination and the most appropriate place not only to achieve learning goals but also to satisfy children.

The benefits of integration are many and important, mainly by improving the community and developing the self-confidence and self-respect of the disability pupil by helping him integrate smoothly into the formal classroom and later into society [4]. Given its significant benefits, integration should be implemented whenever possible [5]. However, many researchers know the inability of the educational system to secure the necessary conditions for the full integration of pupils with special needs in their neighborhood schools and fear that the conquests and benefits will be lost [6-8]. Incorporating these children into integration classes with different competences is a challenge to cultivate an environment where they can equally accommodate the needs of each student. In such classes, each student will be assessed equally beyond the educational, psychological and physical requirements [9,10].

Inclusion does not simply mean placing these children in regular schools, but rather changing the structure of the class to get to know the unique abilities of all students, including those with disabilities [11]. Integration works and acts contrary to social segregation and prevents stigmatization of children with educational difficulties. Unlike the special education school, the integration of children with difficulties at primary school gives new opportunities for learning and social inclusion. The act of living and learning in a mainstream school for all children, contributes to the elimination of prejudices and insecurities, and creates a climate of mutual respect and appreciation, with acquaintance and understanding of the problems of people with different abilities. In this sense, school integration is a basic prerequisite for social and occupational integration [12].

With common education, the prejudices, stereotypes and fear of the unknown are weakened and eliminated. It promotes mutual understanding, mutual acceptance, and attitudes and forms of communication that enhance multicultural and polymorphic society. In formal education, children with different abilities are more humanly supported, since there is no distinction and difference and the equal education opportunities for all children are established. Thus, school integration is not just a functional but at the same time a purely moral problem [13-15].

To achieve the goal of integration, emphasis should be placed on the development of attitudes, attitudes and attitudes toward classroom behavior [5,16]. At the same time, the integration rules should emphasize the building of a school society where everyone is and is accepted and supported by his or her peers and other members of society and in which their educational needs are met [17].

Successful peer tutoring using student-educators and collaborative...
learning should engage in a general atmosphere of co-operation and mutual support. In addition, teachers demonstrate ways of collaborative teaching, and share their views with other professors. An important role is played by their attitude towards the integration of children with disabilities. According Dunn and Fait [18], “... if physical education teachers show fear and terror to the possibility of having students with and without disabilities co-exist in their department, it is most likely that they will be adversely affected the attitude of pupils without disabilities (page 31)”. But the most important factor of the above process is that such interventions open-up new horizons of thinking and involves all students in such a process [19].

The progress and success of school integration depends on the attitude, knowledge, experience and understanding of all those who have daily contact with people with disabilities. Many factors play their own unique role in this success. More specifically:

(a) The disabled persons themselves, according to the type and severity of their disability [20],

b) The school with the organization of the departments, the mode of operation, equipment and logistics [21],

c) Teachers who, with their attitude, can influence the children of their class, the children colleagues, even their parents [22],

d) The attitude of children without disabilities, which is generally positive, but more It is the result of an expression of social and emotional interest, raising questions about the impact of social and cultural factors on the perspective of non-disabled students on integration [23].

As past research showed, Physical Education classes provide multiple motor activity benefits not only to students of a general school, but even more for children with disabilities who are characterized by a poor body image and low self-esteem because of their poor physical condition [24]. It also should be mentioned that Physical Education is not limited however, only to intense activities. It contains the teaching of recreation and relaxation, gives the opportunity for creative expression and social interaction and guides the individual in finding and developing skills in order to use his leisure time [25].

According to Ajzen and Madden [26] the Theory of Planned Behavior claims that an individual's actions are motivated by specific intentions, which constitute our "behavioral intention". The intensity of the intention(s) is usually in direct relation to the determination to act [27]. These intention(s) are defined by:

a) Predisposition towards a specific behavior (negative or positive) and,

b) Subjective norms [28], which consist of behavioral beliefs that are related to the fact that certain people may approve or disapprove of a specific behavior. This "reasoned action model" can be quite successful when investigating controlled behaviors [29] such as class integration.

Planned behavior theory has been enriched with another variable that plays a major role in understanding how behavior is consistent with attitude, “Information” [30-32]. Limited information and knowledge about the behavior in question can represent a serious obstacle in carrying it out [30] and, consequently, in assessing it with accuracy. Finally, according to Ajzen [26], "Perceived Behavioral Control" is one’s conviction that a certain behavior will be rather easy or difficult to perform. This control is affected by both internal and external factors including opportunity, time and the interference of others.

