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Inclusive education in Portugal: Exploring sentiments, concerns and attitudes of teachers

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Abstract

This study examines Portuguese teachers' attitudes towards inclusive education and how teachers' self-efficacy towards inclusion and other sociodemographic and professional variables relate and predict teachers' attitudes. In total, 539 Portuguese teachers participated. Sentiments, Attitudes and Concerns about Inclusive Education scale, Teacher Efficacy for Inclusive Practices scale and a sociodemographic questionnaire were used to collect data. The results indicate that teachers' attitudes towards inclusion were generally positive. However, teachers-related variables (e.g., teachers' self-efficacy, teaching experience, previous training, and knowledge about educational laws and policies) influence teachers' attitudes in a complex and dynamic way. Implications for policies, practices and research are presented.

KEYWORDS

attitudes, inclusive education, Portugal, predictors, self-efficacy, teacher

Key points

- Teachers' age, self-efficacy, previous training in teaching people with disabilities, previous teaching experience with people with disabilities, and knowledge about national and local policies related to disabilities have a differentiated and dynamic impact on teachers' sentiments, concerns and attitudes towards inclusion.
- Teachers must be supported in their professional development regarding their attitudes, concerns, sentiments and sense of personal efficacy.
- Diverse collaborative approaches in schools are an asset for continuous professional development, specifically in-service training, supporting changes in teachers' attitudes and dealing with less positive sentiments and concerns that may be barriers to well-succeeded policy implementation.

INTRODUCTION

Inclusion is one of education's most relevant and discussed topics (OECD, 2015; UNESCO, 2017, 2020a). International policies influence educational systems in diverse countries, motivating changes in national laws related to inclusive education (UNESCO, 2020b). However, the definition of inclusive education is ambiguous and has been vastly debated worldwide.

While in some countries, inclusive education is still generally understood as including children with disabilities in mainstream schooling, in other countries, a more widely view of inclusive education is used (Ainscow, 2020; Yada & Savolainen, 2017). However, it is increasingly seen more broadly as a way to address diversity, assuming that 'every learner matters and matters equally' (UNESCO, 2021, p. 10). Accordingly, inclusive education may be defined as a process that is

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concerned with the identification and removal of barriers to the presence, participation and achievement of all students, and at the same time, it involves a particular emphasis on those groups of learners who may be at risk of marginalization, exclusion or underachievement (Ainscow, 2020).

Some countries have recently published laws about including all students in mainstream schools. For instance, in Portugal, a law devoted to inclusive education was published in 2018, introducing a wide range of changes in the Portuguese educational system (Alves, 2019; Carvalho et al., 2019). With a holistic and broad framework, inclusive education in Portugal is presented as a value/principle, a right and a condition for more inclusive communities and society (to use here the conceptual framework of Göransson & Nilholm, 2014). Inclusion is, by Portuguese law, defined as ‘the right of all children and students to access and participate, fully and effectively, in the same educational contexts’ (Decree-Law 54/2018, p. 2920). This definition highlights core aspects of inclusion, such as the right of all children to quality education, the provision of effective and diverse opportunities for all children, a wider target population as the scope of inclusive education and the mainstream schools as contexts for all children to learn and participate.

The Portuguese law of inclusive education (Decree-Law 54/2018) changes from a disability model, ‘focused on “mainstreaming” students with disabilities or “special needs” into regular schools’ (Alves et al., 2020, p. 281) to a pedagogical model based on the idea that all students can learn with the effective support, organized in a multitiered system of measures to access the curriculum. It moves away from the notion that it is necessary to categorize or diagnose to intervene or to plan and design a pedagogical strategy to address all students’ needs. Therefore, a central concept in this inclusive model is the concept of ‘all students’ or diversity of students. Diversity refers to people’s differences representing salient dimensions that define group membership (how people perceive themselves or are being perceived), including aspects such as race, ethnicity, gender, sexual orientation, language, culture, religion, mental and physical ability, class and immigration status (OECD, 2023; UNESCO, 2017). This concept entails the idea that the scope of inclusive education is all students having opportunities to access, participate and learn in mainstream schools.

The reported changes in Portuguese law brought new challenges for schools and professionals (Ainscow, 2020; Alves, 2019; Carvalho et al., 2019). Schools had to reorganize teams’ work, services and measures provided, and resources available and, at the same time, improve leaders’ and teachers’ knowledge and skills related to a more inclusive vision and practice. Teachers also had to improve pedagogical planning and action, measures provided to all students in the classroom, collaboration and teamwork. While these are expected changes to

occur in schools and teachers’ practices, teachers report difficulties in addressing all the changes needed, such as workload, insufficient knowledge about inclusive education frameworks, incomplete knowledge about inclusive practices, and in teaching all students in the same classroom, especially those requiring more attention and support (Alves, 2019; Carvalho et al., 2019) or at higher risk of exclusion (OECD, 2022).

