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ATTITUDES OF GREEK GENERAL EDUCATION TEACHERS CONCERNING INCLUSION POLICY

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Abstract:
The school community consists of an environment where every child has the right to participate and share the good of the educational process. In that thinking, students dispose of different needs that have to be satisfied in a context where the values of respect and equality emerge as basic foundations of the instructive environment. Consequently, inclusion practices appear to be as the prerequisite of education for all in the general school surroundings. Teachers who are responsible for planning and applying the educational process play an important role in the implementation of inclusive practices. Especially, these educational methods are influenced by educators' attitudes and determine the extent and the level of inclusion strategies. In the present study, participated 154 teachers of primary and secondary general education in Greece. The participants completed the Multidimensional Attitudes towards Inclusive Education Scale (MATIES) (Mahat, 2008). In general, according to the results, teachers expressed positive attitudes toward inclusion. Correlations were calculated in relation to other variables that affect teachers' attitudes according to the research. The results emerged as directions of providing support services in the school community and organizing suitable education programs for in-service teachers in the school and academic domain.

Keywords: inclusion, special educational needs, teachers, general school

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1. Introduction

During the last three decades, there has been a remarkable action oriented towards inclusive education, globally (Hassanein, Alshaboul, & Ibrahim, 2021). Many countries around the world are committed to providing education to all children without discrimination by signing conventions on the rights of the child and the rights of persons with disabilities (Hassanein, Adawi, & Johnson, 2021). Besides, the participation of all individuals, regardless of their strengths or weaknesses, is an inalienable right of human existence (Polyzopoulou & Tsakiridou, 2022). The term "inclusive education" is used to describe the more specific integration of students and young people with disabilities and/or special educational needs, a term also known as a provision of additional needs support, special educational needs and disabilities, learning difficulties, or special needs within the general education classroom (Ewing, Monsen, & Kielblock, 2018). The effect of inclusion classes in general education schools does not work positively for teachers (Gaines & Barnes, 2017).

Human behavior is consistent with many of our attitudes and certain attitudes predict certain behaviors (Polyzopoulou et al. 2014). One way to better understand the barriers that inhibit the implementation of inclusive education is to explore the perceptions of people who contribute to any educational policy change, which are the teachers (Hassanein, Adawi, & Johnson, 2021). The role of teachers in the issue of inclusive education has been studied in many research, with the application of different methodologies, but this specific field requires additional investigation due to the nature of the relationship between these two fields (Noreen, Intizar, Gulzar, 2019). The same research states that this correlation cannot be studied in its entirety, unless the interaction with different factors that have been shown to be related and influence the differentiation of attitudes is taken into account.

2. Literature review

Teachers are responsible for organizing and improving the learning process, recognizing the needs of students and implementing a teaching process that respects the personality of each student, according to their requirements and skills (Polyzopoulou et al., 2014). Teachers' attitudes towards students with special educational needs consist of a determinant of effective teaching and for this reason, the need to understand the complexity of teachers' attitudes in the field of health and education policy becomes apparent (Levins, Bornholt, & Lennon, 2005).

Teachers' attitudes towards inclusive education vary widely (Ewing, Monsen & Kielblock, 2018). For that reason, it is of great importance to specify variables that affect teachers' attitudes (Alasim & Paul, 2019). Previous personal contact with a person with special educational needs was a predictor of highly positive attitudes, while previous teaching experience in classes with students presenting special educational needs and typical needs was a predictor of less positive behavioral intentions (Dias & Cadime, 2016).

Previous research examined the variable of gender, expertise, previous contact with a student with a disability in the classroom, previous positive experience in teaching a student with special educational needs and providing support for the implementation of inclusion practices (collaboration with colleagues, school directors, parents of students, provision of teaching materials) where they were emerged as important predictors of teacher attitudes toward inclusive education (Ahmmed, Sharma, & Deppeler, 2012). In another study, in terms of age, groups of younger and older teachers expressed positive attitudes, gender was not a differentiating variable of attitudes, teachers with less than 5 years of service and more than 25 years developed positive attitudes, previous experience and knowing a person with a disability positively affected attitudes, and for these people, no difference in attitudes is observed regarding the existence or not of a person with a disability in the family environment (Parasuram, 2006). Another study did not observe a significant difference in gender responses to inclusive education (Alasim & Paul, 2019).

3. Material and Methods

3.1 Sample

In the current survey, participated 154 teachers, of which 50 are men and 102 are women. Of these, 65 teachers work in primary education and 84 teachers teach in secondary education. Of the teachers who teach in secondary education, 35 people work in a junior high school, 14 people in a general high school and 37 people in a vocational high school. Regarding the subject of teaching, 66 teachers teach educational sciences, 42 people teach theoretical sciences and 42 people teach positive sciences. In terms of years of teaching experience in public school, 58 people have spent 1-10 years of service, 11-20 years have spent 40 people, 21-30 years have taught 49 people, and more than 31 years have taught 5 people. In the private sector, 106 teachers have taught from 1 to 10 years, 9 people from 11 to 20 years, and 11 people from 21 to 30 years. Furthermore, 12 people stated that there is a person with special needs in their family environment, while 140 stated that there is no disabled person in the family environment. Also, 73 of the participants stated that there is a person with a disability in their friendly environment, while 79 teachers expressed a negative statement. Among most people in the sample, 111 people stated that they have attended special education seminars while 40 have not (Table 1). The seminars were conducted by public institutions for 85 people and by private institutions for 23 people. Regarding the subject of the seminars, 57 people attended a seminar on special education and differentiated teaching, 7 people participated in a seminar on intercultural education, 36 teachers specialized in learning difficulties and 7 people participated in a seminar on teaching approaches. Out of all the people in the sample, 109 teachers have previous teaching experience with students with special needs and 40 people have no corresponding experience. The type of disability / special educational needs of students taught by teachers is described as follows: 55 teachers taught students with cognitive difficulties, 13 people taught students with emotional difficulties, 21 teachers provided instruction for students with motor difficulties, 31 teachers taught students with disabilities behavior and 15 teachers taught students with social difficulties. Furthermore,

85 teachers, have knowledge of the legal framework of special education, while 66 do not have the corresponding knowledge. In addition, 142 people have knowledge of the purpose and operation of Greek Public Differential Diagnosis, Counseling and Support Center, while 10 people stated that they lack knowledge of Greek Public Differential Diagnosis, Counseling and Support Center. The age of 5 people in the sample ranges from 21-30 years, 41 people belong to the age group of 31 to 40 years, 51 people have an age of 41-50 years and 55 people have an age of more than 51 years. Also, 75 people hold a master's degree, while 77 people only hold a bachelor's degree (Table 2).

