

Portuguese Teacher Attitudes Towards Inclusive Education in Basic and Secondary Schools

Atitudes dos professores portugueses do ensino básico e secundário perante a educação inclusiva

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ABSTRACT

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Introduction: The availability of teachers to make personal, organizational and academic adaptations in their classrooms is essential for the implementation of inclusive education. This availability is influenced by teacher's attitudes towards inclusive education. There are not yet many quantitative studies regarding the attitudes of Portuguese teachers towards inclusive education. This study aims to examine the attitudes of Portuguese teachers towards inclusive education, as well as the correlation with demographic and professional characteristics. A quantitative study with a non-experimental, descriptive and correlational design was proposed, using a demographic questionnaire and the MATIES scale (Multidimensional Attitudes toward Inclusive Education Scale). The sample was made up of 437 primary and secondary school teachers in Portugal. Results: The results show that teachers have a generally positive attitude towards inclusive education. No influence of gender, age or type of teacher variables on teachers' attitudes towards inclusive education was identified. Discussion: Teachers have a good level of confidence in their ability to work in the field of inclusive education, but report a lack of specific training in this area. The implications of this evidence in the theoretical and practical field are discussed, as well as the limitations of using attitude assessment scales for inclusive education.

RESUMO

Palavras-chave:

atitudes, educação inclusiva, professores, Portugal, MATIES.

Introdução: Para a implementação da educação inclusiva, é fundamental a disponibilidade dos professores em efetuar adaptações pessoais, organizacionais e académicas nas suas salas de aulas, disponibilidade essa que é influenciada pelas suas atitudes face à educação inclusiva. Não existem ainda muitos estudos quantitativos acerca das atitudes dos professores portugueses perante a educação inclusiva. O objetivo deste estudo é o de analisar as atitudes dos professores portugueses em relação

à educação inclusiva, bem como o efeito de características demográficas e profissionais sobre essas mesmas atitudes. Metodologia: Foi proposto um estudo quantitativo, com um desenho não experimental, descritivo e correlacional, com recurso à aplicação de um questionário demográfico e da escala MATIES (*Multidimensional Attitudes toward Inclusive Education Scale*). A amostra foi formada por 437 professores do ensino básico e secundário de Portugal. Resultados: Os resultados mostram que os professores têm uma atitude geral positiva em relação à educação inclusiva. Não foi identificada influência das variáveis de género, idade ou tipo de professor na atitude dos professores perante a educação inclusiva. Discussão: Os professores da amostra demonstram um bom nível de confiança na sua capacidade para trabalhar no âmbito da educação, mas relatam carência de formação específica nesta área. São discutidas as implicações destas evidências no campo teórico e prático, bem como as limitações do uso de escalas de avaliação de atitudes para a educação inclusiva.

Introduction

According to the Salamanca Declaration (UNESCO, 1994), the concept of inclusive education refers to the idea that all children, including those with disabilities and special educational needs, should have access to mainstream schools and classes with the help of human and technical resources appropriate to their situation.

The concept of inclusive education has been progressively adopted and incorporated into national legislation in various countries. However, the implementation and promotion of education has proved to be a substantial challenge and, according to the European Agency for Development in Special Needs Education (EADSNE, 2012), segregated education has not substantially decreased in many countries.

It is essential to gain a deeper understanding of the mechanisms behind the difficulty in implementing inclusive education.

It is known that "inclusion depends very much on teachers' attitudes towards students with SEN, their view of differences in the classroom and their willingness to respond positively and effectively to those differences" (EADSNE, 2003, p. 15).

Teachers' attitudes have a significant influence on how inclusive educational practices are implemented (Forlin et al., 2008), with negative attitudes towards inclusion exerting an inhibiting influence on its success (Gibb et al., 2007). Teachers' attitudes affect the learning environment and the teaching approach (Ross-Hill, 2009).

According to Scruggs & Mastropieri (1996) the majority of teachers have positive attitudes towards the idea of inclusion, but a slightly smaller majority expressed a willingness to accept children with special needs into their classrooms.