Policy changes challenge schools’ and teachers’ practices. Even educational systems like Portuguese ones, with specific policies to support inclusive education, struggle with the various changes needed to implement more inclusive practices (Alves, 2019; Carvalho et al., 2019; OECD, 2022). Hence, it is crucial to examine what variables influence the implementation of policies and laws. Providing knowledge about teachers’ perspectives, attitudes and practices towards inclusion is one of the aspects to explore since it gives relevant information to a well-succeeded implementation of inclusive education to policy-makers, school administrators, teachers and other stakeholders (Schwab, 2018).

Based on previous research, teachers’ attitudes, sentiments and concerns towards inclusion are essential factors for successful inclusive education (e.g., Alnahdi & Schwab, 2021; Forlin et al., 2011; Miegheem et al., 2020; Navarro-Mateu et al., 2020; Özokcu, 2018; Schwab, 2018). For instance, it has been suggested that positive attitudes towards inclusion are among the strongest predictors of well-succeeded inclusive education policies. Teachers with a positive attitude towards inclusion seem more able to use effective educational strategies in general education classes and feel sufficiently efficacy in meeting the inclusion requirements. In contrast, teachers’ negative attitudes towards inclusion can be a barrier to inclusive practices implementation (Forlin et al., 2011). Teachers with negative attitudes towards inclusion seem to have lower expectations and decrease the learning opportunities for children (Özokcu, 2018).

Besides, some authors consider that teachers’ attitudes towards inclusive education are influenced by diverse cultural and demographical factors (e.g., van Steen & Wilson, 2020). Educational policies in inclusive education and the implementation of these policies vary widely across countries (Alnahdi & Schwab, 2021; Schwab, 2020; Yada & Savolainen, 2017). Hence, it is necessary to address cultural particularities related to teachers’ attitudes when implementing educational policies since some studies also indicated country-specific differences in teachers’ attitudes towards inclusive education (Alnahdi & Schwab, 2021; Leyser et al., 1994).

Limited evidence exists about Portuguese teachers’ attitudes, sentiments and concerns towards inclusive education. The Portuguese studies founded were previous to the publication of the inclusive education law in 2018 (e.g., Dias, 2017; Santos, 2008; Santos & César, 2010), and the results seem convergent to other international studies. For instance, Santos and César (2010), in a study

about Portuguese teachers' attitudes towards inclusive education, concluded that participants presented positive attitudes about inclusion but less positive attitudes towards inclusion of students with disabilities and some concerns about their preparedness for inclusion. As the legislation about inclusive education was published, training was offered to Portuguese teachers to support law implementation what may be seen as an opportunity to change attitudes and concerns. Therefore, to our knowledge, studies have yet to be made about this topic after the last changes in the Portuguese law of inclusive education. This research was designed to investigate Portuguese teachers' attitudes, sentiments and concerns related to inclusive education and the factors that influence these specific dimensions acknowledging the late changes in Portuguese law.

Teachers' attitudes, sentiments and concerns about inclusive education

Several studies explore teachers' attitudes towards inclusive education as a relevant factor to address in educational systems when implementing policies (Alnahdi & Schwab, 2021; Miegheem et al., 2020; Navarro-Mateu et al., 2020). The assumption underlining this line of research is that teachers' attitudes shape teachers' behaviours. Therefore, more positive attitudes towards inclusive education are expected to be related to more inclusive practices of teachers (Alnahdi & Schwab, 2021; Sharma et al., 2014). Thus, the type of response, positive or negative, that the teacher has towards the object of attitude—in this case, diversity—will depend on the combination of the three integrating components of the attitude: cognitive (positive or negative beliefs towards diversity), affective (evaluation and positive or negative valuation towards diversity), which translates into an acceptance (inclusion) or rejection (exclusion), and conative-behavioural responses (disposition towards diversity depending on the other two components) (Ajzen, 2005 cit. in Navarro-Mateu et al., 2020). This line of research has intensively used a framework where attitudes towards inclusion include sentiments, concerns and attitudes (Forlin et al., 2011).

Regarding teachers' attitudes towards inclusive education, some studies found that, in general, teachers' attitudes are somewhat negative, in contrast with the attitudes of parents and peers (Miegheem et al., 2020). Furthermore, teachers' attitudes are related to their knowledge of disabilities. They have less positive attitudes towards children with behavioural problems and severe cognitive impairment compared with children with physical disabilities and sensory impairments (Miegheem et al., 2020). Teachers still have concerns about implementing inclusive education in practice, especially when managing challenging student behaviour (Savolainen et al., 2020).

