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ORIGINAL ARTICLE

Teachers' Attitudes Towards Inclusive Education: a Cross-National Exploration

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Abstract
The study aims to suggest a model for attitudes towards inclusive education that will yield a good fit across different countries. Moreover, we aim to explore the effect of years of teaching experience, educational work level of teachers, and the highest degree completed by teachers on teachers' attitudes towards inclusion across different countries. A demographic scale and the ATTAS-mm were applied to 908 teachers employed in schools of general education or who offered parallel support and/or resources in five different countries (Greece, the UK, the USA, Malaysia, and Turkey). CFA suggested a 4-factor solution, which included the cognitive, affective, and behavioral factors that have been previously introduced by Gregory and Noto (2012), and a fourth factor, labeled overall attitudes towards teaching all students. In the cognitive factor, the UK had the most positive attitudes. TU, MA, and GR enrolled in the same cluster, and the USA had the least positive attitudes. In the affective factor, GR had the most positive attitude. MA and the USA enrolled in the same cluster and TU and the UK had the least positive attitudes. A similar pattern is observed for the behavioral factor with GR having the most positive attitude. TU and MA enrolled in the same cluster, and the USA and the UK had the least positive attitudes. Finally, years of teaching experience, educational work level, and the highest degree completed have a significant effect on teachers' attitudes towards inclusion in all countries. Providing feedback for future research is the focal point of the discussion part.

Keywords Inclusive education · Teachers · Attitudes · Cognitive · Affective · Behavioral

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Introduction

Discussing the importance of inclusive education is not something new. An early reference to the need to ensure an individual's right to education is noted in the United Nations General Assembly (1966), while more recently, it was stressed that inclusion is a part of the foundation for quality education (Ainscow et al., 2019). However, despite several attempts over the years to proceed with an inclusive education model, the majority of these attempts prioritize the location of the student's instruction rather than the quality of the instruction (Dewald-Kaufmann et al., 2021), while the political will, required to succeed in offering inclusive education programs, makes their implementation difficult in practice (Peters, 2004).

Policies offer a starting point for providing inclusive education. However, the enacting of a policy does not guarantee its implementation. Even when The Convention on the Rights of Persons with Disabilities in 2008 mapped out the elements required for meeting special education needs, it did not establish a common understanding of these elements and how these can create an inclusive education environment (Graham et al., 2020). As such, even if policies are enacted for the educational support of people with disabilities, they cannot be implemented without the will of social actors (Peters, 2004).

Whether the social actor is described as an educational leader (Ainscow et al., 2014) or an inclusive education scholar (Graham et al., 2020), these actors, within the macro, meso, and micro contexts, shape the implementation (or not) of a policy. When the main focus of a policy is the education of people with disabilities, teachers become the main social actors that have the power to implement a policy and shape students' experiences. Therefore, the attitudes of the teachers, particularly regarding the inclusion of students with special education needs, become vital to achieving a successful inclusive education (Charema, 2010; Saloviita, 2020). In fact, Hofman and Kilimo (2014) suggest that teachers' attitudes are a stable construct, which predicts teacher levels of self-efficacy. Research has also demonstrated that teachers with open, positive attitudes towards inclusive education experience greater success in implementing inclusive education (Avramidis et al., 2000; Costello & Boyle, 2013; Pearce et al., 2009; Schmidt & Vrhovnik, 2015; Vogiatzi et al., 2021; Vogiatzi et al., 2022). Moreover, the European Agency for Development in Special Education and the United Nations Educational Scientific and Cultural Organization both identify that a teacher's attitude towards the inclusion of students with special education needs is one of the most important elements towards the success of an inclusive education program (Saloviita, 2020).

Taking into consideration that the research commonly acknowledges the importance of teachers' attitudes towards student inclusion and the success of inclusive education, it remains a question of why quite often teachers fail to achieve student inclusion. Our study will answer this important question by using the theory of planned behavior (Ajzen, 1991; 2020) as a lens to explore teachers' attitudes towards teaching all students across five countries.

Applying the Theory of Planned Behavior to Explore Teachers' Attitudes Towards Inclusion

The theory of planned behavior (TPB) (Ajzen, 1991) helps understand how the behavior of people can change, suggesting that behavior can be deliberative and planned. According to TPB, human actions are guided by three kinds of considerations: behavioral beliefs about the likely consequences of the behavior and how our behaviors would like to be perceived by others (conative dimension); normative beliefs about the normative expectations of others and how our perceptions affect how we see others' behavior (cognitive dimension); and control beliefs about the existence of factors that could assist or prohibit performance of the behavior and could affect how we feel about others' behavior (affective dimension). By taking into consideration these three considerations deliberate behavior can be predicted.

Our study uses an instrument designed to measure each one of the three elements of attitude: cognitive, affective, and conative(behavioral) (Gregory & Noto, 2012, 2018, 2019), focusing particularly on how each dimension of attitude contributes to the teacher's overall behavioral intention regarding the inclusion of students with mild to moderate disabilities. Specifically, the cognitive dimension addresses how teachers think about students with mild to moderate disabilities; the affective dimension addresses how teachers feel about these students, while the conative dimension describes how a teacher would like their behavior to be seen in response to teaching students with mild to moderate disabilities.

Using the theory of planned behavior (Ajzen, 1991, 2020) as a theoretical lens in an educational context allows us to operationalize the intention to create a successful inclusive educational experience as consisting of the teacher's attitude, what the teacher thinks the norm is, and what the teacher thinks they can do, which is moderated by the teacher's actual ability to successfully include students with special education needs. According to TPB (Ajzen, 1991, 2020), an individual's attitude and behavioral intention are influenced by whether someone else knows what their actions were. In an educational setting, the public nature of education makes this aspect of the theory of planned behavior important as it influences how the teachers act. This inclusion of norms, behavioral control, and attitudes makes the theory of planned behavior an appropriate framework to explore teachers' attitudes towards inclusion.

Within the larger theory of planned behavior, the suggested model of attitude, which comprises cognitive, affective, and behavioral aspects, has been used to study teachers' attitudes towards inclusion in many international settings (Bangladesh: Ahmmed et al., 2012; Croatia and Poland: Ćwirynkało et al., 2017; Romania: Crișan et al., 2020; Scotland: MacFarlane & Woolfson, 2013; USA: Barnes & Gaines, 2015; Forrester, 2016; Gregory et al., 2016). However, until now, there is not a systematic effort to explore the potential effects of the suggested model emerging from the ATTAS-mm across countries, years of teaching, educational level of work/intern, or highest degree completed.

In the next section, we will present in more detail the cognitive, affective, and conative dimensions, illustrating how these can be used to operationalize the teachers' intention to create a successful inclusive educational experience.

Exploring the Cognitive, Affective, and Conative Dimensions to Study Teachers' Attitudes Towards Inclusion in Different Educational Settings

The cognitive aspect of attitude encompasses the degree to which a teacher believes that inclusion meets the needs of students with mild to moderate disabilities as well as their non-disabled peers. Prior research in the field, policy documents, and legislation provide teachers with information for the formation of their cognitive frame reference of inclusion. Additionally, stereotypes and other informal sources of information can impact the cognitive facets of attitude (Abacioglu et al., 2019).

Research has also pointed out the importance of teaching experience for the success of inclusive education. For example, Crișan et al. (2020) concluded that additional practical training would build necessary skills and self-confidence, increasing a sense of responsibility for teaching students with special education needs. These results affirm earlier findings that each of the three dimensions of attitude (cognitive, affective, and conative) are associated with the level of skills teachers reported. In fact, Avramidis et al. (2000) illustrate that the more training teachers had, the more positive their attitude towards inclusion is, while Saloviita (2020) reports that reduced knowledge and experience regarding teaching students with disabilities can become a socially acceptable excuse for excluding students with special education needs. This research illustrates the important role of teaching experience and highlights how experience in working with students with disabilities significantly improves teachers' attitudes towards inclusion (Ćwirynkało et al., 2017).