Teachers' attitudes towards inclusion can be influenced by their belief in their competence to include these children, which points to the importance of the concept of self-efficacy, defined as teachers' confidence in their individual and collective ability to influence students' learning (Klassen et al., 2011).

Other variables that have been studied as mediators include teachers' training in special education, their experience of working with students with special educational needs and their amount of previous contact with people with disabilities. Having contact with people with disabilities is associated with more positive attitudes towards inclusion (Boyle et al., 2013). Teacher training has been positively correlated with inclusive attitudes (e.g. Ahsan et al., 2012), as has work experience (e.g. Sharma et al., 2006).

Teacher attitudes are associated with teacher categories, with special education teachers generally being the most positive group (Engelbrecht et al., 2013). School principals were also more positive than teachers (Boyle, 2014), and elementary school teachers were more positive than secondary school teachers (Chiner & Cardona, 2013).

As for the gender factor, the studies are not conclusive, with some studies finding no difference between male and female teachers (e.g., Chhabra et al., 2010); and other studies which show that female teachers have a more positive attitude towards inclusion (e.g. Alquraini, 2012). Only two studies found that male teachers felt more positive about inclusion than female teachers (Bhatnagar & Das, 2014).

As for age, this factor is also unclear, with some studies showing no association between teachers' ages and their attitudes towards inclusion (Chhabra et al., 2010) and other studies showing that younger teachers feel more positive about inclusion than older teachers (e.g. Ahmmed et al., 2014).

To assess teachers' attitudes towards inclusive education, many studies have used attitude assessment scales (Saloviita, 2015).

According to a review study by Ewing et al. (2018), the MATIES (Mahat, 2008) and the SACIE-R (Forlin et al., 2011) are the most psychometrically consistent questionnaires for

assessing teachers' attitudes towards inclusive education, as they consider all the affective, cognitive and emotional dimensions of the attitude components (Silva, 2019).

The MATIES (*Multidimensional Attitudes towards Inclusive Education Scale*) was developed by Marian Mahat in 2008 (Mahat, 2008), with the aim of creating a multidimensional instrument that could effectively measure the affective, cognitive and behavioral aspects of attitudes towards inclusive education, including its physical, social and academic dimensions; and contribute to a greater understanding of the theoretical nature and structure of attitudes and the knowledge base for the provision of inclusive education.

Since its initial creation, MATIES has been validated and applied in a range of languages, countries and educational contexts.

Srivastava et al. (2017) used MATIES to conclude that Indian teachers with more knowledge about inclusive education and disability are more positive about the inclusion of students with disabilities. The results also showed statistically significant differences in the affective and behavioral components between the two groups of teachers tested.

In Slovenia, Štemberger & Kiswarday (2018) showed that preschool and elementary school teachers have positive attitudes towards inclusion. They also show a positive understanding of inclusion and a willingness to adjust their behavior to enable effective inclusion.

In Nigeria, the study by Odo et al. (2021) investigated the roles of conscientious personality (based on the BIG five model) and work experience in predicting elementary school teachers' attitudes towards inclusive education. The results showed that conscientious personality and work experience positively predicted elementary school teachers' attitudes towards inclusive education.

On the other hand, in Slovakia, in the study by Barnová et al. (2022) the results revealed statistically significant differences in the affective and behavioral components between the two groups of teachers examined.

Polyzopoulou & Tsakiridou (2023) applied MATIES to a sample of primary and secondary general education teachers in Greece, showing that, in general, teachers expressed positive attitudes towards inclusion. They also found that the presence of and contact with the disabled person in the family are important factors in a more positive attitude towards inclusion, as well as the frequency of special education training, work experience and knowledge of the legal framework. Elementary school teachers develop more positive dispositions than secondary school teachers.

In Portugal, the concept of inclusive education is still a very recent idea and was only formally implemented in July 2018, through new legislation for inclusive education: Decree Law 54/2018 (Presidency of the Council of Ministers, 2018). Also called the "Diploma for Inclusive Education", this new Decree Law aims to provide effective learning opportunities for all children. Rejecting the reductive concept of "special educational needs", it assumes that there should be no arbitrary distinctions between children and admits that any student, at any point in their academic career, may need measures to support learning.