Table 1: Demographic characteristics of the participants

Demographic Variables	**Participants (N = 154)**	**Total (f)**	**Relative frequencies (%)**
Gender	Men	50	32,5
	Women	102	66,2
Teaching level	Primary	65	42,2
	Secondary	84	54,5
School in Secondary education	Junior High School	35	22,7
	General High School	14	9,1
	Vocational High School	37	24,0
Teaching subjects	Pedagogy sciences	66	42,9
	Human / Theoretical sciences	42	27,3
	Physical sciences	42	27,3
Years of teaching in public education	1-10 years	58	37,7
	11-20 years	40	26,0
	21-30 years	49	31,8
	>31 years	5	3,2
Years of teaching in private education	1-10 years	106	68,8
	11-20 years	9	5,8
	21-30 years	11	7,1
Having a family member with special needs	Yes	12	7,8
	No	140	90,9
Having a friend with special needs	Yes	73	47,4
	No	79	51,3
Attending special education seminars	Yes	111	72,1
	No	40	26,0

Missing values: 2 for gender (1,3%), 5 for education level (3,2%), 68 for school in secondary education (44,2%), 4 for teaching subjects (2,6%), 2 for years of teaching in public education (1,3%), 28 for years of teaching in private education (18,2%), 2 for having a family member with special needs (1,3%), 2 for having a friend with special needs (1,3%), 3 for attending special education seminars (1,9%)

Table 2: Demographic characteristics of the participants

Demographic variables	**Participants (N = 154)**	**Total (f)**	**Relative frequencies (%)**
Organization where the special education seminars were conducted	Public	85	55,2
	Private	23	14,9
Subject of special educational needs seminars	Special education and differentiated instruction	57	37,0
	Cross-cultural education	7	4,50
	Learning difficulties	36	23,4
	Teaching approaches	7	4,50
Having teaching experience with special needs students	Yes	109	70,8
	No	40	26,0
Type of special need / disability of students they have taught	Academic difficulties	55	35,7
	Emotional difficulties	13	8,4
	Physical disabilities	21	13,6
	Behavior problems	31	20,1
	Social difficulties	15	9,7
Knowledge of special education Law	Yes	85	55,2
	No	66	42,9
Knowledge of the operation and purpose of Greek Public Differential Diagnosis, Counseling and Support Center	Yes	142	92,2
	No	10	6,5
Age	21-30	5	3,2
	31-40	41	26,6
	41-50	51	33,1
	>51	55	35,7
Level of education	University degree	77	50,0
	Master' s degree	75	48,7

Missing values: 46 for organization where the special education seminars were conducted (29,9%), 107 subjects of special educational needs seminars (69,5%), 5 for having teaching experience with special needs students (3,2%), 19 for type of special need / disability of students they have taught (12,3%), 3 for Knowledge of special education Law (1,9%), 2 for knowledge of the operation and purpose of Greek Public Differential Diagnosis, Counseling and Support Center (1,3%), 2 for age (1,3%), 2 level of education (1,3%).

3.2 Instrument

In order for the research data to be collected, it was used a questionnaire, which consists of 2 sections.

The first section includes the Multidimensional Attitudes towards Inclusive Education Scale (MATIES) (Mahat, 2008). This scale approaches attitude as a multidimensional concept, consisting of three dimensions, cognitive, emotional and behavioral, and inclusive education is considered to include inclusion at the physical and curriculum level. In particular, inclusive education is defined as "*the education of all students of an age suitable for inclusion in general education classes, regardless of the degree or severity of the disability. It includes students who have access to the general education school*

program, with the necessary support and a receptive social environment". The psychometric tool consists of 18 propositions, which are grouped into three factors and represent the three dimensions of attitudes: cognitive, affective and behavioral. According to the creator of the scale, each factor consists of six questions. Each statement of the scale is scored on a 6/point Likert scale, where 1 = Strongly Disagree and 6 = Strongly Agree. Three of the questions belonging to the cognitive factor and all the questions belonging to the behavioral factor include a backward counting, so that a higher score indicates a more positive attitude towards inclusive education.

The initial form of the questionnaire included over one hundred items based on the background of previous research on inclusive education. Subsequently, some of them were rejected, due to ambiguous content and similarity to other proposals, and 41 proposals were selected. After a review by experts in special education and inclusive education and specified teachers, the questionnaire included 36 items. After the questionnaire was completed by a sample of teachers, on a pilot level, exploratory factor analysis was performed and the items ended up to 28 in number. The confirmatory factor analysis led to the emergence of three factors and items with a loading of at least 0.50 on each factor were retained. The final form of the questionnaire includes six items in each factor, with a reliability range from 0.77 to 1.30 and a loading degree greater than 0.50. Specifically, the factors are: 1). Cognitive dimension (e.g. I believe that every student with a disability can be taught within a general education school curriculum if the curriculum is adapted to meet the individual needs of students) (Cronbach's' a = 0.77), 2) Affective dimension (e.g. I experience unpleasant feelings when students with disabilities are included in the general education class with students without disabilities) (Cronbach's' a = 0.78), 3) Behavioral dimension (e.g. I am willing to modify the classroom environment to include students with disabilities in general class) (Cronbach's' a = 0.91) (Mahat, 2008). This scale has also been used in previous research (Hassanein, Alshaboul, & Ibrahim, 2021), with the participation of pre-school and primary education teachers (Štemberger & Kiswarday, 2018), pre-school, primary and secondary education (Gaines & Barnes, 2017; Butakor, Ampadu, & Suleiman, 2020). The selection of this scale was held because it is readily comprehensive by those who participate in the research (Weng, Walker & Rosenblatt, 2015).