In this study, the cognitive dimension of attitude has been operationalized as believing all students can succeed in general education classrooms.

On the other hand, the affective domain of attitude describes how teachers feel about including students with mild to moderate disabilities in the regular education classroom. The relationships between the teacher and students and the teacher and colleagues greatly define the affective component of attitude. Ahmmed et al. (2012) found that teachers that had contact with a student with a disability in the classroom "held more positive attitudes towards inclusion of children with disabilities in their classes than those who did not have such exposure" (p. 138). Further, research has shown that collaboration between teachers positively influences attitudes towards inclusive education (Saloviita, 2020), while Nilsen (2020) affirmed that developing collaborative relationships among teachers can help them overcome the barrier of feeling ill-prepared. Finally, MacFarlane et al. (2013) associate the affective domain of attitude with both cognitive and behavioral facets suggesting "that holding positive feelings towards children with [special education needs] may lead to positive beliefs [cognitive] and higher perceived behavioral control levels" (p. 51). We operationalize the affective dimension in our study as developing personal and professional relationships.

Finally, the conative facet of attitude is related to the behavioral component as it describes how a teacher would like their behavior to be seen. Ahmmed et al. (2012) found that perceived school support positively impacted teachers' attitudes towards inclusion. This finding, consistent with the conative domain, asserts that teachers organize their actions based on how they want to be viewed by others. In this sense, the conative aspect of attitude includes an anticipatory or interpretive element. The

teacher anticipates how others will perceive their actions and aligns their behavior with the desired possible reaction, consistent with their self-concept. This is the aspect of the theory of planned behavior that has been less explored (Peters & Slovic, 2007). In this study, we operationalize the conative aspect in terms of creating an accepting environment for each student to learn.

Research Aim and Hypotheses

The main aim of the study is to explore the reliability and construct validity of the ATTAS-mm across different countries and investigate which, if any, of the demographic variables can be associated with differences in attitude. By studying these variables across nations, we sought to better understand how inclusive education can be more successful. To address these aims, we apply the theory of planned behavior (Ajzen, 1991; 2020), by using the tripartite model of attitude to explore teachers' attitudes towards teaching all students. We used data from five countries, thereby providing a rather rigorous test of the cross-national generalizability of the ATTAS-mm. In doing so, we can examine some key cognitive, affective, and conative aspects that could have an impact on teachers' ability to include students with mild to moderate disabilities in the regular education classroom.

Based on previous findings from studies that have applied the tripartite model of attitude (e.g. Ahmmed et al., 2012; Ćwirynkało et al., 2017; Crișan et al., 2020; Scotland: MacFarlane & Woolfson, 2013; Barnes & Gaines, 2015; Forrester, 2016; Gregory et al., 2016), we formulated the following hypotheses:

Hypothesis 1. The model suggested by ATTAS-mm yields a good fit across different countries.
Hypothesis 2. Years of teaching experience have a significant effect on attitudes towards teaching all students.
Hypothesis 3. The educational work level of teachers has a significant effect on attitudes towards teaching all students.
Hypothesis 4. The highest degree completed by teachers has a significant effect on attitudes towards teaching all students.

Method

Variable-centered approaches are favored in cases we intend to explain relationships among variables of interest in different populations (Howard & Hoffman, 2018). Consequently, for the present study, we employed a variable-centered approach. Since we aimed to assess the goodness of fit of the model suggested by ATTAS-mm across different countries, we performed reliability and structural equation modeling (SEM) analysis. Moreover, to evaluate potential differences in attitudes towards teaching all students across the participant countries, years of teaching, educational work level, and highest degree completed, we performed four independent multivariate analyses of variance (MANOVAs).

Research Context

Greece

In Greece, significant steps towards inclusive education for students with disabilities have been taken over the last 2 decades through legislation and policy development (EASIE, 2020). Following an initial regulation for the education of students with disabilities in 2008, a formal definition of inclusive education was introduced in 2018. Inclusive education is defined as the educational approach that takes into account the needs of the heterogeneity of the student population and aims at overcoming barriers to learning while ensuring equal access to education for all students, including students with disabilities. Towards this aim, the Centers for Interdisciplinary Assessment, Counseling and Support (KEDASY) (Pappas et al., 2018) were established to diagnose students' disabilities and offer individualized educational plans to support the students in mainstream classrooms. Special education services are provided either by special education schools or by mainstream primary and secondary level schools that operate inclusive special classes; priority is given so that students with SEN receive education in mainstream classes with or without support. The percentage of students with an official decision of SEN who are enrolled in inclusive education is 4.48% of the enrolled school population (EASIE, 2020). This could be partly attributed to the teacher's inexperience in dealing with students with special needs. Even though there are several programs available in special education, places are limited, and quite often teachers are asked to engage with students with disabilities after having received only some basic training (Van de Putte et al., (2018).

Malaysia

Similarly, to Greece, in Malaysia special education is provided either in special education schools or mainstream schools that operate inclusive special classes. Even though, however, children with other disabilities are commonly educated in special education schools, and children with learning disabilities receive support for their special educational needs in the Integrated and Inclusive Special Education Programs offered in the mainstream schools. There are also remedial education programs that focus on remedial teaching for students who are slightly underachieved in terms of reading, writing, and arithmetic (3R) abilities. These remedial programs will continue for a specified period, for example, 3 months or a maximum of 6 months, with the students expected to join a mainstream or special education school afterward (Jelas & Mohd Ali, 2014). Teachers in Malaysia receive some basic training to support students with special needs. However, teachers often express that the lack of practical experience makes them less confident in supporting a student with special needs (Jelas & Mohd Ali, 2014).

Turkey

In Turkey, there is the same tendency to education students with disabilities in mainstream schools, when possible. Special education is provided for children with

mild, moderate, or severe learning disabilities. Special education is provided in three ways, in mainstream classrooms, in special education classrooms set in mainstream schools, and in segregated special education schools for children with more severe disabilities. Children with special education needs (SEN) are educated in mainstream schools either full-time in the same class with their peers or part-time in special education classrooms located in mainstream schools for some time of the day together with their disabled peers (Batu, 2014). Special education programs are implemented in mainstream schools at all levels of education from preschool education and primary education to vocational and technical education. If a child has a condition or impairment, he/she is eligible to get extra support and adjustments at school. This is called Special Educational Needs (SEN) support. Even though teachers receive some basic training to support students with special needs, quite often teachers feel they are lucking knowledge to perform special education (Sakız & Woods, 2015).

UK

The UK has also made good progress in the educational support of disabled students. The Equality Act 2010 ("Equality Act 2010" 2021) in the UK protects disabled students from being treated unfavorably by schools. According to this act, it is unlawful for schools to refuse to admit a child because of their impairment or condition, to discriminate against them by not meeting their needs, and to allow harassment by teachers or students related to their condition. To comply with the law, schools must make "reasonable" adjustments so that any child has access to the school and the curriculum. There is no set definition for "reasonable" adjustments as it depends on what a child needs and the difference it will make, the cost, the practicality and effectiveness, and if the adjustment will affect other pupils' learning. If a child has a condition or impairment, they can get extra support and adjustments at school. This is called Special Educational Needs (SEN) support. It is estimated that a third of pupils with special education needs are educated in mainstream schools in the UK. A reason for this is that the UK education system offers extensive and detailed programs on different types of disabilities to support teachers in teaching students with special needs.