There are still not many good studies on teachers' attitudes towards inclusion in Portugal. A study (OECD, 2022), published before the aforementioned Decree-Law 54/2018, found "an overall positive attitude of early childhood education teachers towards inclusion" (p. 8), with more positive attitudes being found in teachers who personally knew someone with special educational needs. However, attitudes were less positive when teachers had direct experience in classrooms with students with special educational needs, probably due to negative experiences in the classroom. However, the majority of respondents reported having difficulties or doubts about the application of the law; feeling a lack of support from administration and training bodies and that the role of the special education teacher is not clear enough (OECD, 2022).

As for evaluating teachers' attitudes towards inclusive education, studies are scarce. Silva (2019) translated and validated MATIES for the Portuguese population. Similar to previous studies with MATIES, the Portuguese sample also showed a positive correlation between the affective and cognitive dimensions of attitudes and behavioral intentions.

However, it should be noted that this study was carried out with student trainees and not with teachers with real professional experience. To date, there has been no study into the application of MATIES with teachers in post.

Method

Project

The aim of this study is to analyze the attitudes of Portuguese primary and secondary school teachers towards inclusive education, as well as the effect of age group, gender, type of teacher (regular education teacher or special education teacher), level of education taught, level of knowledge about national legislation on inclusive education and level of confidence in teaching children with disabilities, on these same attitudes.

We chose to carry out the study with primary and secondary school teachers (1st to 12th grade) because these are the levels of compulsory education in Portugal and, as such, necessarily have to implement inclusive education in their schools and classes.

The analysis of Portuguese teachers' attitudes towards inclusion, as well as the identification of variables that influence them, will be useful to better understand the current situation surrounding inclusion in the Portuguese context.

Portuguese teachers' attitudes towards inclusive education have been studied, but not adequately. There is a need for more research on the subject, mainly quantitative, and with teachers in full exercise of their duties, since most quantitative studies have been carried out with university students in master's degrees related to teaching.

The study questions were formulated as follows:

(1) What are the affections, cognitions and behaviors of Portuguese teachers in relation to inclusive education?

(2) How do age, gender, type of teacher, level of education taught, level of knowledge about national legislation on inclusive education and level of confidence in teaching children with disabilities influence the affections, cognitions and behaviors of Portuguese teachers in relation to inclusive education?

This study is based on the quantitative paradigm, with a non-experimental, descriptive and correlational design. It is assumed to be a quantitative paradigm because the data collected will be quantitative. It has a non-experimental design as there will be no manipulation of an independent variable or random assignment to groups by the researcher. It is assumed to be descriptive as the variables under study will be measured without interference with the aim of describing characteristics and trends, and correlational as it will seek to test the relationship between the variables.

The necessary ethical issues related to the nature of the research were observed. The research presented in this article is part of a larger project aimed at analyzing Portuguese teachers' attitudes towards inclusive education, which has been reviewed and accepted by the International Ibero-American University - Mexico.

The participating teachers were informed about the objectives of the research, that their participation would be anonymous and voluntary and that their answers would only be used for the needs of the current research. The teachers expressly agreed to take part in the research by signing an informed consent form. The researcher in charge gave the participating teachers her personal contact details in case they wanted to communicate for any reason.

Participants

In this study, 437 Portuguese primary and secondary school teachers took part. This sample is representative of the Portuguese teacher population with a 95% confidence interval.

According to Table 1, the majority of teachers are women (81.7%, $n = 357$) and aged over 46 (78%, $n = 341$). The majority of the participants are regular school teachers (89.7%, $n = 392$) and teach in the 3rd cycle and secondary schools (59.7%, $n = 261$).

With regard to teachers' experiences, the majority rate their level of knowledge of national legislation on inclusive education as average or good (64.1%, $n = 280$), as well as their level of confidence in working with children with disabilities (65.6%, $n = 287$). However, the level of specific training for working with children with disabilities is rated as low or medium (58.3%, $n = 255$).

Table 1

Participating teachers' answers to the sociodemographic questionnaire.