The second section includes questions related to the demographic data of the sample (teaching school, teaching class, subject of teaching, years of experience in private and public education, existence of a person with a disability in the family or friendly environment, attendance at seminars on the subject of special education (special education and differentiated teaching, intercultural education, learning difficulties, teaching approaches), previous teaching experience with children with special educational needs, type of disability and/or special educational needs of the students teachers taught (motor difficulties, behavioral problems, cognitive difficulties , emotional difficulties, social difficulties), knowledge of the legal framework of special education, knowledge of the purpose and operation of Greek Public Differential Diagnosis, Counseling and Support Center, gender, age, educational level), which were formed based on previous research (Vilchinsky, & Werner, 2007; Findler, Forlin, et al, 2009;

Tsakiridou & Polyzopoulou, 2014; Gaines & Barnes, 2017; Tsakiridou & Polyzopoulou, 2019a).

3.3 Statistical analysis

The Statistical Package of Social Analysis (SPSS 29) was used for the data analysis. Especially, it was used Factor analysis, Cronbach's a reliability analysis, Independent Samples T-test and Univariate ANOVA, to determine the predicted results.

4. Results

4.1 Factor analysis of the questionnaire

The new questionnaire consists of 18 items and the factor analysis carried out for the Greek version of the questionnaire, using the orthogonal axis rotation, confirmed the 3 factors of the original questionnaire: KMO = 0.863, degree of sphericity (Bartlett's test) = 1213.816, $p < 0.001$ that explains 72.56% of the total variance of the sample. Specifically, the first axis explains the 27.94% of the total variance, the second axis explains 24.85% of the total variance, and the third axis explains the 19.78% of the total variance. In another study (Perrin, Jury, & Desombre, 2021), the Cronbach a was found to be equal to 0.91.

The first factor consists of six items (a = 0.90) and represents the cognitive dimension. The second factor consists of six items (a = 0.81) and represents the emotional dimension and the third factor consists of six items (a = 0.85) and represents the behavioral dimension. In a similar research, the reliability indicators emerged as followed (Štemberger & Kiswarday, 2018): cognitive dimension a = .79, emotional dimension a = 0.89, behavioral dimension a = 0.91 (Table 3).

The correlation between the subscales was also calculated and it was found that each subscale consists of an independent unit, a result that is consistent with the original research (Mahat, 2008).

Also, there were calculated the overall mean (M = 4.33) and standard deviation of the responses of the sample subjects (S. D. = 0.67). The total means for the factors of the questionnaire were formed as follows: for the first factor representing the cognitive dimension, the average of the responses is 4.46, with a standard deviation of 0.83, for the second factor representing the emotional dimension, the average is 3.66 and the standard deviation of 0.88, for the third factor, which represents the behavioral dimension, the mean of the responses is 4.84 and the standard deviation is 0.74. The behavioral subscale presents the highest mean, which is indicated as the most positive attitude expressed by the teachers of the sample, although this dimension is a tendency to behave in a willing manner and this tendency to express a behavior is probably opposite to actual behavior expressed in the classroom (Gaines & Barnes, 2017). In another study (Perrin, Jury, & Desombre, 2021) the overall mean was found to be 4.41 (SD = 0.81) (Table 3).

Table 3: Factor analysis for the Greek version of the MATIES (Mahat, 2008)

Items	Factors				
	F1	F2	F3	Mean	SD
I believe that an inclusive school is one that permits the academic progression of all students regardless of their ability.	0,827			4.88	1,15
I believe that students with a disability should be taught in special education schools	0,817			3.73	1,40
I believe that inclusion facilitates socially appropriate behavior amongst all students	0,764			5,03	0,77
I believe that any student can learn in the regular curriculum of the school if the curriculum is adapted to meet their individual needs	0,721			4,68	1,12
I believe that students with a disability should be segregated because it is too expensive to modify the physical environment of the school	0,719			4,28	1,28
I believe that students with a disability should be in special education schools so that they do not experience rejection in the regular school.	0,509			4,18	1,22
I get frustrated when I have difficulty communicating with students with a disability.		0,798		3,36	1,45
I get upset when students with a disability cannot keep up with the day-to-day curriculum in my classroom.		0,769		2,72	1,30
I get irritated when I am unable to understand students with disabilities.		0,762		3,27	1,38
I am uncomfortable including students with a disability in a regular classroom with other students without a disability.		0,637		4,62	1,33
I am disconcerted that students with a disability are included in the regular classroom regardless of the severity of the disability.		0,607		3,36	1,60
I get frustrated when I have to adapt the curriculum to meet the individual needs of all students.		0,537		4,63	1,12
I am willing to encourage students with a disability to participate in all social activities in the regular classroom.			0,775	5,27	0,73
I am willing to adapt the curriculum to meet the individual needs of all students regardless of their ability			0,738	5,00	0,89
I am willing to physically include students with a severe disability in the regular classroom with the necessary support			0,654	4,49	1,25
I am willing to modify the physical environment to include students with a disability in the regular classroom.			0,621	4,90	0,97
I am willing to adapt my communication techniques to ensure that all students with an emotional and behavioral disorder can be successfully included in the regular classroom.			0,612	4,84	1,00
I am willing to adapt the assessment of individual students in order for inclusive education to take place.			0,589	4,57	1,00

Table 4: Factors' mean, standard deviation and Cronbach's a for the Greek version of the MATIES (Mahat, 2008)

Factors	N = 154		
	M	S. D.	Cronbach's a
Cognitive dimension	4.46	0.83	0.90
Emotional dimension	3.66	0.88	0.81
Behavior dimension	4.84	0.74	0.85
Total	4.33	0.67	0.86

4.2 The correlation between demographics and Greek general education teachers' attitudes toward children with disabilities and/or special educational needs and their inclusion

Regarding the existence or not of a person with special needs in the family environment, statistically significant differences were observed between participants who had a relative with special needs and those who did not have a relative with a disability. Specifically, the attitudes of people with a relative with special needs (M. = 5.04, S.D. = 0.53) differ from the attitudes of people who do not have a person with special needs in the family environment (M. = 4.42, S.D. = 0.84) in the cognitive factor ($t = 2.258$, $df = 150$, $p<0.05$). Also, people with a relative disability (M. = 5.40, S.D. = 0.52) develop different attitudes than people who do not have a relative with special needs (M. = 4.80, S.D. = 0.75) ($t = 2.686$, $df = 150$, $p<0.05$) (Table 5 & Table 6).