Moreover, factors that influence teachers' attitudes towards inclusive education have also been studied intensively, considering (i) teacher-related factors, such as age, gender, teaching experience, teacher training and teacher self-efficacy; (ii) student-related factors, such as child disability type and nature; and (iii) environmental factors, such as the availability of support staff and educational materials (Avramidis & Norwich, 2002; Miegheem et al., 2020; Özokcu, 2018; Sharma et al., 2012). Therefore, attitudes towards inclusion can be explained by a complex interplay of demographic and cultural factors (van Steen & Wilson, 2020).

This study explores Portuguese teacher-related factors that influence attitudes towards inclusion as it is a specific cultural context with relevant and recognized policies supporting inclusive education (Alves, 2020; Alves & Fernandes, 2023). The variables analysed in this study are age, gender, teachers' previous training in teaching people with disabilities, previous teaching experience with people with disabilities, knowledge about national and local policies related to inclusive education, and specifically related to the inclusion of people with disabilities, and teacher self-efficacy.

Teacher-related factors' influence on attitudes towards inclusion: Age, gender, training, experience, policies' knowledge and self-efficacy

Regarding gender and age, their influence on teachers' attitudes towards inclusion seems controversial, possibly due to measurement instruments used to measure attitudes towards inclusion or to cultural differences in educational systems from different countries. Some studies found no significant effect of gender on teachers' attitudes towards inclusion (e.g., Aldosari, 2022), while other studies found more positive attitudes of female teachers (e.g., Mouchritsa et al., 2022). Regarding age, some studies suggest that older teachers appear to have more negative attitudes towards inclusion (Tsakiridou & Polyzopoulou, 2014), while other studies present a low but significant positive correlation between age and attitudes towards inclusion (Navarro-Mateu et al., 2020). It is important to note that, in some cases, age is presented along with work experience, which positively affects teachers' attitudes towards inclusion. Previous experience in teaching and, particularly teaching experience with children with disabilities positively affect attitudes (Forlin et al., 2014; Navarro-Mateu et al., 2020; Tsakiridou & Polyzopoulou, 2014). Contact and experience with persons with disabilities and knowledge and training related to teaching diverse students positively affect attitudes towards inclusion (Navarro-Mateu et al., 2020). Regarding training, studies report differences in teachers' attitudes towards inclusion (e.g., Aldosari, 2022; Forlin et al., 2014; Mouchritsa et al., 2022). However, Forlin

et al. (2014) have highlighted the relevance and quality of training experiences and collaboration involved in these reported differences in attitudes regarding previous training. Another relevant variable influencing teachers' attitudes towards inclusion is the knowledge of law and policy concerning inclusive education, with the latter positively influencing the first (Pappas et al., 2018).

Notably, teachers' self-efficacy and attitudes have been used interchangeably as predictors or outcomes. Diverse studies reported that teachers' self-efficacy is related to attitudes towards inclusion in various samples considering teachers from different countries who instruct at different levels and with diverse qualifications (Yada et al., 2022). Despite some inconsistent findings related to this relationship, more recent research suggests that teachers' self-efficacy beliefs affect their attitudes, sentiments and concerns towards inclusion (Alnahdi & Schwab, 2021; Özokcu, 2018; Savolainen et al., 2020). For instance, Savolainen et al. (2020) provide evidence that the effect of teachers' self-efficacy on teachers' attitudes towards inclusive education is likely stronger than vice versa. Their study found that teachers' attitudes of female and male teachers, experts and novices were stable. This result suggests that irrespective of gender or teaching experience, increases in self-efficacy are likely to lead to more positive attitudes. Nevertheless, another interesting finding of this study was that efficacy had a more substantial effect on the attitudes measured as teacher concerns than their general attitudes (Savolainen et al., 2020).

The present study

The main purpose of this study was to explore Portuguese teachers' attitudes towards inclusive education. Moreover, this study examines whether Portuguese teachers' self-efficacy and sociodemographic and professional teachers' variables are related and predict attitudes towards inclusive education. The research questions for this study are presented below:

RQ1. How Portuguese teachers' can be characterized regarding overall and specific attitudes towards inclusive education, self-efficacy towards inclusion, previous training in teaching people with disabilities, previous teaching experience with people with disabilities and knowledge about national and local policies related to disabilities?

RQ2. Does age, gender, previous training in teaching people with disabilities, previous teaching experience with people with disabilities, knowledge about national and local policies related to disabilities and teachers' self-efficacy correlate with Portuguese teachers' attitudes towards inclusion?

