General preschool and primary university students in Greece and their attitudes toward inclusive education

Accepted 23rd July, 2019

ABSTRACT

University studies on teaching and pedagogy consists of great importance for the education of students during their school years. The different characteristics of the students' population demand knowledge and abilities in order for the teachers to meet their needs and to successfully facilitate their adaptation in the academic and social school environment. Consequently, it is important to study pedagogy students' attitudes toward students with special educational needs and their inclusion in the general education system. In the present study, 348 preschool and primary education students, who completed the "Attitudes Toward Inclusive Education Scale" were selected as participants. The results showed that the students embraced neutral attitudes toward the inclusion of students with physical disabilities and academic difficulties, but they expressed favorable attitudes concerning the inclusion of students with behavior problems and social difficulties. Attitudes are compared to other variables that affect students' predispositions. It is important for the University departments to follow a continuous training on the special needs and inclusion, in order for the future teachers to be prepared to teach in diverse school context.

Key words: University students, preschool studies, primary education, attitudes, inclusion, disability.

INTRODUCTION

In many countries, preschool and primary education universities offer courses that include thematic units for teaching diversity and inclusive education (Oswalt and Swart, 2011). Pupils with special educational needs are characterized as a group of developing persons, with diverse needs, where, in order for their needs to be satisfied successfully, future teachers should possess the appropriate knowledge and skills and adopt positive attitudes, as a necessary condition for the effective implementation of inclusive education (Forlin et al., 2009).

According to the research, in general, students of pedagogy departments tend to adopt a favorable attitude (Cardona, 2009) toward inclusion. They express positives attitudes toward the inclusion of students with learning difficulties, less positive about the inclusion of students with physical disabilities and but they are less willing to integrate, in the general education system, students with behavior problems and social difficulties (Sharma et al, 2009). In the same study, it was observed a negative attitude toward the inclusion of students with special educational needs.

There are different variables that affect university students' attitudes toward the teaching of special needs students in the mainstream setting. Teaching experience and contact with special needs students reinforces positive attitudes (Forlin et al., 2009), but other study obtained different results (Rakap et al., 2017). Gender constitutes a differentiate variable (Tervo et al., 2002; Romi and Leyser, 2006) where women adopt more positive attitudes as compared with men, and younger students are expressing more favorable attitudes than older aged students (Forlin et al., 2009). Preschool education students tend to be more
acceptable to inclusion than primary education students (Gokdere, 2012; Çikili and Karaca, 2019). Seminars on special education influence, in positive way, students’ attitudes toward inclusion (Forlin et al., 2010). Furthermore, university courses on special education affect university students’ attitudes in an unambiguous way (Tait and Purdie, 2000; Stella et al., 2007) and a public supportive network predisposes them in a positive way (Gilor and Katz, 2018).

MATERIALS AND METHODS

Sample

The survey involved 348 students, of whom 36 were men and 310 were women. From the total sample, 179 students were attending the general preschool university and 168 attending the general primary university. As regards gender, 5 men and 173 women were attending preschool education studies and 31 men and 136 women are studying in primary education departments. In terms of education level, 178 students were attending preschool education university and 167 students were to graduate as primary education teachers.

Furthermore, 343 participants were at the fourth year of studies and 2 university students at the fifth year of studies. Regarding age, 127 students were 21 years old, 153 students were 22 years old and the age range from 23 to 38 years old for 26 participants. Concerning the possession of a second degree, 9 students declared that they have graduated from another university department and 90 students have no second degree. A university course about disabilities and special needs have graduated 281 students, and 59 responded that they have attended any similar course. Additionally, 55 persons stated that there is a member with special needs in their family, but 291 stated that they have no family member with disability. Also, 93 participants declared that they have a friend with special needs and 251 participants do not know any person with disability. Concerning special needs seminars, 92 students have attended one, but 253 have not. As regards special needs seminars, 19 of them have been conducted by University institutions, 20 have been organized by other organizations and 1 has been implemented by the Greek Ministry of Education, Research and Religious Affairs. From the total sample, 42 students responded they had an experience with a special needs person and 299 responded negatively. The subject of experience of persons with special needs is referred to Practical training for 10 students, to voluntary occupation for 11 students, to creative occupation – full time employment for 8 students and Private lessons – parallel support coeducation, for 8 persons. A small part of the participants (39 students), declared that they were occupied during the research period and 308 students were not.