Variable	Category	N	f%
Gender	Male	77	17.6
	Female	357	81.7
	Non-binary	3	0.7
Type of teacher	Special education teacher	45	10.3
	Regular education teacher	392	89.7
Level of education taught	Pre-school	35	8.0
	1st cycle	96	22.0
	2nd cycle	45	10.3
	3rd cycle	118	27.0
	Secondary education	143	32.7
Age group	25 years old or less	16	3.7
	26 to 35 years old	13	3.0
	36 to 45 years old	67	15.3
	46 to 55 years old	147	33.6
	Over 56 years old	194	44.4
Level of knowledge of national legislation on inclusive education	None	19	4.3
	Little	93	21.3
	Medium	159	36.4
	Good	121	27.7
	Very good	45	10.3
Level of specific training for working with children with disabilities	None	93	21.3
	Little	115	26.3
	Medium	140	32.0
	Good	57	13.0
	Very good	32	7.3
Level of confidence in working with children with disabilities	None	16	3.7
	Little	89	20.4
	Medium	147	33.6
	Good	140	32.0
	Very good	45	10.3

Instrument

Two questionnaires were used for the study: a socio-demographic questionnaire and the MATIES Scale - *Multidimensional Attitudes towards Inclusive Education Scale* (Mahat, 2008), in its Portuguese version (Silva, 2019).

As for the sociodemographic questionnaire, the first four questions were for demographic analysis of the sample regarding: level of education taught (pre-school, 1st cycle, 2nd cycle, 3rd cycle or secondary education), gender (male, female, non-binary), age group, divided into five classes (25 years old or less; 26 to 35 years old; 36 to 45 years old; 46 years old to 55 years old and over 56 years old) and type of teacher (regular education teacher or special education teacher). The last three questions of the sociodemographic questionnaire focus on the sample's assessment of their level of specific training for teaching children with disabilities; knowledge of national legislation on inclusive education and level of confidence when working with children with disabilities.

The MATIES (Mahat, 2008) is an 18-item scale that measures affective, cognitive and behavioral aspects of attitudes towards inclusive education. The instrument items have six response alternatives, ranging from Strongly disagree (1) to Strongly agree (6). The first 6 items of the scale (1 to 6) correspond to the cognitive dimension of attitude assessment, items 7 to 12 correspond to the affective dimension and items 13 to 18 correspond to the behavioral dimension.

In the cognitive dimension of MATIES, there are six statements referring to the fact that teachers believe that an inclusive school is one that enables the academic progression of all students, regardless of their abilities; believe that students with disabilities should be taught in specialized schools; believe that inclusion promotes appropriate social behaviour among all students; believe that any student can learn the contents of the curriculum, as long as adjustments are made according to their educational needs; believe that students with disabilities should be segregated because it is too expensive to change the physical space of the school and, finally, believe that students with disabilities should attend specialized schools so that they don't feel rejected.

In the affective dimension of the MATIES, there are six statements referring to possible feelings of frustration at difficulties in communicating with students with disabilities; annoyance when students with disabilities can't follow the content of lessons; irritability when students with disabilities can't be understood; discomfort at the inclusion of students with and without disabilities in the same class; anxiety at the inclusion of students with disabilities in classes, regardless of the severity of the disability and, finally, frustration at the need to adapt the curriculum to meet the educational needs of all students.

In the behavioral dimension of MATIES, there are six statements referring to teachers' willingness to motivate students with disabilities to participate in all social activities at school; adapting the curriculum to meet the educational needs of all students, regardless of their abilities; physically including students with severe disabilities in the class, with the necessary support; modifying the physical space to include children with disabilities in the class; adapting communication strategies to ensure that all students with an emotional and behavioral disorder are successfully included in the class and, finally, making individual adjustments to the student assessment process in order to implement inclusive education.

The data was collected using the *Google Forms* tool through random sampling, after contacting the heads of school groups in mainland Portugal and the islands.

The time taken to complete each questionnaire was approximately 10 minutes.

Data analysis

The results were analyzed using the IBM® SPSS® Statistics 27.0 program

At the inferential level, we first tested whether the variables to be statistically analyzed were normally distributed using the Kolmogorov-Smirnov normality test, which showed that the sample did not have a normal distribution of data.