At the same time, in Greece limited research used the model of Planned Behavior to identify the attitudes and intentions of students and more specifically towards their collaboration with students with disabilities in class (6; 9) [33,34] and recreation environments [24]. Therefore, this investigation was conducted as a first attempt to examine if an intervention program would change students’ attitudes and intention(s) towards inclusion of disable students in a mainstream physical education class.

Materials and Methods

Participants

The sample consisted of 180 primary grade school children; 82 boys and 98 girls, between 10 to 12 years of age (M=11.15, SD=0.70) (Table 1). The sample was divided into 2 groups, control (N=95) and experimental (N=85).

Design and procedure

The research was divided into two phases and included the following parts: During the pre-intervention phase (1st week), questionnaires were shared to record the views of mainstream school’ students for possible participation of peers with moderate disability in their school physical education class. The same measurement was repeated after the intervention phase (6th week). Before completing the questionnaires in both cases, clarifications were given to the pupils that were followed by information on how to fill-in the questionnaire. It should be noted that the participation of the students was voluntary and the supervision of all students was administered by a special education teacher from the mainstream school in cooperation with the school physical education teacher of the special school.

a) More specifically, the first two weeks were aimed at raising children’s awareness of people with disabilities using audiovisual material (video, documentaries, internet, photos, newspaper articles, discussion(s)), in collaboration with adaptation and cooperation games, were sensitization of children toward the specific subject was addressed. Also, the students participated in Paralympic sports during their Physical Education classes (e.g. goalball, volleyball, boccia) were the aim was to maximize knowledge and experience towards the abilities and the peculiarities that these activities require.

b) During the intervention phase, which took place in the 3rd, 4th and 5th weeks, three common courses of 45 minutes were held. The courses included games - sports of leisure and low difficulty so that they could be performed by all students. For this purpose, appropriate adjustments were made to the space (smaller stadium dimensions), the instruments (balloon instead of a ball), the instructions given (one at a time), the way of communication (acoustic, visual and kinetic guidance) [24]. At the same time, rules of the games - sports were also changed.

Measures

In order to examine any possible differences on attitudes and intention, all students twice (pre and post tests), completed the revised version of the “Planned Behavior Theory” [24] questionnaire, which consists of the following seven factors:

(a) Attitudes were estimated by the mean score of responses to the question “For me to accept a student with disabilities in my physical

<table>
<thead>
<tr>
<th>Sex</th>
<th>Grade</th>
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<tbody>
<tr>
<td>Boys</td>
<td>82 (45.5%)</td>
</tr>
<tr>
<td>Girls</td>
<td>98 (54.5%)</td>
</tr>
</tbody>
</table>

Table 1: Participant’s descriptive characteristics.
education class, is...". Responses were rated on a 7-point Likert type scale, on six bipolar adjectives (7=good to 1=bad, 1=unethical to 7=ethical, 7=smart to 1=foolish, 7=useful to 1=useless, 7=nic to 1=ugly, 7=pleasant to 1=unpleasant).

(b) Intention was estimated by the mean score of the responses to three different questions: "I intend/I will try/I am determined to accept a student with disabilities in my physical education class" were rated on a 7-point scale from 1=very unlikely to 7=very likely. A 7-point Likert type scale with endpoints labelled 1=definitely no to 7=definitely yes, was used for the other two questions.

(c) Perceived behavioural control: for the specific behavior was estimated by the mean score of four questions. Examples of questions are: "For me to accept a student with disabilities in my physical education class is", "If I wanted I could accept a student with special needs in my physical education class", "Is totally up to me, if I will accept or not a student with disabilities in my physical education class", and "How much is under your control, to accept or not a student with special needs in your physical education class?". A 7-point Likert type scale was used, ranging from 1=difficult to 7=easy for the first question, from 1=incorrect to 7=correct for the second, from 1=disagree to 7=agree for the third and 1=not at all to 7=complete control for the forth.

(d) Moral satisfaction was estimated by the mean score of three questions: "I wouldn't feel guilty if I didn't accept a student with special needs in my physical education class", "To not accept in my physical education class a student with special needs, is against my principles", and "It would be unethical to me, if I wouldn't accept a student with special needs in my physical education class". A 7-point Likert type scale was used, ranging from 1=incorrect to 7=correct for the first question, from 1=impossible to 7=possible for the second, and from 1=disagree to 7=agree for the third question.