USA

The US has a tradition of educational policy being driven by legislation. In 2001, the No Child Left Behind Act (NCLB) set expectations for the inclusion of students with special education needs in the mainstream classroom and accountability metrics to assess the implementation of inclusive practice ("No Child Left Behind Act" 2001). The act was updated to the Every Student Succeeds Act in 2010, which was also reauthorized in 2015 when it was emphasized that the general education teachers have the primary responsibility for all the curricular needs of students with appropriate special education supports ("Every Student Succeeds Act" 2015). Students identified with special education needs are entitled to an individualized education program that is co-constructed with educators, parents, and specialists. The

accommodations and supports are legally binding and if a school fails to provide these supports, it can be sued. Regarding teachers' training, the USA offers a variety of quality teaching programs in special education (Hunt, 2011).

Participants

Data were obtained from five different countries. A total number of 908 respondents from Greece, Malaysia, Turkey, the UK, and the USA were recruited for the study. We chose those five countries due to their differences in terms of their educational systems and teachers' training. Potential differences in terms of teachers' attitudes may be attributed to such differences. Researchers used simple random sampling. We employed respondents, in-service and pre-service teachers, and professionals, who have either direct or indirect experience working with individuals with disabilities in schools and/or human service agencies. An open call was made from all countries, to recruit the participants. More specifically, an e-mail was sent to the principals of randomly selected schools in each country. Collectively, 245 (27%) were Greek, 171 (19%) were Malaysian, 210 (23%) were Turkish, 186 (20%) were British, and 96 (11%) were Americans. In Table 1, all demographic characteristics by country are presented in detail.

Measures

Attitudes Towards Teaching All Students Scales (ATTAS-mm)

The ATTAS-mm is a questionnaire divided into two parts (demographic and scale). The ATTAS-mm was initially developed by Gregory and Noto (2012). ATTAS-mm scale demonstrated high reliability since Cronbach's Alpha coefficient was formed at 0.833. The first part of ATTAS-mm consists of 10 items assessing demographic parameters, while the second part consists of 9 items assessing attitudes towards teaching all students, which are divided into three subscales, assessing cognitive, affective, and behavioral dimensions of attitude. These independent dimensions of attitude are entitled to believing all students can succeed in general education classrooms, developing personal and professional relationships, and creating an accepting environment for all students to learn, respectively. Each subscale includes three separate items.

For the ATTAS-mm scoring, a 7-point Likert scale is used (1 = agree very strongly to 7 = disagree very strongly). Specifically, a high score indicates negative attitudes towards the school inclusion of children with disabilities. The translation process was implemented through two independent stages. Firstly, all countries translated ATTAS-mm to their language of origin (apart from the UK), each country recruiting bilingual speakers to translate the scale independently. The translations were reviewed by the national representative of the project in each country. They commented on the translations and adjusted them appropriately. Afterward, a back-translation technique was employed by two bilingual speakers (different than the first ones employed for the translation), to ensure the accuracy and the conceptual

Table 1 Demographic characteristics by country

Countries						
Country	*Greece*	*Malaysia*	*Turkey*	*UK*	*USA*[1]	*Overall*
Participants (N)	245	171	210	186	96	908
Gender						
Male	26	36	50	46	21	179 [19.7]
Female	219	135	160	140	75	729 [80.3]
Community of work/intern						
Rural	21	26	21	0	1	69 [7,6]
Suburban	52	61	21	186	0	320 [35,2]
Urban	170	79	79	0	95	423 [46,6]
N/A (not currently in the field)	2	5	89	0	0	96 [10,6]
Years of teaching						
0–4	163	33	115	145	17	473 [52,1]
5–9	31	34	33	39	20	157 [17,3]
10–14	29	48	32	2	25	136 [15,0]
15–19	15	28	18	0	18	79 [8,7]
> 20	7	28	12	0	16	63 [6,9]
Highest completed degree						
Associates	26	0	43	91	0	160 [17,6]
Bachelors	148	107	143	83	32	513 [56,4]
Masters	67	51	20	12	39	190 [20,9]
Masters + 30 (6^{th} year)	0	7	2	0	25	34 [3,7]
Doctorate	4	6	2	0	0	12 [1,3]
Number of college (or higher) completed courses in special education						
None	33	92	160	94	36	413 [45,5]
1–3	50	66	29	72	34	253 [27,8]
4 or more courses	162	13	21	20	26	242 [26,7]
Extent of experience working with individuals with disabilities in schools and/or human service agencies						
Minimal (1 h of fewer per month)	100	101	128	83	13	428 [47,1]
Some (2–10 h per month)	53	41	54	44	46	238 [26,2]
Considerable (11–80 h per month)	51	17	25	59	37	189 [20,8]
Extensive (more than 80 h per month)	41	9	3	0	0	53 [5,8]
Current role in education						
Student not yet in the field	97	13	40	71	0	221[24,3]
Intern	59	3	37	61	0	160 [17,6]
Substitute teacher/DSAP	47	2	30	11	0	90 [9,9]
Paraprofessional	20	1	10	0	0	31 [3,4]
Certified teacher	16	140	93	43	95	387 [42,6]
Other	6	12	0	0	1	19 [2,1]
Educational level in which you work/intern						
Elementary (k-2, k-3, k-4, k-5, or k-6)	36	32	66	115	96	345 [38,0]
Middle (4–6, 5–6, 4–8, 6–8, 7–8)	149	68	111	0	0	328 [36,1]

Table 1 (continued)

Countries						
Country	*Greece*	*Malaysia*	*Turkey*	*UK*	*USA*[1]	*Overall*
High (7–12, 8–12, 9–12)	43	54	17	0	0	114 [12,6]
Other	17	17	16	71	0	121 [13,3]
Socioeconomic status of the community of work/intern						
Poor (income/education in the lowest 20%)	30	11	55	0	80	176 [19,4]
Moderate (income/education in the middle 60%)	203	146	143	175	16	683 [75,2]
Affluent (income/education in the highest 20%)	12	14	12	11	0	49 [5,4]
Years planning to teach						
Fewer than 5 years	10	23	13	17	10	73 [8,0]
5–10 years	22	21	22	47	54	166 [18,3]
11–20 years	42	23	46	64	32	207 [22,8]
Greater than 20 years	171	104	129	58	0	462 [50,9]

[1]Data from USA were collected in Connecticut, Illinois, Ohio, Pennsylvania, New Jersey, North Carolina, Tennessee, Texas, Virginia, and Wisconsin

[*]Relative frequencies percentages are written in brackets

[**]Total $n = 908$

equivalency to the English version of the translation of ATTAS-mm. By the end of this procedure in each non-English speaking country (Greece, Malaysia, and Turkey), the teams ended in the final draft of ATTAS-mm.

Data Collection and Analysis

Data were obtained from each of the participant countries. The minimum of each country's sample was determined at 90 participants. It was a prerequisite for each country to submit an SPSS file, which had no missing data points. Descriptive measures were used for the preliminary data analysis. These measures provided general information about the groups. We estimated measures of internal consistency (Cronbach's Alpha coefficient) both for subscales and full scale across the participating countries. Afterward, we assessed the potential factorability of ATTAS-mm. Several different tests of dimensionality were employed, such as the proportion of variance extracted, the Bartlett's chi-square test, the Cattell-Nelson-Gorsuch scree test, the Kaiser-Guttman criterion, the parallel analysis, and the Minimum Average Partial test to determine the number of factors.

We performed exploratory factor analysis to have sufficient evidence for the interpretation of the three factors. More specifically, we performed principal axis factoring analysis with Varimax rotation and Kaiser normalization. We suppressed small coefficients with an absolute value below 0.30 for the determination of the coefficients display format. Construct validity of ATTAS-mm was assessed through confirmatory factor analysis (CFA). Moreover, we evaluated the second-order structural

model for the attitudes towards teaching all students (ATTAS-mm) scale, which included a fourth factor, overall (F_4), titled *attitudes towards teaching all students.* We assessed the measurement invariance of the 4-factor model across the different countries and estimated ΔCFIs and ΔRMSEAs.