Regarding the attendance of special education seminars, differences emerged between teachers who participated in seminars and those who did not. Specifically, the attitudes of teachers who have attended a special education seminar (M. = 3.76, S.D. = 0.86) differ from the attitudes of teachers who have not attended a seminar (M. = 3.32, S.D. = 0.83) in the emotional factor ($t = 2.799$, $df = 149$, $p < 0.05$). Furthermore, the attitudes of teachers who have attended a special education seminar (M. = 4.91, S.D. = 0.75) differ from the attitudes of teachers who have not attended a seminar (M. = 4.64, S.D. = 0.73) in the behavioral factor ($t = 2.017$, $df = 149$, $p<0.05$) (Table 5 & Table 6).

Regarding the subject of seminars in special education, statistically significant differences were observed in the cognitive factor ($F\ 3, 103 = 3.748$, $p < 0.05$). More specifically, based on the Tukey HSD test, which was used in previous research (Gaines & Barnes, 2017), individual differences emerged between the teachers who attended a seminar on "special education and differentiated instruction" (M. = 4.72, S.D. = 0.77) and to those who attended a seminar on "learning difficulties" (M. = 4.18, S.D. = 0.87) in the cognitive factor (Table 7).

Differences also emerged regarding the acquisition of teaching experience with students with special needs across all factors. Specifically, teachers with teaching experience with students with special needs (M. = 4.55, S.D. = 0.85) develop different opinions than teachers who do not have teaching experience with students with special needs (M. = 4.24, S.D. = 0.75) in the cognitive factor ($t = 2.017$, $df = 147$, $p<0.05$). Teachers with teaching experience (M. = 3.80, S.D. = 0.85) and teachers without teaching experience (M. = 3.25, S.D. = 0.81) express different attitudes in the emotional factor ($t = 3.563$, $df = 147$, $p<0.001$). Also, teachers with teaching experience (M. = 4.98, S.D. = 0.72) and those

without teaching experience (M. = 4.47, S.D. = 0.73) develop different perceptions of the behavioral factor (t = 3.740, df = 147, p<0.001) (Table 5 & Table 6).

Regarding the knowledge of the special education legal framework, differences were observed in all factors. Specifically, the perceptions of teachers who have knowledge of the special education policy framework (M. = 4.63, S.D. = 0.81) differ from the attitudes of teachers who do not have knowledge of the legal framework of special education (M. = 4.24, S.D. = 0.82) in the cognitive factor (t = 2.944, df = 149, p < 0.01). In addition, the attitudes of teachers who have knowledge of the legal framework of special education (M. = 3.89, S.D. = 0.85) differ from the perceptions of teachers who do not have knowledge of the legal framework of special education (M. = 3.35, S.D. = 0.85) in the emotional factor (t = 3.915, df = 149, p < 0.001). Furthermore, the attitudes of teachers who have knowledge of the legal framework of special education (M. = 4.99, S.D. = 0.72) differ from the perceptions of teachers who do not have knowledge of the legal framework of special education (M. = 4.65, S.D. = 0.75) in the emotional factor (t = 2.846, df = 149, p < 0.01) (Table 5 & Table 6).

Regarding the knowledge of the operation and purpose of Greek Public Differential Diagnosis, Counseling and Support Center, differences were observed in one of the three factors. Specifically, the attitudes of teachers who have knowledge of the operation and purpose of the specific center (M. = 4.87, S.D. = 0.74) differ from the attitudes of teachers who do not have knowledge of the operation and purpose of that organization (M = 4.38, S.D. = 0.77) in the behavioral factor (t = 2.022, df = 150, p < 0.05) (Table 6).

In respect of teaching level, statistically significant differences were observed in all factors. In particular, the attitudes of teachers who teach in primary education (M. = 4.66, S.D. = 0.72) differ from the attitudes of teachers who teach in secondary education (M. = 4.30, S.D. = 0.87) in the cognitive factor (t = 2.696, df = 147, p < 0.01). Also, the attitudes of teachers who teach in primary education (M. = 3.88, S.D. = 0.88) differ from the attitudes of teachers who teach in secondary education (M. = 3.52, S.D. = 0.84) in the emotional factor (t = 2.591, df = 147, p < 0.05). The attitudes of teachers who teach in primary education (M. = 5.04, S.D. = 0.70) differ from the attitudes of teachers who teach in secondary education (M. = 4.69, S.D. = 0.76) in the behavioral factor (t = 2.875, df = 147, p < 0.01) (Table 5 & Table 6).

With reference to the teaching school in secondary education (junior high school, general high school, vocational lyceum) differences were observed in two of the three factors: in the first factor – cognitive dimension (F 2, 83 = 3.436, p < 0.05) and in the third factor – behavioral dimension (F 2, 83 = 4.154, p < 0.05). The post-testing of the results, carried out with the Tukey HSD test, as in previous research (Gaines & Barnes, 2017), resulted in individual differences between the general high school (M. = 4.79, S.D. = 0.70) and in the vocational high school (M. = 4.09, S.D. = 0.82) for the cognitive factor. Also, individual differences emerged between the general high school (M. = 5.09, S.D. = 0.52) and the vocational high school (M. = 4.47, S.D. = 0.70) for the behavioral factor (Table 7). About the teaching subject, statistically significant differences were observed in all three factors: in the cognitive factor (F 2, 147 = 6.798, p < 0.01), in the emotional factor (F 2, 147

= 5.551, p < 0.01) and in the behavioral (F 3, 387 = 5.687, p = 0.001, p<0.01). Based on the Tukey HSD test, as in previous research (Gaines & Barnes, 2017), statistically significant differences emerged between the "pedagogy sciences" (M = 4.70, S.D. = 0.73) and "physical sciences" (M.= 4.12, S.D. = 0.86) in the cognitive factor, in the "pedagogy sciences" (M. = 3.92, S.D. = 0.86) and "physical sciences" (M.= 3.39, S.D. = 0.83) in the emotional factor and in the "pedagogy sciences" (M. = 5.05, S.D. = 0.67) and "physical sciences" (M. = 4.64, S.D = 0.73) in the behavioral factor (Table 7).