Total of 152 students had knowledge of Special Education Act, while 192 were not aware of the Acts related to Special Education. A great part of the sample, 228 students, stated they have knowledge of the purpose and the functioning of Greek Public Diagnostic, Differential Diagnosis and Support Center, but 117 students have no relative knowledge.

Instrument

To collect the data of the research, it was used a questionnaire consisting of two sections: The first section includes the “Attitudes Toward Inclusive Education Scale” (Wilczenski, 1992; 1995) and the second section includes questions related to the demographics characteristics of the participants, such as gender, university department, year of studies, age, having a second degree, family member with special needs in the family, having a friend with special needs, university course about disabilities and special needs, special needs seminars, Organization where the special education seminars were conducted, Experience of persons with special needs Subject of experience of persons with special needs, Knowledge of Special Education Act, Knowledge of the purpose and the functioning of Greek Public Diagnostic, Differential Diagnosis and Support Center. These variables have been examined in previous research as well (Tait and Purdie, 2000; Forlin et al., 2001; Sharma et al., 2006; Stella et al., 2007; Findler et al., 2007; Sharma et al., 2008; Forlin, et al, 2009).

This scale was designed to measure attitudes related to the educational policy of inclusion, and in particular attitudes towards the education of students with physical, behavioral, social and learning difficulties within the normal classroom. In particular, this scale measures the participants’ perceptions concerning the type of disability disposed by the student the student in order for the student to be included in the ordinal classroom (Sharma et al., 2008).

The scale consisted of 16 items, that were grouped and constitute four (4) factors, each one contains four statements equally, examining for dimensions of inclusive education: 1) First (1st) Factor: Physical disabilities (students with physical disabilities, that require special adjustments in the classroom), 2) Second (2nd) Factor: academic difficulties (having students with learning difficulties taking part in a general school curriculum until they have access in an individualized curriculum), 3) Third (3rd) Factor: Behavior problems (identifying children who present disruptive behavior and difficulties in the context of school adaptation), 4) Fourth (4th) Factor: Social Difficulties (students who are having difficulties in interacting socially with their schoolmates). Each item was scored on a 6-point Likert scale, rating from “strongly agree” to “strongly disagree”. Score equal to 16 is a declaration of the least favorable attitude and score equal to 96 is identified as the most favorable attitude. According
to the original research, the reliability scores were presented as follows: for each factor: $a = 0.83$ for physical disabilities factor, $a = 0.84$ for academic difficulties factor, $a = 0.87$ for behavior problems factor and $a = 0.82$ for social difficulties factor and Cronbach's $a = 0.92$ for the total scale (Wilczenski, 1992). There were no negatively worded items in the scale (Seçer, 2010).

In the present study, two bilingual translators were responsible for the scale translation from English language into Greek language. Subsequently, the questionnaire was distributed to preschool and primary students, as a test administration, to examine the wording and the understanding of the items or other problems. Back translation was followed by two other researchers. At the end, the translations were checked by three researchers who were specialized in the subject in order to assess the content validity by applying the method of content structure analysis (Weber, 1990). In the present research, the scale was scored by a 6-Likert scale, where 1 = strongly disagree and 6 = strongly agree. Also, it consisted of 16 items for primary education students and 14 for preschool education students (Cologon, 2012; Tsakiridou and Polyzopoulou, 2014).