Finally, the potential contribution of the ten demographic variables on ATTAS-mm (gender, the community of work/intern, years of teaching, highest completed degree, number of college (or higher) completed courses in special education, the extent of experience working with individuals with disabilities in schools and/or human service agencies, current role in education, educational level in which you work/intern, socioeconomic status of the community of work/intern, and years of planning to teach) was evaluated. Country, years of teaching, educational level of work/intern, and the highest degree completed were examined for potential differences in the suggested three factors. Four independent MANOVA analyses were performed. For this analysis, we used factors extracted from EFA and confirmed through CFA. Finally, through post hoc tests, using Bonferroni adjustment for multiple comparisons, we assessed potential distinct clusters of countries within each factor.

Results

Reliability—Internal Consistency

The original instrument, published in 2012, demonstrated strong reliability data, and in a more recent study, the reliability of the scale was again established (Gregory & Noto, 2012, 2019). The full-scale Cronbach's Alpha coefficient slightly demonstrated good internal consistency *[0.810]* as did the affective *[0.810]* and behavioral *[0.814]* subscales, while the cognitive subscale demonstrated acceptable reliability *[0.743]*. For the current study, all Cronbach's Alpha coefficients are presented in detail in Table 2.

For all the countries included in the current study, the affective subscale demonstrated the lowest reliability value. The notable exception is the data from the UK. These data demonstrate much higher reliability values across the scale. The UK data was derived from a sample indicating they had taken a few courses in special education (over half had taken no courses in special education), and this may have impacted the reliability results.

Table 2 Measurement of internal consistency (Cronbach's Alpha coefficient)

	Greece	*Malaysia*	*Turkey*	*UK*	*USA*	*Overall*
Subscale 1: cognitive	.763	.813	.774	.954	.777	.805
Subscale 2: affective	.658	.471	.501	.887	.706	.687
Subscale 3: behavioral	.764	.697	.729	.813	.741	.776
Full scale	**.832**	**.827**	**.806**	**.954**	**.820**	**.851**

Preliminary Analysis

To conclude the number of the factors, we estimated the Kaiser-Guttman criterion, the proportion of variance extracted, the Cattell-Nelson-Gorsuch scree test, the Bartlett's chi-square test, and the Minimum Average Partial test. Statistical analysis suggested 3 factors. The first one is the cognitive factor (F_1), the second one is the affective factor (F_2), and the last one is the behavioral factor (F_3) (Gregory & Noto, 2012, 2019).

The Kaiser–Meyer–Olkin measure of sampling adequacy was 0.854, above the common cut-off value of 0.60. The Bartlett's test of sphericity was tested and was found significant ($\chi^2(36) = 3815.250,\ p < 0.001$). Analysis of the overall sample showed that *74.6%* of the variance was explained by the three factors. More specifically, initial eigenvalues explained *47.42%*, *17.48%*, and *9.70%*, respectively.

Structural Equation Modeling

Results suggested a unidimensional 3-factor solution. Figure 1 presents all the standardized path coefficients. The suggested measurement model described the overall data set arising from the five countries that participated in the project. CFA indicated "a good fit" for the suggested 3-factor model ($\chi^2(24) = 583.263,\ p = 0.000;\ CFI = 0.96;\ RMSEA = 0.04 < 0.08$ *and* $SRMR = 0.000 < 0.08$).

The fourth factor (F_4) entered the model to capture the rest three factors that shared covariances directly. Analysis suggested "a good fit" for the 4-factor model ($\chi^2(36) = 719.132,\ p = 0.000;\ CFI = 0.97;\ RMSEA = 0.03 < 0.08$ *and* $SRMR = 0.000 < 0.08$). Moreover, the χ^2 difference tests showed that the three-factor model yielded significantly worse fits than the 4-factor model (Fig. 2).

Testing of measurement invariance showed an adequate fit for the 4-factor model across the different participating countries. The model comparisons, including the metric to configure model comparison and the scalar to metric model comparison, yielded ΔCFIs and ΔRMSEAs below the cut-offs of non-invariance. In the last model comparison (the strict to scalar model comparison), as expected, invariance was not supported by the ΔCFI cut-off.

Finally, the model fit evaluation indicated that only three out of the ten demographic variables demonstrate a significant contribution to ATTAS-mm. These variables are summarized as the highest completed degree, the extent of experience working with individuals with disabilities in schools and/or human service agencies, and the current role in education. Analysis suggested "a good fit" for the suggested model ($\chi^2(22) = 416.289,\ p = 0.000;\ CFI = 0.96;\ RMSEA = 0.02 < 0.08$ *and* $SRMR = 0.000 < 0.08$) (Fig. 3).

Comparisons of the Four Latent Factors by Country, Years of Teaching, Educational Level of Work/Intern, or Highest Degree Completed

Firstly, a MANOVA analysis was performed to implement comparisons of the four latent factors across countries. Cross-national comparisons and descriptive

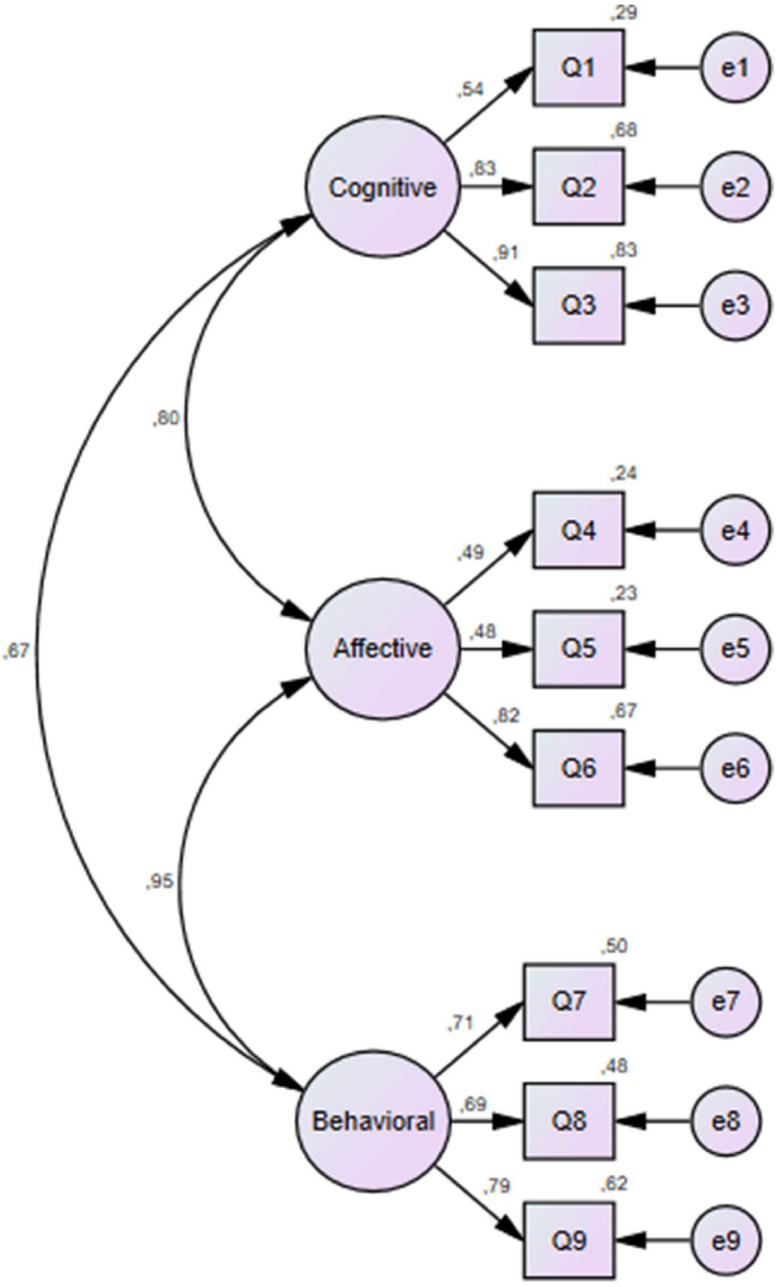

Fig. 1 The measurement model of the attitudes towards teaching all students (ATTAS-mm) scale

statistics, such as the mean and standard deviation of the ATTAS-mm factors scores, are presented in Table 3. Dependent measures included the 4 factors:

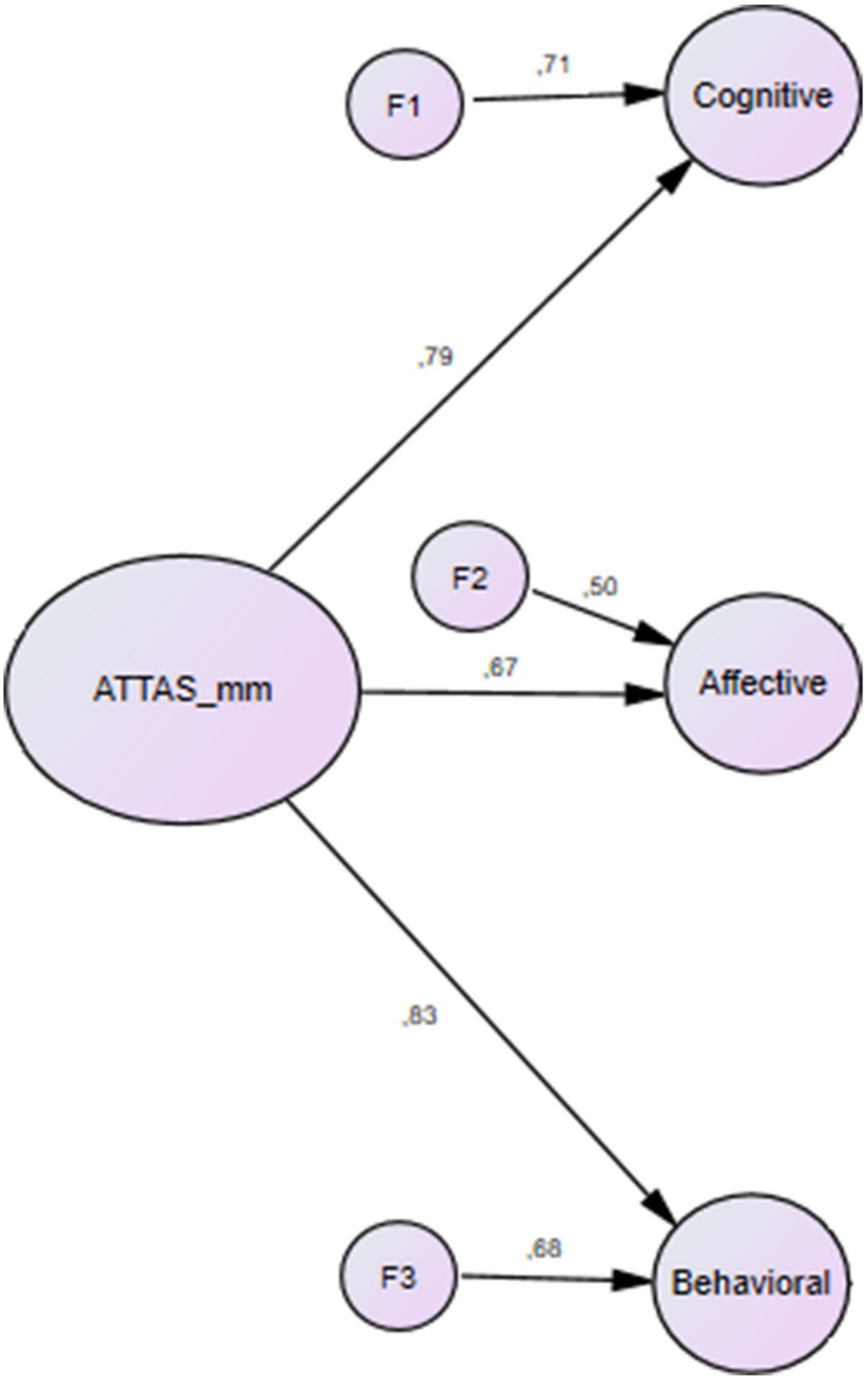

Fig. 2 The second-order structural model for the attitudes towards teaching all students (ATTAS-mm) scale

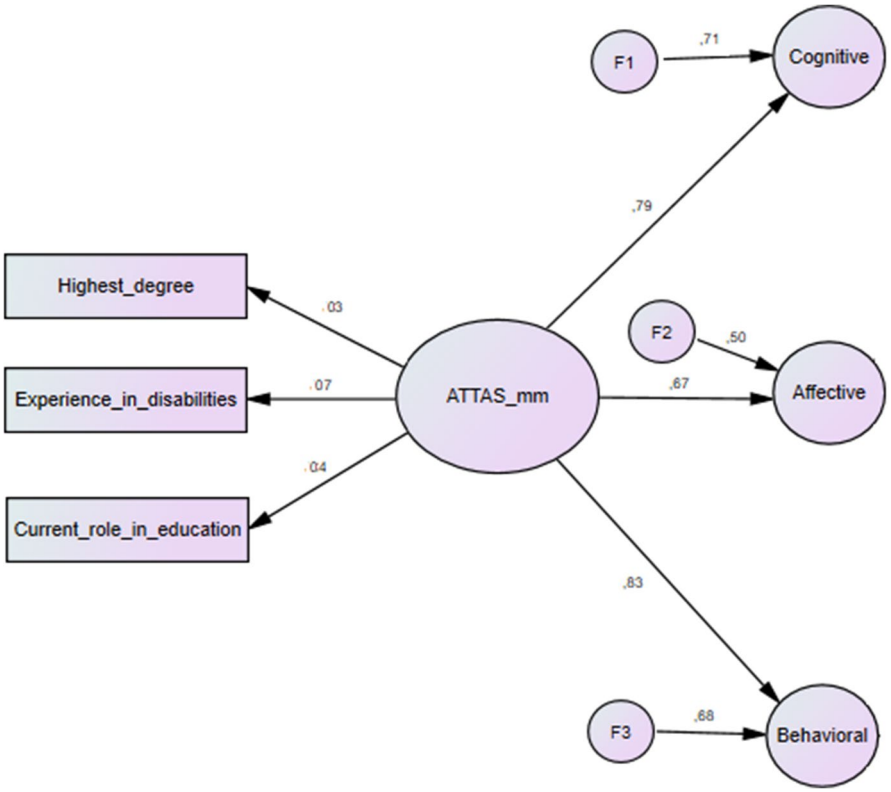

Fig. 3 Evaluation of the contribution of demographic variables on ATTAS-mm

cognitive factor (F_1) titled *believing that all students can succeed in general education classrooms*, affective factor (F_2) titled *developing personal and professional relationships*, behavioral factor (F_3) titled *creating an accepting environment for all students to learn*, and overall (F_4) titled *attitudes towards teaching all students*, while the independent measure was the location. Statistical analysis indicated a significant effect for F_4 ($Pillai's\_Trace = 0.323$, $F(12,2709) = 27.264$, $p = 0.000 < 0.001$, $\eta_p^2 = 0.108$). Equally, there was a significant effect for F_1 ($F(4,903) = 20.234$, $p = 0.000 < 0.001$, $\eta_p^2 = 0.082$), F_2 ($F(4,903) = 23.765$, $p = 0.000 < 0.001$, $\eta_p^2 = 0.095$), and F_3 ($F(4,903) = 25.361$, $p = 0.000 < 0.001$, $\eta_p^2 = 0.101$).