Regarding the years of teaching experience in public education, statistically significant differences were observed in the behavioral factor (F 3, 148 = 3.732, p < 0.05). Specifically, multiple comparisons with the Tukey HSD test, as in previous research (Gaines & Barnes, 2017), showed differences between teachers with 1-10 years of service (M. = 4.97, S.D. = 0.72) and teachers with 21-30 years of service (M. = 4.57, S.D. = 0.82) in the behavioral factor and among teachers with 11-20 years of service (M. = 5.02, S.D. = 0.65) and teachers with 21-30 years of service (M. = 4.57, S.D. = 0.82) on the same factor (Table 7).

As for the years of teaching in private education, statistically significant differences were observed in the emotional factor (F 2, 123 = 3.198, p < 0.05). Specifically, multiple comparisons with the Tukey HSD test, as in previous research (Gaines & Barnes, 2017), showed differences between teachers with 1-10 years of service (M. = 3.73, S.D. = 0.88) and teachers with 21-30 years of service (M. = 2.94, S.D. = 0.77) in the emotional factor (Table 7).

Concerning the age of the teachers in the sample, statistically significant differences were observed for the second and third factors out of the three factors. Statistically significant differences were found in age in relation to the emotional factor (F 3, 148 = 4.177, p < 0.01) and in relation to the behavioral factor (F 3, 148 = 3.453, p < 0.51). Based on the Tukey HSD test, statistically significant differences emerged in the age group 31-40 (M. = 3.99, S.D. = 1.03) and over 51 years old (M. = 3.40, S.D. = 0.72) in the emotional factor and in the age group 31-40 years (M. = 5.09, S.D. = 0.79) and in the age group over 51 years old (M. = 4.62, S.D. = 0, 77) in relation to the behavioral factor (Table 7).

No statistically significant differences were found for gender, person with special needs in the friendly environment, seminar provider, participant's level of education, teaching class in primary and secondary education and the type of disability / special educational needs of the students taught by the teachers.

Table 5: Means and standard deviation for Multidimensional Attitudes toward Inclusive Education Scale (MATIES) (Mahat, 2008), according to t-test

Factors		**Teachers' groups N = 154**	**N**	**M**	**S. D.**
Cognitive dimension	Family member with special needs	Yes	12	5,04	0,53*
		No	140	4,42	0,84*
	Teaching experience with students with special needs	Yes	109	4,55	0,85*
		No	40	4,24	0,75*
	Knowledge of special education Law	Yes	85	4,63	0,81**
		No	66	4,24	0,82**
	Teaching level	Primary education	65	4,66	0,72**
		Secondary education	84	4,30	0,87**
Emotional dimension	Attending special education seminars	Yes	111	3,76	0,86*
		No	40	4,32	0,83*
	Teaching experience with students with special needs	Yes	109	3,80	0,86**
		No	40	3,25	0,81**
	Knowledge of special education Law	Yes	85	3,89	0,85**
		No	66	3,35	0,85**
	Teaching level	Primary education	65	3,88	0,88*
		Secondary education	84	3,52	0,84*

Note: Level of significance: p<0.05*, p<0.01**, p<0.001***

Table 6: Means and standard deviation for Multidimensional Attitudes toward Inclusive Education Scale (MATIES) (Mahat, 2008), according to t-test

Factors		**Teachers groups N = 154**	**N**	**M**	**S. D.**
Behavior dimension	Family member with special needs	Yes	12	5,40	0,52*
		No	140	4,80	0,75*
	Attending special education seminars	Yes	111	4,91	0,75*
		No	40	4,64	0,73*
	Teaching experience with students with special needs	Yes	109	4.98	0,72**
		No	40	4,47	0,73**
	Knowledge of special education Law	Yes	85	4,99	0,72**
		No	66	4,65	0,75**
	Knowledge of the operation and purpose of Greek Public Differential Diagnosis, Counseling and Support Center	Yes	142	4,87	0,74*
		No	10	4,38	0,77*
	Teaching level	Primary education	65	5,04	0,70**
		Secondary education	84	4,69	0,76**

Note: Level of significance: p<0.05*, p<0.01**, p<0.001***

Table 7: Means and standard deviations for statistically significant differences among the factors for the Greek version of the MATIES (Mahat, 2008), according to Tukey HSD test

Factors		**Teachers groups N = 154**	**N**	**M**	**S. D.**
Cognitive dimension	School in Secondary education	General high school	14	4,79	0,69*
		Vocational high school	37	4,09	0,82*
	Teaching subjects	Pedagogy sciences	66	4,69	0,73**
		Physical επιστήμες	42	4,12	0,86**
	Subject of special educational needs seminars	Special education and differentiated instruction	57	4,72	0,77*
		Learning difficulties	36	4,18	0,87*
Emotional dimension	Teaching subjects	Pedagogy sciences	66	3,91	0,86**
		Physical επιστήμες	42	3,39	0,83**
	Years of teaching in private education	1-10 έτη	106	3,73	0,88*
		21-30 έτη	11	2,94	0,77*
	Age	31-40 έτη	41	3,99	1,03**
		>51 έτη	55	3,39	0,72**
Behavior dimension	School in Secondary education	General high school	14	5,09	0,52*
		Vocational high school	37	4,47	0,70*
	Teaching subjects	Pedagogy sciences	66	5,05	0,67*
		Physical sciences	42	4,64	0,73*
	Years of teaching in public education	1-10 years	58	4,97	0,72*
		11-20 years	40	5,02	0,65*
		21-30 years	49	4,57	0,82*
	Age	31-40 years	41	5,09	0,79*
		>51 years	55	4,62	0,77*

Note: Level of significance: p<0.05*, p<0.01**, p<0.001***

5. Discussion

Having a relative with a disability affects teachers' attitudes, which means that teachers develop more positive attitudes towards inclusive education tactics, a finding consistent with previous research (Levins, Bornholt, & Lennon, 2005). Presence and contact with the disabled person in the family are important factors while the degree of frequency of contact and intimacy are variables that play a less important role (Parasuram, 2006).