The Kruskal-Wallis test was used to compare distributions between 3 or more independent samples, where at least one is small ($n < 30$) and does not have a normal distribution. Bonferonni's post hoc analysis was used to test multiple comparisons in cases where there were statistically significant results in the Kruskal-Wallis tests.

Finally, Pearson's chi-squared test was used to assess the correlation between the variables asked in the sociodemographic questionnaire.

The significance of the tests was set at 5%.

Results

The validity of the MATIESp scale dimensions was calculated using the Cronbach's Alpha internal consistency coefficient, where acceptable values are those greater than 0.6 (Denzin & Lincoln, 1994). Table 2 shows that all the dimensions have acceptable validity.

Table 2

MATIESp validity analysis

Dimension	Cronbach's Apha
Cognitive	0.632
Affective	0.756
Behavioral	0.872

The validity of the MATIESp Scale items was tested using the Promax rotation method with Kaiser normalization, with the results indicating that most of the items demonstrate adequate construct validity, as shown in Table 3. However, in the cognitive dimension, items 1 and 4 correspond more closely to the behavioral dimension, and these same observations were previously reported in the validation study by Silva (2019). In the behavioral dimension, item 12 showed greater correspondence with the affective dimension. Items 10 and 11 showed low validity.

Table 3

Validity of MATIES items, with Promax rotation and Kaiser normalization

	Behavioral	Cognitive	Affective
Item 1	.581	-.164	
Item 2		.774	
Item 3		.400	
Item 4	.541	-.295	
Item 5		.879	
Item 6		.819	
Item 7			.776
Item 8			.767
Item 9			.790
Item 10		.469	.309
Item 11			.496
Item 12	.265		.469
Item 13	.677		
Item 14	.861		

Item 15	.743
Item 16	.632
Item 17	.763
Item 18	.771

As can be seen in Table 4, the gender variable shows no significant differences in cognitive, affective and behavioral levels between the genders ($p = .273$) ($p = .407$) and ($p = .678$).

As for the type of teacher, there were significant differences in affective ($p = .019$) and behavioral ($p = .032$) levels between mainstream and special education teachers. Regular education teachers scored higher on the affective and behavioral levels than special education teachers. There were no differences in cognitive level ($p = .070$).

For the level of education taught, there were no significant differences in cognitive ($p = .686$), affective ($p = .072$) and behavioral ($p = .670$) levels between the levels of education taught by the participant.

Also for the age group, there were no significant differences in cognitive ($p = .404$), affective ($p = .243$) and behavioral ($p = .795$) levels between age groups.

There are significant differences at the cognitive ($p = .010$), affective ($p = .015$) and behavioral ($p < .001$) levels between some of the knowledge of national legislation on inclusive education. In the cognitive dimension, having "little" knowledge scores higher than the "good" and "very good" levels. In the affective dimension, having "medium" and "little" knowledge scores higher than "no" knowledge. The "good" level of knowledge scored lower than the "average" and "poor" levels. In the behavioral dimension, participants who reported "little" knowledge and "medium" knowledge scored better than those who reported "good" knowledge. The "very good" level of knowledge scored lower than "little" knowledge.

There are significant differences in cognitive, affective and behavioral levels between some of the specific training levels for teaching children with disabilities. At the cognitive level ($p = .009$), participants who reported having "no" level of training and "little" level of training had better scores compared to those with "very good" level of training. "No" level of education results in better scores than "medium" level of education. On the affective level ($p < .001$), having "no" level of training scores better than having "good" level of training and "very good" level of training. Having a "poor" level of training results in a better score than a "very good" level of training and a "good" level of training. Having a "medium" level of education results in lower scores than "little" level of education and "no" level of education. At the behavioral level ($p = .003$) having "no" level of training scores better than "medium" level of training and "very good" level of training. Having "little" level of training scores better than "medium" level of training and "very good" level of training. Having "no" level of training scores better than having a "good" level of training.