(e) Subjective Norms were estimated by the mean score of responses to four questions: "Some individuals, who are important in my life, believe that I must accept a student with disabilities in my physical education class", "Some very important people to me, would accept a student with disabilities in the physical education class", "Some people to whom I value their opinion, would agree the idea of having a student with disabilities in my physical education class", and "Some very important people would approve the idea of having a student with special needs in my physical education class". A 7-point Likert type scale was used, ranging from 1=must not to 7=must for the first question, from 1=incorrect to 7=correct for the second and forth, and from 1=disapprove to 7=approve for the third question.

(f) Information was measured by four questions: "Some individuals told me that they pay attention to different information about inclusion of students with disabilities to physical education classes. How much attention do you pay to different information about inclusion of students with disabilities to physical education classes?"; "I am very interested in any information regarding the inclusion of students with disabilities to physical education classes?"; "How often do you pay attention to information regarding inclusion of students with disabilities to physical education classes?"; "I am very interested in any information regarding the inclusion of students with disabilities to physical education classes?". Responses were given on 7-point Likert type scales, ranging from 1=never to 7=very much pay attention for the first, from 1=neither to 7=very often for the second, from 1=strongly disagree to 7=strongly agree for the third, and from 1=never pay attention to 7=I pay a lot of attention for the fourth question.

(g) Additionally, a factor named General Attitudes was added to the questionnaire [12] which was translated into Greek [25]. It was measured by nine questions in an effort not only to explore the attitude of the students’ planned behavior in school activity, but the overall students’ attitude and willingness to approach, build a relationship, and accept students with disabilities in their physical education class. Before the questions, the students were presented with a scenario: "Let's hypothesize that a student with disabilities comes in your physical education class for this school year", and then they were asked: "Will you have him/her become your best friend?". Responses were given in a 5-point Likert type scale, ranging from 1=definitely not to 5=definitely yes.

Analysis

To investigate any possible differences between groups for each factor of the questionnaire, ANOVA Repeated Measures analyses were conducted. The post hoc multiple comparisons Scheffe test was used to define the statistically significant differences between groups.

Results

Descriptive statistics

Descriptive statistics were computed for all assessed variables and are presented in Table 2. The results indicated that all scales showed acceptable internal consistency since Cronbach alpha was higher than 0.80.

ANOVA Repeated Measures (2 groups × 2 measurements) Groups (Table 3).

1) ANOVA repeated measures (2 groups × 2 measurements) was applied to establish whether there were any differences between groups on Attitudes. The results indicated that there was a statistically significant difference (F_{1.162} = 15.42; p < 0.001). More specifically, the Scheffe multiple comparison test showed that only the score of experimental group were greater on the post-test measurement than the initial one.

2) ANOVA repeated measures (2 groups × 2 measurements) was applied to establish whether there were any differences between groups on Intention. The results indicated that there was a statistically significant difference (F_{1.162} = 10.10; p < 0.001). More specifically, the Scheffe multiple comparison test showed that only the score of experimental group were greater on the post-test measurement than the initial one.

Table 2: Internal reliability and descriptive statistics of all variables.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Cronbach’s alpha</th>
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<tbody>
<tr>
<td>Attitudes</td>
<td>0.82</td>
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<tr>
<td>Intention</td>
<td>0.84</td>
</tr>
<tr>
<td>Perceived Behavioral Control</td>
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</tr>
<tr>
<td>Moral Satisfaction</td>
<td>0.81</td>
</tr>
<tr>
<td>Subjective Norms</td>
<td>0.86</td>
</tr>
<tr>
<td>Information</td>
<td>0.86</td>
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<tr>
<td>General Attitudes</td>
<td>0.88</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Variable</th>
<th>Pre-test</th>
<th>Post-test</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
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<td>Attitudes</td>
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<td>1.08</td>
</tr>
<tr>
<td>Intention</td>
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<td>1.53</td>
</tr>
<tr>
<td>Perceived Beh. Control</td>
<td>5.40</td>
<td>1.16</td>
</tr>
<tr>
<td>Moral Satisfaction</td>
<td>4.70</td>
<td>1.65</td>
</tr>
<tr>
<td>Information</td>
<td>4.30</td>
<td>1.11</td>
</tr>
<tr>
<td>General Attitudes</td>
<td>2.76</td>
<td>.331</td>
</tr>
</tbody>
</table>

Table 3: Anova repeated measures.
3) ANOVA repeated measures (2 groups × 2 measurements) was applied to establish whether there were any differences between groups on Perceived Behavioral Control. The results indicated that there was a statistically significant difference (F(1,144) =3.92; p<0.05). More specifically, the Scheffe multiple comparison test showed that only the score of experimental group were greater on the post-test measurement than the initial one.