Attending seminars on special education affected teachers' attitudes, with the result that teachers who participated in training on special education developed better attitudes on an emotional and behavioral level, a result that is in line with another research (Tsakiridou & Polyzopoulou, 2014; Tsakiridou & Polyzopoulou, 2019a).

Regarding the teaching topic of the seminars, teachers who attended the thematic modules on "special education and differentiated teaching" expressed better attitudes than those who were trained in "learning difficulties". It seems that the specialized training teachers received in the domain of special educational needs, which does not focus exclusively on the learning process at a cognitive level, but also includes issues that support this process, acquiring the knowledge, readiness, and competence to accept with willingness in the classroom students with special educational needs. The additional

education and specialization of teachers play an important role and frames teachers' attitudes towards inclusive education (Noreen, Intizar, Gulzar, 2019).

The teaching experience acquired in teaching with students with special educational needs differentiates the attitudes of teachers towards the tactics of inclusive education in all dimensions of attitudes: cognitive, emotional, behavioral. This variable is an important parameter that should be considered (Ahmmed, Sharma, & Deppeler, 2012). In previous research, the same finding was identified (Tsakiridou & Polyzopoulou, 2019a) and specifically it was related to a favorable attitude towards the inclusion of students with physical difficulties and behavioral problems. In corresponding research, with the participation of teachers without teaching experience, it was found that men and women maintain an attitude that does not seem to be favorable to inclusive education (Lao et al., 2022). Accordingly, and in earlier research (Levins, Bornholt, & Lennon, 2005) the teaching and personal experience with students with special educational needs is not a differentiating factor as to the perceptions of teachers towards students with special needs. Teachers may experience job satisfaction, a parameter linked to the consequences of the learning process, in the sense that a satisfied teacher can provide a better quality of education, or a form of education characterized by consistency in the teaching process (De Stasio et al., 2017).

The knowledge of the legal framework of special education affects the attitudes of teachers towards the policy of inclusion and this effect is expressed in all dimensions: cognitive, emotional, behavioral, as in previous research (Tsakiridou & Polyzopoulou, 2014; Tsakiridou & Polyzopoulou, 2019a).

Teachers who are aware of the function and purpose of Greek Public Differential Diagnosis, Counseling and Support Center form more favorable attitudes at the behavioral level. A similar finding was also found in another study (Tsakiridou & Polyzopoulou, 2014), where it is stated that, in case the teacher is given the opportunity to ask for help from an expert employed in these centers regarding a student who exhibits moderate or severe behavioral difficulties in the classroom, then a positive attitude is developed for the inclusion of these students in the general education classroom.

Teachers who teach in primary education develop more positive dispositions compared to teachers who teach in secondary education, a result that appears in all dimensions: cognitive, emotional, behavioral. This finding also emerged in another study (Tsakiridou & Polyzopoulou, 2014). Specifically, primary school teachers in the general education expressed a more favorable attitude towards teaching students with disruptive behavior or social interaction difficulties compared to secondary school teachers (Tsakiridou & Polyzopoulou, 2019a). This difference may be due to the fact that the primary teacher remains as the dominant teacher in the classroom for the whole school year, interacts with the same students in the classroom for a school year and can become capable of being oriented to the personality of each student. In addition to that result, in another study (Gaines & Barnes, 2017), it was found that secondary teachers had more favorable attitudes than primary teachers. In another survey (Gaines & Barnes, 2017) primary education teachers expressed less favorable attitudes in contrast to secondary teachers.

Teachers who teach in secondary schools (junior high school, general high school, vocational high school) develop different attitudes. Specifically, teachers who teach in a general high school express more favorable attitudes than teachers who teach in a vocational high school in the cognitive and behavioral dimensions. It seems that in a professional school, curriculum and teaching subjects follow a stable and rigid course, which is dictated by the specified content of the courses and the specializations which students are called to choose during the years of school attendance. It is supported that human tries to keep their distance from conditions that could disrupt their harmony, extinguish contradictory information, reorganize them, implement an amount of approach to get along with stress, as protecting behavior, which can also be displayed in their attitudes toward inclusion practices (Barnová et al., 2022). It seems that teachers in a general high school are acquainted with the knowledge of planning the educational procedure in a more individualized level, a fact that demands from the teachers to provide directions aiming to satisfy every student's particular needs (Weng, Walker & Rosenblatt, 2015).

Teachers teaching the "pedagogy sciences" subject tend to adopt more favorable attitudes compared to those who teach "physical sciences" in all dimensions of attitudes: cognitive, emotional, behavioral. A similar finding was also found in another research (Tsakiridou & Polyzopoulou, 2014), where teachers who educate students in the domain of educational and theoretical sciences, favor the inclusion of students with social and academic/learning difficulties.

Years of teaching in public education influence the formation of more positive attitudes towards inclusive education and affect the behavioral dimension of attitudes. Specifically, the differences were observed between the groups of teachers with 1-10 years of service and 21-30 years of service and between the groups of teachers with 11-20 years of service and 21-30 years of service. This conclusion was also confirmed in previous research (Tsakiridou & Polyzopoulou, 2019a), where teachers who have completed 10 years of teaching experience express more positive attitudes compared to teachers who have completed more than 10 years towards students with physical difficulties. In another study (Gaines & Barnes, 2017), attitudes were found to differ between the group of individuals with 1 to 5 years of teaching experience and the group of individuals with 11 years or more of teaching experience.