Finally, there are also significant differences in cognitive, affective and behavioral levels between some of the levels of confidence working with children with disabilities. At the cognitive level ($p = .038$) having a "low" level of confidence is better than having a "very good" level of confidence, a "good" level of confidence and a "medium" level of confidence. At the affective level ($p < .001$) having a "low" level of confidence is better than having a "good" level of confidence and a "very good" level of confidence. Having a "medium" level of confidence is better than a "very good" level of confidence. At the behavioral level ($p < .001$) having a "low" level of trust is better than having a "medium" level of trust, a "good" level of trust and a "very good" level of trust. Having "no" level of confidence is better than having a "very good" level of confidence. Having a "medium" level of trust is better than a "very good" level of trust and a "good" level of trust is better than a "very good" level of trust.

Table 4

Correlations between the variables in the sociodemographic questionnaire and the MATIES dimensions

Variables	MATIES dimensions	Kruskal-Wallis	df	p-Value
Gender	Cognitive	1.201	1	.273
	Affective	.688	1	.407
	Behavioral	.173	1	.678
Type of teacher	Cognitive	3.275	1	.070
	Affective	5.537	1	.019
	Behavioral	4.609	1	.032
Level of education taught	Cognitive	2.272	4	.686
	Affective	8.609	4	.072
	Behavioral	2.360	4	.670
Age group	Cognitive	4.015	4	.404
	Affective	5.462	4	.243
	Behavioral	1.677	4	.795
Level of knowledge of national legislation on inclusive education	Cognitive	13.374	4	.010
	Affective	12.402	4	.015
	Behavioral	20.099	4	<.001
Level of specific training for working with children with disabilities	Cognitive	13.582	4	.009
	Affective	24.055	4	<.001
	Behavioral	16.075	4	.003
Level of confidence in working with children with disabilities	Cognitive	10.142	4	.038
	Affective	34.467	4	<.001
	Behavioral	19.964	4	<.001

Table 5 shows the correlations between the variables in the sociodemographic questionnaire.

There is a significant relationship between gender and the level of education taught (χ^2 (4, N=434) = 10.46, $p = .033$). Female participants are more likely to teach pre-school and primary school, while male participants are more likely to teach secondary school.

There were no significant relationships between gender and age group ($p = .269$), the assessment of the level of training specific to teaching with children with disabilities ($p = .218$), knowledge of national legislation ($p = .120$) or the level of confidence in working with children with disabilities ($p = .359$).

There are no significant relationships between the type of teacher and the level of education they teach ($p = .271$), gender ($p = .276$) or age group ($p = .830$).

There is a significant relationship between the type of teacher and the level of training for teaching with children (χ^2 (4, N=437) = 78.69, $p < .001$). Special education teachers are more likely to rate themselves as "good" and "very good".

There is a significant relationship between the type of teacher and knowledge of national legislation on inclusive education (χ^2 (4, N=437) = 33.10, $p < .001$). Special education teachers are more likely to rate themselves as "good" and "very good".

There is a significant relationship between the type of teacher and the level of confidence in working with children with disabilities (χ^2 (4, N=437) = 43.15, $p < .001$). Special education teachers are more likely to rate themselves as "good" and "very good". (none answered "none", "little" or "medium").

There is a significant relationship between the level of education taught and the level of training specific to teaching children with disabilities (χ^2 (16, N=437) = 30.894, $p = .014$). Participants who rate their level of training as "very good" are more likely to teach 1st cycle, those who answer "good" to teach 2nd cycle, those who answer "average" to answer "pre-school", those who answer "little" and "none" to teach 3rd cycle.

There is no significant relationship between the level of education you teach and your knowledge of national legislation ($p = .209$) or the level of confidence when working with children with disabilities ($p = .414$).

There is a significant relationship between age group and knowledge of national legislation ($\chi^2 (16, N=437) = 30.23, p = .017$). Participants who rated their knowledge of legislation as very good were more likely to be over 56. Those who rate themselves as "good" and "average" are more likely to be between 46 and 55 and those who rate themselves as "poorly" are more likely to be between "36 and 45".

There were no significant relationships between age group and the level of training specific to teaching children with disabilities ($p = .331$) or the level of confidence in working with children with disabilities ($p = .927$).