4) ANOVA repeated measures (2 groups × 2 measurements) was applied to establish whether there were any differences between groups on Moral Satisfaction. The results indicated that there was a statistically significant difference (F(1,159) =13.74; p<0.05). More specifically, the Scheffe multiple comparison test showed that only the score of experimental group were greater on the post-test measurement than the initial one.

5) ANOVA repeated measures (2 groups × 2 measurements) was applied to establish whether there were any differences between groups on Information. The results indicated that there was a statistically significant difference (F(1,165) =11.02; p<0.01). More specifically, the Scheffe multiple comparison test showed that only the score of experimental group were greater on the post-test measurement than the initial one.

6) ANOVA repeated measures (2 groups × 2 measurements) was applied to establish whether there were any differences between groups on General Attitudes. The results indicated that there was a statistically significant difference (F(1,156) =13.49; p<0.001). More specifically, the Scheffe multiple comparison test showed that only the score of experimental group were greater on the post-test measurement than the initial one.

Discussion

The aim of the study was to examine if an intervention program would change students’ attitudes and intentions towards inclusion of disabled students in a mainstream physical education class. To our knowledge, no similar studies have been conducted on the specific topic in physical education. Therefore, discussion and conclusions from the present study reflect a first attempt to interpret the relation of attitudes, intentions and behaviors of primary students towards the integration of disabled students in a mainstream physical education class.

More specifically, "Attitudes" was the first factor that showed a high increase after the completion of the physical education intervention program. As past research indicated change of attitudes is the result of the interaction between the individual with the others and the social factor [30-40]. As Innes FK et al. [41] suggested, someone’s attitudes are influenced by the social environment and they are formed through the direct or indirect experiences with people and events [42], as well as by participating with students with disabilities in integration classes or intervention programs (such as the one that took place in the present study) [43]. Therefore, it appears that pupils’ contact through joint physical education programs has helped the behavior change of pupils without disabilities in order to accept pupils with moderate disability in the mainstream physical education course [24].

Furthermore, significant was the increase of the indicators on the factor of “Intention”. Researchers speculate that the intention of non-disabled students to accept possible presence of disabled pupils in their PE class was shaped and changed by their participation in an intervention program [32-34]. Besides, an important element in the present research is the fact that “Information” appeared to have a positive effect after the implementation program. This is due to the fact that students during the pre-intervention phase of the research where they were informed that it concerns people with disabilities, participated in games of adaptation, cooperation, trust and non-exclusion, and experienced the problems and peculiarities that these people have to consider [24,35].

Moreover, the recording of the responses showed a significant increase of "General Attitude". The benchmark for the children, as it was mentioned before, was the opportunity that was offered to them, to play and participate during a mainstream physical education class under the same conditions that their colleagues with disabilities must deal with. Additionally, the increase of “Perceived Behavioral Control” factor is also directly related to the implementation of the intervention program. Former bibliographical research supports the unbroken relation between PBC with attitudes and intention [36], which in turn shows that the final choice of non-disabled students was to accept peer disabled pupils in mainstream classes. Finally, likewise results supported the outcome that after the implementation of the program, students felt “Morally” obligated to accept students with disabilities in class and collaborate with them. Previous research confirms the outcome [37].

Conclusion

In this study, the majority of non-disabled students developed very positive attitudes towards the prospect of integrating pupils. This is due to the experiential experience, to the educational approach with modern audiovisual media as well as to the activities of cooperation and interdependence. It is also due to the simplicity of activities that contributed to the absence of obvious differences in performance among pupils with and without disabilities. It’s also noteworthy, in agreement with other studies [38,39] that well-organized exercise programs for pupils of moderate disability, contribute significantly to changing attitudes and intention towards inclusion. Therefore, physical education teachers should evaluate students’ attitudes, and provide to all students the appropriate learning experiences, and assist them in achieving the course goals.

Further research is required to evaluate the relation between students’ attitudes and behaviors, by observing them during the conduction of the lesson. Also, this relation should be further studied for different types of disability in order to provide a better understanding of students’ attitudes and behaviors.

References