Post hoc tests using Bonferroni adjustment for multiple comparisons revealed distinct clusters of countries within each factor. In all factors apart from F_1, Greece scored above the other countries. The UK and the USA enrolled in the same cluster for all factors apart from F_1. The same holds for Malaysia and Turkey for all factors. Only in the F_1 factor, entitled Cognitive, the UK scored above all countries. Greece, Malaysia, and Turkey enrolled in the same cluster, with higher scores than the USA.wAfterward, a MANOVA analysis was performed to

Table 3 Cross-national comparison of the ATTAS-mm factor scores

Countries							
	Greece GR	Malaysia MA	Turkey TU	United Kingdom UK	United States of America USA		
	245	171	210	186	96		
Variables	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)	*F* values	Group comparisons Post-hoc tests
Cognitive	12.67 (3.73)	12.26 (3.96)	11.92 (3.86)	14.46 (3.85)	10.47 (3.76)	20.234***	UK* > TU* = MA* = GR* > USA*
Affective	17.46 (2.91)	15.52 (2.22)	15.30 (2.73)	15.16 (3.39)	16.22 (3.18)	23.765***	GR* > MA* = USA* > TU* = UK*
Behavioral	17.29 (2.98)	14.70 (2.51)	15.83 (3.09)	15.02 (3.08)	16.35 (3.00)	25.361***	GR* > USA* = TU* > UK* = MA*
ATTAS-mm/overall	47.42 (7.82)	42.49 (7.26)	43.06 (7.76)	44.65 (9.78)	43.06 (7.87)	27.264***	GR* > UK* = TU* > USA* = MA*

implement comparisons of the four latent factors across teachers' years of experience. Comparisons and descriptive statistics, such as mean and standard deviation, of the ATTAS-mm factors scores are presented in Table 4. Dependent measures included the 4 factors, as previously, while the independent measure was the years of teaching. Statistical analysis indicated a significant effect for F_4 (*Pillai's_Trace* = *0.030, F(12,2709)* = *2.271, p* = *0.007* < *0.05,* $\eta_p^2 = 0.010$). Equally, there was a significant effect for F_1 (*F(4,903)* = *2.532, p* = *0.039* < *0.05,* $\eta_p^2 = 0.011$), F_2 (*F(4,903)* = *1.984, p* = *0.095* > *0.05,* $\eta_p^2 = 0.009$), and F_3 (*F(4,903)* = *3.086, p* = *0.015* < *0.05,* $\eta_p^2 = 0.012$).

Then, a MANOVA analysis was also performed to implement comparisons of the four latent factors across the educational level of work/intern. Comparisons and descriptive statistics, such as the mean and standard deviation of the ATTAS-mm factors scores, are presented in Table 5. Dependent measures included the 4 factors, as previously, while the independent measure was the educational level of work/intern. Statistical analysis indicated a significant effect for F_4 (*Pillai's_Trace* = *0.046, F(9,2712)* = *4.658, p* = *0.000* < *0.001,* $\eta_p^2 = 0.015$). Equally, there was a significant effect for F_1 (*F(3,904)* = *5.796, p* = *0.001* < *0.05,* $\eta_p^2 = 0.019$), F_2 (*F(3,904)* = *3.761,p* = *0.011* < *0.05,* $\eta_p^2 = 0.012$), and F_3 (*F(3,904)* = *2.562, p* = *0.007* < *0.05,* $\eta_p^2 = 0.008$).

Finally, a MANOVA analysis was performed to implement comparisons of the four latent factors across the highest degree completed. Comparisons and descriptive statistics, such as the mean and standard deviation of the ATTAS-mm factors scores, are presented in Table 6. Dependent measures included the 4 factors, as previously, while the independent measure was the highest degree completed. Statistical analysis indicated a significant effect for F_4 (*Pillai's_Trace* = *0.041, F (12,2709)* = *3.139, p* = *0.000* < *0.001,* $\eta_p^2 = 0.014$). Equally, there was a significant effect for F_1 (*F(4,903)* = *3.591, p* = *0.006* < *0.05,* $\eta_p^2 = 0.016$),

Table 4 Comparison of the ATTAS-mm scores across years of teaching

Years of teaching							
	0–4 C_1	5–9 C_2	10–14 C_3	15–19 C_4	> 20 C_5		
	474	157	135	79	63		
Variables	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)	*F* values	Post hoc tests
Cognitive	12.78 (4.04)	12.87 (3.68)	12.17 (4.00)	11.45 (3.90)	10.47 (4.26)	2.532**	
Affective	16.16 (3.14)	16.00 (2.80)	16.09 (2.92)	15.27 (2.90)	15.46 (3.07)	1.984	
Behavioral	16.09 (3.24)	15.62 (2.84)	16.26 (2.86)	15.50 (2.67)	14.93 (3.41)	3.086**	$\mathbf{C_3^* > C_4^*}$
ATTAS-mm/ overall	45.03 (8.64)	44.49 (7.60)	44.54 (8.08)	42.24 (7.69)	42.66 (9.05)	2.271**	

Table 5 Comparison of the ATTAS-mm scores across educational level of work/intern

Educational level of work/intern						
	Elementary (k-2, k-3, k-4, k-5, or k-6)	Middle (4–6, 5–6, 4–8, 6–8, 7–8)	High (7–12, 8–12, 9–12)	Other		
	345	328	113	122		
Variables	M (SD)	M (SD)	M (SD)	M (SD)	*F* values	Post hoc tests
Cognitive	12.24 (4.23)	12.44 (3.57)	12.34 (4.16)	13.93 (3.96)	5.796*	O* > E* > M* = H*
Affective	15.60 (3.36)	16.28 (2.81)	16.43 (2.86)	15.91 (2.67)	3.761*	E* > M*
Behavioral	15.66 (3.15)	16.22 (3.12)	15.93 (3.35)	15.68 (2.62)	2.562*	
ATTAS-mm/ overall	43.52 (9.06)	44.96 (7.51)	44.71 (9.01)	45.54 (7.71)	4.658**	E* > M*

F_2 ($F(4,903) = 4.098$, $p = 0.003 < 0.05$, $\eta_p^2 = 0.018$), and F_3 ($F(4,903) = 2.381$, $p = 0.049 < 0.05$, $\eta_p^2 = 0.010$).

Discussion

Taking for granted the diversity of educational systems and teachers' profiles across different countries (Armstrong et al., 2011; Condie et al., 2011) such as Greece, Turkey, Malaysia, the UK, the USA, and the relationship of this diversity to the implementation of inclusive education programs, an attempt to suggest a model for attitudes appropriate for cross-national comparison could set a basis for further work in exchanging practices, promoting quality (Ainscow et al., 2019) and teachers' training towards inclusive education (Ainscow et al., 2014).

Particularly our study addressed the gap in the lack of a systematic effort to explore potential effects of the suggested model emerging from the ATTAS-mm across countries, years of teaching, educational level of work/intern, or highest degree completed. Our study provides evidence that ATTAS-mm is a reliable and valid research tool appropriate for cross-national use and comparisons. It also supports the hypotheses made at the start of the study:

Hypothesis 1. The model suggested by ATTAS-mm yields a good fit across different countries.
Hypothesis 2. Years of teaching experience have a significant effect on attitudes towards teaching all students.
Hypothesis 3. The educational work level of teachers has a significant effect on attitudes towards teaching all students.