**Procedure**

For the survey to be conducted, a permission was granted by the Greek Ministry of Education, Research and Religious Affairs and it was followed by briefing of the University rectors (Alnahdi et al., 2019), who were given a text, where there were presented with information about the purpose of the study and a copy of the psychometric tool. Then, the questionnaires were distributed in the auditorium (Sharma et al., 2009), during lesson sessions (Romi and Leyser, 2006) or before the start of the teaching, with the academic teacher permission (Sharma et al., 2003), who was present during the procedure (Gilor and Katz, 2018). The students were asked to complete the questionnaire and to return it to the lecturer or the researcher (Sharma, et al., 2009). Completion procedure lasted 10-15 min (Romi and Leyser, 2006). Students were informed about the anonymity of the research and that their participation is voluntary (Gilor and Katz, 2018), and that they can withdraw from the procedure, anytime they wanted, without having responded to all the questions, or delivering the paper with no answers (Sharma et al., 2009).

Each of the participants completed the Attitudes Toward Inclusive Education Scale (Wilczenski, 1992; 1995) and the demographics. Before starting the completion procedure, an introductory briefing was preceded and the students were given relevant instructions (Gilor and Katz, 2018).

**Research questions**

The present study aimed to answer the following questions:

- What attitudes are adopted by the preschool and primary education students toward special educational needs of students and their inclusion?
- What attitudes do preschool and primary education students express toward students with physical, academic, behavioral and social difficulties?

The study focused on the assessment of the variables, which are related to the pedagogy students' attitudes, according to previous surveys (Sharma et al., 2009; Forlin et al., 2010).

**Statistical analysis**

For the data to be analyzed, it was used the Statistical Package of Social Analysis (SPSS 20). Particularly, Factor analysis, Cronbach’s a reliability analysis, Pearson correlation analysis, Independent Samples T-test and Univariate ANOVA were used to control eventual differences among variables.

**RESULTS**

The scale for the Greek students’ participants consisted of sixteen (16) themes and the factorial analysis performed for the Greek version of the scale, using the principal component analysis with varimax rotation, confirmed the four factors of the original scale: KMO = 0.897, Bartlett’s test – $x^2 = 1068.340$, df = 120, $p = 0.000$, $p < 0.001$, where they explain the 65.204% of the total variance. The four factors contain the same number of items, as the original scale. Differences referred to the factor analysis were observed in another study (Kuyini and Desai, 2007), where the results showed five factors: (language difficulties, social difficulties, behavior problems, students with low learning abilities, intellectual difficulties). In a similar study, Cronbach’s $a$ was found equal to $a = 0.89$ (Sharma et al., 2008) and in another study the instrument showed a good reliability $a = 0.79$ (Stella et al., 2007). In a study, where preschool students participated, the total Cronbach’s $a$ presented a good grade of reliability, $a = 0.867$ (Seçer, 2010).

The 1st factor – physical disabilities ($a = 0.846$), contained four (4) items and explains the $21.814\%$ of the total variance, the 2nd factor – academic difficulties ($a = 0.765$), contained four (4) items and explains the $20.251\%$ of the variance, the 3rd factor – behavior problems ($a = 0.863$) consisted of four items and explains the $12.665\%$ of the variance and the 4th factor – social difficulties ($a = 0.725$) explains the $10.747\%$ of the variance.

In a relevant study (Brandes et al., 2012), Cronbach’s $a$ was formed as follows: $a = 0.94$ for physical disabilities, $a = 0.87$ for academic difficulties, $a = 0.93$ for behavioral difficulties, $a = 0.83$ for social difficulties and $a = 0.95$ for
total Cronbach’s a. Factor analysis of a similar study (Sharma et al., 2009) showed four factors: physical disabilities (a = 0.40), academic disabilities (a = 0.45), behavior problems (a = 0.60) and a = 0.74 for the total Cronbach’s a.

Pearson’s correlation for four factors was characterized as a moderate correlation. The degree of correlation indicated between the factors is presented as a low, moderate and strong correlation. The correlation showed a positive direction and it was a statistical significant correlation, p = 0.01. The measures of mean and standard deviation where calculated as follows: for physical disabilities, mean equal to 3.41 and standard deviation equal to 1.27, for academic difficulties, mean equal to 3.46 and standard deviation equal to 0.76, for behavior problems, mean equal to 4.83 and standard deviation equal to 1.60, and for social difficulties, mean is equal to 4.76 and standard deviation equal to 0.83.