Table 5

Correlations between the variables in the sociodemographic questionnaire

	Variables	χ^2	<i>p</i> -Value
Gender	Type of teacher	1.185	.276
	Level of education taught	10.46	.033
	Age group	5.184	.269
	Level of knowledge of national legislation on inclusive education	7.315	.120
	Level of specific training for working with children with disabilities	5.763	.218
	Level of confidence in working with children with disabilities	4.360	.359
	Type of teacher	Level of education taught	5.158
Age group		1.481	.830
Level of knowledge of national legislation on inclusive education		33.10	< .001
Level of specific training for working with children with disabilities		78.69	< .001
Level of confidence in working with children with disabilities		43.15	< .001
Level of knowledge of national legislation on inclusive education		20.248	.209
Level of specific training for working with children with disabilities		30.894	.014
Age group	Level of confidence in working with children with disabilities	16.574	.414
	Level of knowledge of national legislation on inclusive education	30.23	.017
	Level of specific training for working with children with disabilities	17.881	.331
	Level of confidence in working with children with disabilities	8.653	.927

Discussion and conclusions

The results obtained in this study make it possible, firstly, to characterize primary and secondary school teaching in Portugal as a mostly female profession, especially at the initial levels of education; and an ageing profession in which the average age is around 50, data that is in line with official statistics (OECD, 2022).

The teachers surveyed report feeling that they have little or no training in inclusive education. In fact, according to the OECD study (2018), only just over a third of teachers in Portugal felt prepared to work in an inclusive environment with students with diverse

educational needs, and 27% said they would like to receive further training: 5 percentage points above the OECD average (22%).

In contrast to the idea that they have a lower level of training for working with children with disabilities, teachers mostly rate their level of knowledge of national legislation as average or higher. This raises the possibility that teachers may need specific training in teaching strategies and pedagogy and not so much in general concepts related to inclusion, special educational needs or inherent legal terms.

Despite feeling that they have little training in inclusive education, most Portuguese teachers feel confident in their abilities to meet the demands of inclusive education. We hypothesize that this may be due to teachers' possible self-efficacy beliefs, which will give them the confidence to adapt to the most challenging situations. It is suggested that more detailed studies be carried out on Portuguese teachers' sense of self-efficacy.

As for the results obtained on the MATIES scale, they show, firstly, that Portuguese teachers have favorable attitudes towards inclusive education, which is in line with the initial observations of the study by Scruggs & Mastropieri (1996) which showed that the majority of teachers have positive attitudes towards inclusive education. The OECD study (2018) conducted specifically with Portuguese teachers also found a generally positive attitude towards inclusion.

The Portuguese teachers surveyed mostly reported that an inclusive school is one that enables all students to progress academically, regardless of their abilities, and that inclusion promotes appropriate social behavior among all students. They reject the idea of segregation, based on financial arguments or to avoid students feeling marginalized, but are divided on the idea of the need for specialized schools and that any student will be able to learn the contents of the curriculum, as long as adjustments are made according to their educational needs. The teachers surveyed say they don't feel uncomfortable, anxious or irritated about pedagogical aspects related to the inclusion of students, for example, adapting resources or content. However, they seem to feel more discomfort on a personal level in their relationship with the students, particularly in managing communication and the relationship between mainstream and special education students.

This result coincides with the literature which states that teachers tend to express greater concern about difficulties in attention/concentration, language and communication and social skills of students with special educational needs when implementing inclusive education (Forlin et al., 2008). Teachers may be finding it more difficult to personally manage their inclusion efforts than to technically and professionally manage them. This hypothesis needs further study and, if proven, it raises the possibility that Portuguese teachers could benefit from greater organizational and training support in the personal management of the inclusion process.

At a behavioral level, Portuguese teachers show a significant predisposition to make changes at a personal, physical and organizational level for the inclusion of special education students, regardless of their degree of need, to adapt the curriculum, assessment methods, communication strategies and physical space.

With regard to inferential analysis, it was possible to increase knowledge about the factors that may influence teachers' attitudes towards inclusive education.

Firstly, we'll look at the type of teacher, distinguishing between mainstream teachers and special education teachers.