Table 6 Comparison of the ATTAS-mm scores across highest degree completed

Highest degree completed							
	Associates (A)	Bachelors (B)	Masters (M)	Masters + 30 (6th year) (M+)	Doctorate (D)		
	160	512	190	34	15		
Variables	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)	*F* values	Post hoc tests
Cognitive	12.87 (4.28)	12.50 (4.00)	12.62 (3.56)	10.58 (4.24)	15.08 (3.72)	3.591*	D* > M+* > A* = B* = M*
Affective	15.57 (3.10)	15.89 (3.01)	16.68 (2.78)	15.35 (3.82)	16.91 (2.93)	4.098*	D* = M* > A* = B*
Behavioral	15.41 (3.08)	15.93 (3.09)	16.23 (3.05)	15.41 (3.31)	17.33 (3.28)	2.381*	
ATTAS-mm/overall	43.86 (8.96)	44.33 (8.36)	45.54 (7.51)	41.35 (8.93)	49.33 (8.67)	3.139**	D* > M+*

Hypothesis 4. The highest degree completed by teachers has a significant effect on attitudes towards teaching all students.

Analysis of ATTAS-mm suggested a good fit of a 4-factor solution for the five participating countries. The factors are summarized as the cognitive factor (F_1), titled believing that all students can succeed in general education classrooms; the affective factor (F_2), titled developing personal and professional relationships; the behavioral factor (F_3), titled creating an accepting environment for all students to learn; and the overall factor (F_4), titled attitudes towards teaching all students (Ahmmed et al., 2012; Barnes & Gaines, 2015; Crișan et al., 2020; Ćwirynkało et al., 2017; Forrester, 2016; Gregory et al., 2016; MacFarlane & Woolfson, 2013). Moreover, our effort explores the potential effects of the four latent factors emerging from the ATTAS-mm by country, years of teaching, educational level of work/intern, or highest degree completed (Avramidis & Kalyva, 2007; Barnes & Gaines, 2015; Crișan et al., 2020; Gregory et al., 2016).

Results suggested that the proposed model by ATTAS-mm yields a good fit across different countries. Existing similarities and differences across the different countries did not affect the suggested construct. Even though each country may follow different routes to the inclusion of students with disabilities in mainstream classrooms, the context description illustrates that each country has progressed towards students with special needs inclusion. Our findings are consistent with several individual studies across different countries (Bangladesh: Ahmmed et al., 2012; Croatia and Poland: Ćwirynkało et al., 2017; Romania: Crișan et al., 2020; Scotland: MacFarlane & Woolfson, 2013; USA: Barnes & Gaines, 2015; Forrester, 2016; Gregory et al., 2016) which illustrate that significant steps have been taken for towards inclusive education for students with disabilities.

Extant evidence suggests that the application of the theory of planned behavior (Ajzen, 1991, 2020) more specifically, the cognitive, affective, and behavioral aspects of attitudes, has a significant effect on teacher's overall behavioral intention regarding the inclusion of students with mild to moderate disabilities (Gregory et al., 2016). A potential interpretation may be grounded in the relationships between the teacher and students, and the teacher and colleagues greatly define the affective and conative (behavioral) components of attitude. Recent findings suggest that the majority of typically developing students in Greece have a positive attitude towards their classmates with disabilities (Soulis et al., 2016). Frequent contact with students with disabilities can create an accepting environment and promote teachers' positive attitudes towards inclusive education (Ahmmed et al., 2012; Vogiatzi et al., 2021). Moreover, teachers build their identities as they interact with other people (Vähäsantanen & Eteläpelto, 2009). They organize their actions based on how they want to be viewed by others. In this sense, the behavioral aspect of attitude includes an anticipatory or interpretive element. Additionally, the cognitive aspect is related to perceptions and stereotypes about believing that all students can succeed in general education classrooms.

In the cognitive factor, the UK had the most positive attitudes. TU, MA, and GR enrolled in the same cluster, and the USA had less positive attitudes. A potential interpretation may lay in the fact that in the UK it is estimated that a third of pupils

with special education needs are educated in mainstream schools. This percentage is higher in comparison to the other countries we examined and could be related to a positive attitude on behalf of the teaching staff and children in coexisting and supporting students with special needs. Consequently, teachers have more frequent interactions with children with disabilities. If they have a student with disabilities in their class, they can get extra support and adjustments at school. This is called Special Educational Needs (SEN) support. There are usually 2 levels of support for children with SEN: (a) SEN support, which mainstream state schools must always provide, and (b) education, health, and care (EHC) plans, sometimes called EHCPs when SEN support is not enough to meet a child's needs (Condie et al., 2011). Thus, the structure of the educational system in the UK affects their practices and as a result their positive attitudes.

On the other hand, students identified with disabilities in the USA are entitled to an individualized education program that is co-constructed by teachers, parents, and specialists. As a part of the individualized education program, the committee determines the most appropriate placement for the student which can range from being fully included in general classes to placements in special schools or a hospital. Moreover, the individualized education program specifies which supports must be in place for a student, even when the student is included in the general education classroom. Despite the positive attempts to support students with special needs, we need to take into consideration another contextual factor. In the USA, the accommodations that the school is expected to make are legally binding, and the school could be sued if they fail to meet these accommodations (Hunt, 2011). Hence, this pressure may be responsible for the teachers' less positive attitudes.

As we have presented in our context description, significant steps have been taken towards inclusive education for students with disabilities over the last 2 decades through legislation and policy development in the five countries that we examine in our study. However, teachers in TU, GR, and MA perceive that inclusive education has a long way to move on to be smoothly implemented (TU: Rakap et al., 2010; GR: Vogiatzi et al., 2021; MA: Jelas & Mohd Ali, 2014). This could be partly attributed to the small number of students with special needs that made it to mainstream schools, with an overall tendency to move students with disabilities to special schools. The main reason for this move is the lack of appropriate education that teachers receive, which makes them feel inadequate to support students with disabilities. This is particularly apparent in TU and MA, while it is also apparent in GR.

In the affective factor, GR had the most positive attitude. MA and the USA enrolled in the same cluster, and TU and the UK had less positive attitudes. A potential interpretation may lay in the fact that the teacher-students and teacher-colleagues relationships define the affective component of attitude (Gregory & Noto, 2019). Despite the working environment and the aspects of the employee's terms and conditions of employment in Greece, teachers are not able to change their profession due to the high unemployment in the field of education. As a consequence, they need to stay engaged in their work (Antoniou et al., 2022), be more open to collaborating with their colleagues (Saloviita, 2020), and reach higher perceived behavioral control levels (MacFarlane et al., 2013).

In addition to the above aspects, it can be observed that Greece is the country with the least teachers *4.08%* compared to all countries, stating that they intend to work in education for less than 5 years. Moreover, most teachers *69.80%* compared to all countries stated that they intend to work in education for more than 20 years, while the corresponding percentages for all countries are formed at lower values [MA(*60.82%*), TU (*61.43%*), UK (*31.18%*), and USA (*0.00%*)]. Moreover, another possible explanation may be related to the features of the samples across countries. The extent of experience working with individuals with disabilities in schools and/or human service agencies for more than 80 h per month was formed at *16.73%* for GR, at *5.36%* for MA, at *1.43%* for TU, and at *0.00%* for both the UK and the USA. A similar pattern is observed for the behavioral factor with GR having the most positive attitude. TU and MA enrolled in the same cluster, and the USA and the UK had very positive attitudes.

Moreover, our findings support H2 suggesting that statistical analysis indicated that years of teaching experience have a significant effect on attitudes towards teaching all students. This finding is consistent with previous findings (USA: Janney et al., 1995; Leatherman & Niemeyer, 2005; LeRoy & Simpson, 1996, UK: Avramidis et al., 2000, Australia: Campbell et al., 2003, Greece: Avramidis & Kalyva, 2007), which highlighted the fact that higher levels of experience and social contact with children with disabilities can promote positive attitudes towards inclusive education (Avramidis & Kalyva, 2007). Significant differences in teachers' attitudes are observed between those having 10–14 and 15–19 years of experience as an educator within behavioral factors. Moreover, it was observed that the groups of participants with the most years of experience (15–19 and > 20) had the least positive attitudes towards teaching all students across all factors. A potential explanation may lay in the fact that older teachers are less willing to reform their educational approaches (Vähäsantanen & Eteläpelto, 2009).