Gender emerged as a differentiated variable for two factors: behavior problems and social difficulties. Men attitudes (M = 4.38, SD = 1.17) were different from women attitudes (M = 4.89, SD = 1.63) for behavior problems factor (t = 2.305, df = 48.538, p = .026, p < 0.05). Also, men attitudes (M = 4.24, SD = 0.79) differed from women attitudes (M = 4.83, SD = 0.80) for social difficulties (t = 4.903, df = 327, p = .000, p < 0.001).

Regarding university type, there were statistically significant differences between preschool students (M = 3.92, SD = 1.23) and primary education students (M = 2.87, SD = 1.08) based on physical disabilities (t = 8.462, df = 340.552, p = .000, p < 0.001). Also, there were statistically significant differences between preschool university students (M = 5.54, SD = 1.34) and primary university students (M = 4.07, SD = 1.51) in terms of behavior problems (t = 9.512, df = 339, p = .000, p < 0.001). Preschool students’ attitudes (M = 5.02, SD = 0.79) were significantly different from primary student’s attitudes (M = 4.47, SD = 0.78) for social difficulties (t = 6.397, df = 328, p = .000, p < 0.001).

Age influenced students’ attitudes for physical disabilities (F 2, 300 = 4.498, p = .012, p < .05). LSD test showed statistical differences for students aged 22 years old (M = 3.28, SD = 1.26) and students age range from 28 to 38 years old (M = 4.01, SD = 0.98). Furthermore, there were statistical differences for behavior problems (F 2, 299 = 3.399, p = .035, p < .05). Analysis according to LSD the differences emerged between students of 22 years old (M = 4.74, SD = 1.56) and students of 28-38 years old (M = 5.53, SD = 1.31).

Having or not having a friend with disabilities differentiates students’ attitudes in terms physical disabilities and behavior problems. Students who have a friend with special needs (M = 3.66, SD = 1.31) adopted different attitudes as compared with who have no friend with special needs (M = 3.30, SD = 1.25) for physical disabilities (t = 2.326, df = 339, p = .021, p < .05). In the same way, students’ attitudes with a special needs friend (M = 5.2, SD = 1.36) were not similar to those who have no disabled friend (M = 4.69, SD = 1.66) for behavior problems (t = 2.741, df = 194.430, p = .007, p< .001).

In addition, students who attended special education seminars (M = 3.91, SD = 1.21) expressed different attitudes as compared with those who have not attended any seminar (M = 3.24, SD = 1.26) for physical disabilities (t = 3.474, df = 340, p = .000, p < .001). Conjointly, the attitudes of students who have participated in special education seminars (M = 5.3, SD = 1.40) were different to those attitudes expressed by students who have not participated in special education seminars (M = 4.67, SD = 1.63) for behavior problems (t = 3.267, df = 331, p = .001, p< .01).

Furthermore, the University course about disability and special needs functions as a differentiated variable for physical disabilities and behavior problems factors. Students’ attitudes who have attend a relevant course (M. O. = 3.33, T. A. = 1.27) present different attitudes from those who have not attend a special needs course (M = 3.75, SD = 1.27) for physical disabilities (t = 2.286, df = 336, p = .023, p< .05). Secondly, students who have participated in a disability course (M. O. = 4.69, T. A. = 1.60) and students who have not attend a similar course (M = 5.45, SD = 1.39) differed for behavior problems (t = 3.360, df = 332, p = .001, p< .01).