Regular education teachers have general education training and comparatively less special education training. Special education teachers are professionals who specifically choose to work in inclusive education, so we would expect them to have more positive attitudes towards inclusion. Engelbrecht et al. (2013) showed that special education teachers had more positive attitudes towards inclusive education than mainstream teachers. However, in the

present study, the results are not so linear, since in the MATIES, mainstream teachers showed more positive attitudes at the affective and behavioral level than special education teachers and there were no differences between teachers in the cognitive dimension of the MATIES.

It could be argued that the implementation of inclusive education means that these two categories of teacher are increasingly working collaboratively and that, as such, we will also see a lack of statistically significant differences between teacher categories. It may no longer make sense to continue to distinguish between regular education teachers and special education teachers and instead start talking about the single category of inclusive teacher.

This may also be a possible explanation for the fact that there were no statistically significant differences between the level of teaching of each teacher in this study. On this point, the results are contrary to the study by Chiner & Cardona (2013) and Polyzopoulou & Tsakiridou (2023), which showed that elementary school teachers had more positive attitudes towards inclusive education, and the study by Gaines & Barnes (2017), which showed that secondary school teachers had more favorable attitudes than elementary school teachers.

As for age, it could be argued that the more years of teaching experience, the more confident and available teachers would be for inclusive education (Dignath et al., 2022). However, the literature points to inconclusive results regarding the relationship between the years of professional experience of mainstream teachers and attitudes towards inclusive education (de Boer et al., 2011). This can also be seen in the results achieved with Portuguese teachers, where the results obtained through MATIES did not show any significant differences in relation to age group at the cognitive, affective and behavioral levels.

Finally, with regard to the demographic variables of age and gender, the results achieved in this study with Portuguese teachers are inconclusive.

As for the gender factor, there are studies showing no differences between genders (e.g. Chhabra et al., 2010); studies showing more positive attitudes on the part of females (e.g. Alquraini, 2012) and studies showing more positive attitudes on the part of males (Bhatnagar & Das, 2014). The results obtained in this study of Portuguese teachers revealed no relationship between gender and attitudes towards inclusive education. It suggests that focusing on the gender factor is not relevant to teachers' attitudes towards inclusive education.

As for the age factor, there are also inconsistent results, ranging from no association between age and more positive attitudes (Chhabra et al., 2010) to evidence that young teachers have more positive attitudes (e.g. Ahmmed et al., 2014).

The results obtained in this study of Portuguese teachers in MATIES show no relationship between age and attitudes towards inclusive education. As with the gender factor, it is suggested that the age factor is not significantly relevant to teachers' attitudes towards inclusive education.

A reflective comment should also be made about the MATIES assessment scale itself, since the validity tests carried out following its application with the sample of Portuguese teachers revealed some potential problems.

Starting with the issue of validity, in the validation of the original version of the MATIES questionnaire, Mahat (2008) calculated the validity of the scales with a Cronbach's alpha of 0.89 in the affective area; 0.79 in the cognitive area and 0.91 in the behavioral area. In the present study with Portuguese teachers, the results of Cronbach's alpha were 0.76 in the affective area, 0.63 in the cognitive area and 0.87 in the behavioral area, i.e. slightly lower than those found by Mahat (2008).

These values are still at an acceptable level, demonstrating acceptable content validity, construct validity, criterion validity and convergent validity. However, only validity coefficients above 0.70 are generally considered respectable and most attitude scales have validity estimates above 80 (Denzin & Lincoln, 1994). The Portuguese version of the MATIES is below this value in the cognitive and affective areas and after a detailed item-by-item analysis, there

was also difficulty with some of the items in the cognitive area (item 1 and item 4), exactly the same as those determined in the initial validation study for the Portuguese population carried out by Silva (2019).

On the other hand, as noted by Ewing et al. (2018), although both questionnaires are assumed to be scales for assessing attitudes towards inclusive education, in reality the focus of the questionnaires differs greatly from this basic assumption. MATIES focuses on the notion of incapacity and disability which, as Ewing et al. have warned. (2018) may mean that these questionnaires are not the most suitable for assessing teachers' attitudes towards the inclusion of children with behavioral, emotional or learning difficulties. Attitude assessment scales do not clearly reflect the basic principles of inclusive education and it is essential to refine them to encompass more up-to-date thinking, policies and practices.

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