Results from this study support H3 suggesting that there is a statistically significant effect of educational work level on the teachers' attitudes towards teaching all students. Previous research findings suggested that the teachers employed in elementary school settings (USA: Gregory et al., 2016) had more positive attitudes towards inclusion than those employed in secondary school settings. A possible explanation may be attributed to the fact that in secondary education, there are many different teachers' disciplines. At the middle and high school level, lessons are getting more content-specific and difficult, making increasingly demanding for teachers to implement inclusive education. Moreover, in secondary education, the teachers receive training or placement towards inclusion (Chiner & Cardona, 2013).

Finally, results supported H4 suggesting that there is a statistically significant effect of the highest degree completed of teachers on attitudes towards teaching all students. Results are consistent with previous findings suggesting that the more qualifications in special education teachers have, the more positive the impact is on their attitudes towards inclusion (Boyle et al., 2013; Sharma et al., 2009; Shippen et al., 2011; Subban et al., 2006; O'Rourke et al., 2008).

Practical Implications

An instrument that is reliable for measuring teachers' attitude towards inclusive education is critical. This study explored the reliability and construct validity of ATTAS-mm to measure teachers' attitudes towards inclusion across different countries. ATTAS-mm scale is reliable to be adopted as a tool in USA, the UK, Greece, Turkey, and Malaysia representing developed and developing countries.

In exploring teachers' attitudes towards inclusion across five different countries, the study found that significant differences exist in attitude concerning the country origin, the highest completed degree, the extent of experience working with individuals with disabilities in schools and/or human service agencies, and the current role in education.

As we illustrate in the context description, there seems to be ground to develop or update the training that teachers receive in special education. This is further supported by our data which suggest that teachers in TU, GR, and MA perceive that inclusive education has a long way to move on to be smoothly implemented. The call to upgrade and enrich pre-service and in-service teachers' knowledge and skills on inclusive education could impact the cognitive domain and be an important objective in professional courses at all educational levels. While involved in teaching practices, pre-service teachers can be allowed to work with students with disabilities to improve both competencies and attitudes. Skills that benefit both typically developing students and students with disabilities are necessary to be developed if inclusive education is to be promoted. Students' interactions with their typically developing peers can have a strong effect on the entire society on a macro-level.

Sustainable Development Goal 4 on Education and the Education 2030 Framework for Action emphasize inclusion and equity as laying the foundations for quality education. This is a world agenda, whereby all countries are responsible to ensure the success of attaining the goal. The data also suggests that the more qualifications in special education teachers have, the more positive the impact is on their attitudes towards inclusion. We have seen that in the countries explored in this study, significant steps have been made to emphasize inclusion and incorporate initiatives for student inclusion in mainstream education. We recommend continuing to build on the progress made so far and introducing policies that specify the training required by teachers to be perceived as qualified to teach students with special education. A policy towards this effect is currently missing in the countries explored in our study.

Monitoring bodies, like UNESCO, monitor educational practices throughout the world. Scholars across the world are also contributing by providing useful information through empirical research. For ensuring quality in science and mathematics education, PISA and TIMSS have been accepted as measurement means of students' performance throughout the world. Inclusive education, which advocates for no child to be educationally left behind, is still new to many countries, and its level of acceptance among teachers varies across the world. Therefore, it is of the interest of many parties in the education field to understand teachers' attitudes towards inclusive education, since they constitute a prime factor leading to successful outcomes for students with disabilities. The findings of the present study urge stakeholders to

invest in the training of pre-service teachers and the professional development of in-service teachers.

Furthermore, various countries may work together towards the development of inclusion programs, while monitoring their implementation and comparing educational outcomes. In the countries explored in this study, we have seen that the UK and the USA have been more successful in educating students with special education needs in mainstream schools. Other countries, such as Turkey, Malaysia, and Greece, could learn from the implementation of inclusion programs and teachers' training offered in the UK and the USA to achieve higher percentages of student inclusion in mainstream education. Looking for ways to assist educational collaborations and exchanges between countries with more advanced policies and training programs in special education and countries that are still looking for more effective ways to support special education could have a great impact on the lives of students with special needs and the teachers.

Future Directions

Our study explored four hypotheses in five particular contexts, the UK, the USA, Greece, Turkey, and Malaysia. The results of the study could differ in different contexts. Future studies could further explore the validity of ATTAs-mm and the support of H1, H2, H3, and H4 in different contexts. Focusing only on developing countries or developed countries to explore the hypotheses could also draw some interesting findings and further insights to understand how to better support the inclusion of students with special needs in mainstream education.

Our data illustrated that there is a statistically significant effect of the highest degree completed of teachers on attitudes towards teaching all students. Future studies could focus on the training programs put in place across countries. Comparing the training programs offered along counties with the percentages of student inclusion in mainstream education could lead to some interesting recommendations regarding the types, quality, and intensity of special education provided to teachers.

Limitations

The basic limitation of the study lies in the data collection. This study was carried out in December 2020 during the COVID-19 crisis. In most countries, schools were closed, and classes were conducted online during that year. Teaching and learning activities during that time were a new challenge for most teachers and still are even today. The experiences of the pandemic might have shaped the participants' attitudes and influenced their responses to the survey of the present study. Teaching typically developing students is hard, while teaching students with disabilities is even harder. Regardless of the situation, the results of the study indicate high consistency among the variables measuring teachers' attitudes towards inclusive education during the two different periods. This is part of the study's limitations and perhaps suggestions for future research. Moreover,

another limitation is related to the fact that this study eliminated students with disabilities. It would be rather useful and interesting to implement research regarding attitudes towards teaching students with either neurodevelopmental disorders or high abilities/giftedness.

Conclusion

The current study found that the ATTAS-mm was a reliable and valid tool to study teacher attitudes towards the inclusion of students with mild to moderate disabilities in the five countries studied. Additionally, the data showed that a fourth overarching factor encompassed the three dimensions of attitude (cognitive, affective, behavioral/conative) consistent with the theory of planned behavior. These findings, paired with the three demographic variables, emphasized the extant opportunities for both pre-service and in-service teacher training. Specifically, experiences that allow teachers greater contact with students with special education needs increased collaboration between teachers and more support for taking additional coursework in the field of special education. These practical actions can impact teachers' attitudes towards inclusion and therefore improve the implementation of inclusive education and educational outcomes for students.

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Author Contribution GC with the assistance of SGS and AA collected the data for Greece. GC was responsible for the coordination of the study across the 5 participating countries, GC analyzed the data and wrote the Method and Results parts of the article. AA assisted us with the editing process and general substantial corrections regarding the entire manuscript. IK collected the data for the UK and supported the writing of the introduction part. JG collected the data for the USA and supported the writing of the introduction part. MO, SS, and CD collected data for Turkey. MO supported the writing of the Methods part. ZI collected data for Malaysia and assisted in the writing of the discussion and implications, limitations, and conclusion parts. All authors wrote short descriptions of their countries' educational systems regarding special and inclusive education. All authors contributed equally to the final form of the article.

Data Availability Data is available upon request.

Declarations

Ethics Approval and Consent to Participate We complied with the principles of the British Educational Research Association (BERA) (2018) Ethical Guidelines for Educational Research in implementing the study. The study was approved by the relevant Ethics Committee, and consent forms were obtained from all teachers that participated in the study.

Consent for Publication There are no identifying images or other personal or clinical details of participants that compromise their anonymity of the participants. For the participants'/teachers' data in any form, written consent to publish was obtained from all participants.

Conflict of Interest The authors declare no competing interests.

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