Comparatively, for previous experience with disabled people or special needs students, it was observed that students who had a teaching or working experience with persons or students with special needs (M = 3.99, SD = 1.24) were different from those attitudes expressed by students who had no previous experience (M = 3.31, SD = 1.26) in terms physical disabilities (t = 3.302, df = 336, p = .001, p < .01). Attitudes differed also among those who had previous experience (M = 5.76, SD = 1.42) and those who have not any previous experience (M = 4.68, SD = 1.50) for behavior problems (t = 4.146, df = 333, p = .000, p < .001).

Students with previous teaching or working experience with persons or students with special needs (M. O. = 5.11, T. A. = .91) were adopting more favorable attitudes than those students who have no relevant experience (M = 4.69, SD = 0.81) for social difficulties (t = 3.032, df = 322, p = .003, p < .01).

Students who dispose knowledge of the purpose and the functioning of Greek Public Diagnostic, Differential Diagnosis and Support Center (M. O. = 5.07, T. A. = 1.60) presented higher scores than those who have no relevant knowledge (M = 4.35, SD = 1.47) for behavior problems (t = 4.043, df = 337, p = .000, p < .001). In addition to this, students who have knowledge of the purpose and the functioning of Greek Public Diagnostic, Differential Diagnosis and Support Center (M = 4.86, SD = 0.84) developed different attitudes as compared with students who have no relevant knowledge (M = 4.56, SD = 0.78) for social difficulties (t = 3.104, df = 362, p = .002, p < .01).
There were no statistically significant differences in students’ attitudes according to having a family member with disability, organization where the special education seminars were conducted (University, other organizations, Greek Ministry of Education, Research and Religious Affairs), knowledge of Special Education Act, Subject of experience of persons with special needs (ractical training, voluntary occupation, creative occupation – full time employment, private lessons – parallel support coeducation) and occupation during the process of the survey.

**DISCUSSION**

The students of the present research seem to develop moderate attitudes toward students with physical disabilities and academic difficulties within the general class as compared with students who have behavioral problems and social difficulties for whom they tend to accept and advocate for teaching them in the context of inclusive education, indicating that they are capable of effectively managing social relationships (Romi and Leyser, 2006). According to another study (Wilczenski, 1991), students of pedagogy universities support the idea of integration and are willing to teach in the general education class, students with difficulties that do not hinder their own learning process or the learning process of other students. Based on a later study (Wilczenski, 1992), students seemed more willing to integrate into classroom education, pupils with deficits in social behavior as compared with students with physical disabilities. Thus they expressed a higher degree of agreement to accept students with physical disabilities than students experiencing learning difficulties and hence agreed with the adjustment of curriculum, and expressed a more favorable attitude towards students with academic difficulties, than toward students who were experiencing behavioral problems.

Women expressed more favorable attitudes than men toward the inclusion of students with behavior problems and social difficulties. This result is in agreement with previous studies (Werner and Davidson, 2004; Romi and Leyser, 2006; Stella et al., 2007). It seems that women express a higher level of self-efficacy during teaching process and possess the ability to manage effectively special educational needs of students in the general classroom (Romi and Leyser, 2006).

Additionally, concerning the University studies, preschool University students expressed more favorable attitudes toward the inclusion of students with physical disabilities, behavior problems and social difficulties as compared with primary education students. In general, preschool education students showed positive attitudes toward inclusion (Rakap et al., 2017) but other study showed no difference between preschool education students and primary education students (Forlin et al., 2010).

Younger students adopt less favorable attitudes toward students with physical disabilities and behavior problems. It seems that older students, kept under the age of youth period, acquire over age, an increasingly tolerant attitude as a result of the emphasis given to eliminating stereotypes (Goreczny et al., 2011).

Having a friend with disabilities affects university students’ attitudes in a positive way, regarding the inclusion of students with physical disabilities and behavior problems. This result has been observed in previous studies as well (Gething, 1993; Goreczny et al., 2011). It was pointed out that the environment where the contact takes place induces an important influence, as it is about a human context where there are developed and assessed social roles (Lyons, 1991).