Years of teaching in private education affect teachers' attitudes a result that leads to the emergence of differences in the emotional dimension of attitudes. Specifically, teachers with 1-10 years of service develop more positive attitudes than teachers with 21-30 years of service. In a related study (Gaad & Khan, 2007), a low percentage of teachers having less than ten years of experience perceive special needs students in a general classroom as a group with a definite strength for the ideology of the school community. Private education in Greece is a demanding working area and consists of a basic contribution to the education of Greek students, which demands patience and great effort from the young teachers. Besides, in the frames of a competitive Greek educational system, educators who are occupied in private schools are forced to obtain an education

for all, a fact that demands desire for work and dedication, abilities that are usually expressed in the begging of working career.

The age of the teachers in the sample affects teachers' attitudes, who aged from 31 to 40 and over 50 years for the emotional and behavioral factor, as in previous research (Tsakiridou & Polyzopoulou, 2014; Tsakiridou & Polyzopoulou, 2019a). It appears that the more teachers adopt the values of self-transcendence and receptivity to change, the more they seem to express positive attitudes towards inclusion, while those who pursue values of self-improvement/personal improvement express negative attitudes towards inclusion (Perrin, Jury, & Desombre, 2021).

5. Recommendations

In order to interpret teachers' negative attitudes towards inclusive education it is useful to carry out research comparing the attitudes of teachers and the available school resources at the country level, between different countries (Saloviita, 2020).

It is important that the training for the institution of inclusive education is organized for students studying in pedagogic universities, who lack of teaching experience, so that an introductory course is provided, which includes a period of practical training, in order to have a positive effect on the attitudes of teachers, in order to acquire the skills that allow the implementation of inclusive education programs (Levins, Bornholt, & Lennon, 2005; Tsakiridou & Polyzopoulou, 2019b; Hassanein, Alshaboul, & Ibrahim, 2021). Specifically, Hassanein, et al., (2021) state that these courses should include a theoretical part and a practical part, to be implemented in an inclusive education environment and to maintain the orientation of the courses in preparation for inclusive education.

To promote the values of inclusion, the concept of acceptance of diversity and intercultural differences should be included in all curricula and not only those in the special education curricula (Braunsteiner & Mariano-Lapidus, 2014). In continuation of the research, it is pointed out that the future of truly inclusive education, with no exclusions, is based on a cultural change, which supports and strengthens diversity and approaches success through a perspective that is not constructed by standardized assessment and grading tests.

Additionally, the inclusion of students with different strengths and weaknesses in the same class requires a redefinition of teacher training and their orientation to a preparation different from that required by education in a "typical" class, and the teachers themselves must consider the participation of parents as a normal parameter of the planning of the pedagogical process (Forlin & Hopewell, 2006). It is proposed that teachers, parents and students should develop a collaboration in the frame of understanding students' needs in an individualized way and adjust their teaching strategies respectively (Hind, Larkin, & Dunn, 2019).

It is important to explore how values influence teachers' attitudes toward inclusion, as well as to appreciate the values that reside in the education system itself (Perrin, Jury, & Desombre, 2021). The same researchers suggest that it would be helpful

to design curricula and training programs that incorporate these elements in their structure and content, to be important incentives for improving teachers' attitudes towards inclusive education, ensuring the values of universality, receptivity and benefit, so that all students have access to the educational good. Beyond this, it is important to design a policy with the aim of investing in quality in the work environment, as the positive interpersonal relationships that teachers can experience in the school context can be a protective shield against the risk of burnout (De Stasio et al., 2017).

Inclusion is a social reality and teachers should accept the situation (Dignath et al., 2022). Consequently, according to the research, educational interventions play an important role to fully preparing teachers for teaching in inclusive classrooms. Also, it is recommended that training seminars should be organized, special education course should be integrated as part of the studies, providing information about students with special educational needs and/or disability in the teaching community and employing one teacher with sufficient knowledge about students with a disability in every educational institution of general education consist of perquisites in order for the inclusive education to be implemented (Noreen, Intizar, Gulzar, 2019).

Furthermore, it is proposed to be conducted similar research in the near future, where the relationship of students with disabilities is investigated (Noreen, Intizar, Gulzar, 2019).

The implementation of inclusive education is only possible when schools are designed and managed so that all children experience a quality learning environment, as a result of which a significant effort to reform the education system of most countries is required (Hassanein, Adawi, & Johnson, 2021).

Behavioral change may not materialize and is more likely to be limited to a change in the intent of the behavior rather than the behavior itself (Noreen, Intizar, Gulzar, 2019). The researchers add that the change in behavior is always observed at a slow rate, however, one can hope that as more educated and new teachers are employed in the education system, the system will be adapted to conditions of inclusive education.

The non-differentiation of the results by gender of the participants towards inclusive education suggests the need for more studies in this area, as the investigation of attitude and gender remains an area worthy of examination, given that the teacher's path and career dominated by one gender group (Ahmmed, Sharma, & Deppeler, 2012; Lao et al., 2022).

Besides, social desirability consists of a determinant factor that affects teachers' responses (Weng, Walker & Rosenblatt, 2015). According to the authors, educators' attitudes might arise as quite emotional and some of them possibly not prefer to be indicated as disagreeing with or supporting the inclusion policy.

6. Conclusion

Greek teachers express their general willingness to accept students with special needs in the general classroom. The variables that predict educators' attitudes according to previous research, are verified by the current study. Nevertheless, it is admitted that the

implementation of inclusion policy in the Greek educational system demands an attentive and complete planning, offering to the members of the school community the appropriate support and opportunities for continuing and specialized learning.

Conflict of Interest Statement

The authors declare no conflicts of interest.

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References

Alasim, K., & Paul, P. V. (2019). Understanding factors that affect teachers' attitudes toward inclusion of students who are hard of hearing in Saudi Arabia. Deafness & Education International, 21(4), 210-226.

Ahmmed, M., Sharma, U., & Deppeler, J. (2012). Variables affecting teachers' attitudes towards inclusive education in Bangladesh. Journal of research in special educational needs, 12(3), 132-140.

Barnová, S., Kožuchová, M., Krásna, S., & Osaďan, R. (2022). Teachers' Professional Attitudes towards Inclusive Education. Emerging Science Journal, 6, 13-24.

Braunsteiner, M. L., & Mariano-Lapidus, S. (2014). A perspective of inclusion: Challenges for the future. Global Education Review, 1(1).

Butakor, P. K., Ampadu, E., & Suleiman, S. J. (2020). Analysis of Ghanaian teachers' attitudes toward inclusive education. International Journal of Inclusive Education, 24(11), 1237-1252.

De Stasio, S., Fiorilli, C., Benevene, P., Uusitalo-Malmivaara, L., & Chiacchio, C. D. (2017). Burnout in special needs teachers at kindergarten and primary school:

Investigating the role of personal resources and work wellbeing. Psychology in the Schools, 54(5), 472-486.

Dias, P. C., & Cadime, I. (2016). Effects of personal and professional factors on teachers' attitudes towards inclusion in preschool. European journal of special needs education, 31(1), 111-123.

Dignath, C., Rimm-Kaufman, S., van Ewijk, R., & Kunter, M. (2022). Teachers' beliefs about inclusive education and insights on what contributes to those beliefs: a meta-analytical study. Educational Psychology Review, 1-52.

Ewing, D. L., Monsen, J. J., & Kielblock, S. (2018). Teachers' attitudes towards inclusive education: a critical review of published questionnaires. Educational Psychology in Practice, 34(2), 150-165.

Findler, L., Vilchinsky, N., & Werner, S. (2007). The multidimensional attitudes scale toward persons with disabilities (MAS) construction and validation. Rehabilitation Counseling Bulletin, 50(3), 166-176.

Forlin, C., & Hopewell, T. (2006). Inclusion–the heart of the matter: trainee teachers' perceptions of a parent's journey. British Journal of Special Education, 33(2), 55-61.

Forlin, C., Loreman, T., Sharma, U., & Earle, C. (2009). Demographic differences in changing pre-service teachers' attitudes, sentiments and concerns about inclusive education. International Journal of Inclusive Education, 13(2), 195-209.

Gaad, E., & Khan, L. (2007). Primary Mainstream Teachers' Attitudes towards Inclusion of Students with Special Educational Needs in the Private Sector: A Perspective from Dubai. International journal of special education, 22(2), 95-109.

Gaines, T., & Barnes, M. (2017). Perceptions and attitudes about inclusion: Findings across all grade levels and years of teaching experience. Cogent Education, 4(1), 1313561.

Hassanein, E. E. A., Adawi, T. R., & Johnson, E. S. (2021). Barriers to including children with disabilities in Egyptian schools. Journal of International Special Needs Education, 24(1), 25-35.

Hassanein, E. E., Alshaboul, Y. M., & Ibrahim, S. (2021). The impact of teacher preparation on preservice teachers' attitudes toward inclusive education in Qatar. Heliyon, 7(9), e07925.

Hind, K., Larkin, R., & Dunn, A. K. (2019). Assessing teacher opinion on the inclusion of children with social, emotional and behavioural difficulties into mainstream school classes. International journal of disability, development and education, 66(4), 424-437.

Lao, K. A. C., Lao, H. A., Siason, V. A., Cabangcala, R. B., Cadapan, E. D., & Alieto, E. O. (2022). Attitude towards Inclusive Education (IE) among Prospective Teachers: Is there Gender Polarization?. International Journal of Special Education, 37(3).

Levins, T., Bornholt, L., & Lennon, B. (2005). Teachers' experience, attitudes, feelings and behavioural intentions towards children with special educational needs. Social Psychology of Education, 8, 329-343.

Mahat, M. (2008). The Development of a Psychometrically-Sound Instrument to Measure Teachers' Multidimensional Attitudes toward Inclusive Education. International journal of special education, 23(1), 82-92.

Noreen, H., Intizar, F., & Gulzar, S. (2019). Teachers' multidimensional attitude towards inclusive education. UMT Education Review, 2(2), 72-89.

Gaines, T., & Barnes, M. (2017). Perceptions and attitudes about inclusion: Findings across all grade levels and years of teaching experience. Cogent Education, 4(1), 1313561.

Parasuram, K. (2006). Variables that affect teachers' attitudes towards disability and inclusive education in Mumbai, India. Disability & Society, 21(3), 231-242.

Perrin, A. L., Jury, M., & Desombre, C. (2021). Are teachers' personal values related to their attitudes toward inclusive education? A correlational study. Social Psychology of Education, 24(4), 1085-1104.

Polyzopoulou, K., Kokaridas, D., Patsiaouras, A., & Gari, A. (2014). Teachers' perceptions toward education of gifted children in Greek educational settings. Journal of Physical Education and Sport, 14(2), 211.

Polyzopoulou, K. & Tsakiridou, H. (2022). Adults' attitudes towards disability in the Greek Community. International Journal of Multidisciplinary Research and Analysis, 5(10), 2852-2861.

Saloviita, T. (2020). Teacher attitudes towards the inclusion of students with support needs. Journal of Research in Special Educational Needs, 20(1), 64-73.

Štemberger, T., & Kiswarday, V. R. (2018). Attitude towards inclusive education: the perspective of Slovenian preschool and primary school teachers. European journal of special needs education, 33(1), 47-58.

Tsakiridou, H., & Polyzopoulou, K. (2014). Greek teachers' attitudes toward the inclusion of students with special educational needs. American Journal of Educational Research, 2(4), 208-218.

Tsakiridou, H., & Polyzopoulou, K. (2019a). Educators' attitudes concerning teaching of students with special educational needs in the mainstream Greek school. International Journal of Innovation Education and Research, 7(7), 317-337.

Tsakiridou, H., & Polyzopoulou, K. (2019b). General Preschool and Primary University Students in Greece and Their Attitudes Toward Inclusion. European Journal of Special Education Research, 4(4), 1-20.

Weng, C. S., Walker, Z., & Rosenblatt, K. (2015). Special education teachers' attitudes toward including students with SEN in mainstream primary schools in Singapore. Asia Pacific Journal of Developmental Differences 2(1), 63-78.