Special education seminars affected positively university students’ attitudes toward the inclusion of pupils with physical disabilities and behavioral problems. It seems that these programs contribute to the elimination of prejudices toward the persons with disabilities (Goreczny et al., 2011) and commitment that derives from participating in these seminars reinforce feelings of trust in order to acquire knowledge related to the appropriate behavior expression (Stella et al., 2007).

Students who have attended a university course about disability and special needs express less favorable attitudes toward the inclusion of students with physical disabilities and behavior problems than those who have not attend similar courses, a result that shows the possible incomplete planning of these courses (Tait and Purdie, 2000). Besides, in case this course includes theoretical knowledge only and is not focused on training in classroom management (development of a psycho-emotional teacher-student relationship), it seems that it affects students in a discouraging way (Garwood and Van Loan, 2018).

Teaching or working experience with special needs persons or students differentiate students’ attitudes for physical disabilities, behavior problems and social difficulties. This result is in agreement with previous research (Tervo et al., 2002). In a relevant study, experience did not present the same influence, as it seems that contact with a student with disabilities or inclusive practices did not affect positively students’ attitudes as it seems that type of contact, quality of contact and frequency affect, in a positive way, students’ attitudes (Rakap et al., 2017).

Knowledge of the purpose and the functioning of Greek Public Diagnostic, Differential Diagnosis and Support Center contributes to the positive attitude formation for the inclusion of students with behavior problems and social difficulties. Future teachers who can receive guidance and support by this public service may experience low levels of concerns for the effective implementation of appropriate inclusive teaching method (individualized learning, cooperative learning, peer teaching) (Sharma et al., 2008).

Additionally, a family member with special needs did not
show a variance in students’ attitudes (Cansiz and Cansiz, 2018). The organization where the special education seminars were conducted did not reveal any influence, as the subgroups are represented with a low frequency. The object of previous experience seemed that it did not offer adequate knowledge and the appropriate skills to form students’ attitudes. The employment of the students during the current phase of the research proved to be a typical occupation, where students choose to work in order to ensure an income. Knowledge of legal framework of special education did not differentiate University students’ attitudes and it was observed as a neutral variable. It seems that students are not sufficiently prepared during their academic studies, that this kind of awareness helps them to perceive and assume their responsibilities to teach students with disabilities, and enrich their perceptions about the available sources regarding their work (Sharma et al., 2009).

In the present study, no differences were observed related to universities students’ attitudes toward the inclusion of pupils with academic difficulties. It is assumed that the low level of belief in their abilities also influences their confidence to apply an appropriate teaching method that responds to the academic difficulties of students with problems in school performance and thus forms an indifferent attitude toward the students’ population who confront these difficulties. It seems that students are worried about their own inadequacy to meet the needs of disabled students and whether the school they are going to occupy will be fully equipped to provide the necessary equipment for them (Stella et al., 2007).

Conclusions

Research data are useful to make sure that those responsible for organizing training programs understand to what extent future teachers maintain positive attitudes towards inclusive education (Alnahdi et al., 2019). Also, it is very important for future teachers to approach pupils with special needs as a human personality and to engage in a relationship of interest and care, since otherwise the unpopular behaviors expressed by a student are interpreted to an excessive extent (Garwood and Van Loan, 2018).

Furthermore, all data were collected on the basis of a self-reporting scale and, as it is usually the case with surveys based on psychometric self-referencing tools. There is likelihood that the answers are expressed in a random and less cautious manner. Additionally, it is generally accepted that the educational community is largely represented by the female gender, as women’s professional preferences are highly directed towards the science of education.

Further oriented Survey research should also focus on the motivation of male teachers’ self-efficacy as they hold the belief that they are unable to exercise the necessary control and management of pupils who express aggressive behaviors or have some form of disability (Stella et al., 2007). The fact that teachers and students in pedagogical departments experience low feelings of self-confidence for effective teaching to pupils with special educational needs is a subject to be investigated (Gokdere, 2012), as both attitudes and self-efficacy explain a large percentage of the willingness to teach in inclusive education classes (Gilor and Katz, 2018).

REFERENCES