RQ3. Does previous age, gender, previous training in teaching people with disabilities, previous teaching experience with people with disabilities, knowledge about national and local policies related to disabilities and teachers' self-efficacy predict Portuguese teachers' attitudes towards inclusion?

METHOD

Sample

Participants in this study were 539 teachers (83.5% female) who worked in private and public schools in Portugal. Most participants are over 51 years old (56.8%) and have more professional experience (over 31 years of experience). This unequal distribution of teachers' gender and age broadly represents the education system in Portugal. According to national statistics, in 2019, 84% of Portuguese teachers from early childhood to the secondary level were over 40 years old (Fundação Belmiro de Azevedo, n.d.), and in 2022, 78.2% were female (Fundação Manuel dos Santos, n.d.).

The participants teach at different levels of education or special education. Some participants (3.3%) teach at more than one level of education. In Portugal, early childhood includes children from 3 to 6 years old, the first level of education includes students from 6 to 10 years old, the second level of education includes students from 10 to 12 years old, the third level of education includes students from 12 to 15 years old, and the secondary level includes students from 15 to 18 years old (see Table 1).

Measures

Sociodemographic and professional questionnaire

An ad hoc questionnaire was carried out to collect data about age, gender, experience as a teacher, level of teaching, teachers' roles, teachers' previous training in teaching people with disabilities, previous teaching experience with people with disabilities, knowledge about national and local policies related to the inclusion of people with disabilities. Some data were collected for sample description purposes. Other data were collected to address study research questions: teachers' previous training in teaching people with disabilities (3-point Likert scale—none, some and high), previous teaching experience with people with disabilities (5-point Likert scale—very low, low, average, high and very high), knowledge about national and local policies related to the inclusion of people with disabilities (5-point Likert scale—very poor, poor, average, good and very good).

TABLE 1 Sample demographics.

Variables	N	%
Age		
Under 30 years	4	0.7
31–40 years	24	4.5
41–50 years	204	37.8
Above 51 years	306	56.8
Gender		
Male	89	16.5
Female	450	83.5
Number of years of experience as a teacher		
Under 10 years	32	5.9
11–20 years	95	17.6
21–30 years	245	45.5
31–40 years	146	27.1
Above 41 years	18	3.3
Type of school		
Public	516	95.7
Private	23	4.3
Level of teaching		
Early childhood	28	6.0
First level	108	23.2
Second level	70	15.1
Third level	137	29.4
Secondary	104	22.4
More than one level	15	3.3
Special education	74	13.7

Attitudes towards inclusive education

The Sentiments, Attitudes, and Concerns about Inclusive Education—Revised (SACIE-R) Scale, developed by Forlin et al. (2011), was used to determine the teachers' attitudes regarding inclusive education. The scale contained 15 items, scored from 1 (strongly disagree) to 4 (strongly agree) on a Likert-type scale. The scale is organized into three sub-scales: sentiments (five items), attitudes (five items) and concerns (five items). The scores (both total and each sub-scale score) are computed by averaging items. The sentiments sub-scale evaluates sentiments about engaging with students with disabilities (e.g., 'I tend to make contacts with people with disabilities brief and I finish them as quickly as possible'). The attitudes subscale measures general attitudes towards inclusive education and instruction of students with disabilities in mainstream classrooms (e.g., 'Students who are inattentive should be in regular classes'). The subscale concerns evaluate teacher-specific attitudes related to the concerns about including students with disabilities in classrooms (e.g., 'I am concerned that I will be more stressed if I have students with disabilities in my class'). The scale

presented an acceptable internal consistency ($\alpha > 0.74$) within previous studies (Forlin et al., 2011). In the present study, Cronbach's alpha coefficient for the overall scale was 0.44 (15 items). For the three sub-scales, the alpha values ranged from 0.45 to 0.81, which were acceptable, attending to the reduced number of items in each subscale (five items).

Self-efficacy beliefs in inclusive education

A Portuguese version of Teacher Self-Efficacy for Inclusive Practices (TEIP), originally developed by Sharma et al. (2012), was used. The scale comprised a total of 18 items, scored from 1 (strongly disagree) to 6 (strongly agree) Likert-type scale. The TEIP is comprised of three subscales: Efficacy in Inclusive Instruction (five items), Efficacy in Managing Behavior (seven items) and Efficacy in Collaboration (six items). The scores (both total and each subscale score) are computed by averaging items. The subscale efficacy in inclusive instruction relates to the efficacy beliefs in adapting teaching according to learners' needs (e.g., 'I can provide appropriate challenges for very capable students'). The subscale efficacy in managing behaviour measures the perceived capability to prevent and handle unwanted student behaviour (e.g., 'I can make my expectations clear about student behaviour'). The subscale efficacy in collaboration evaluates the teachers' efficacy to collaborate with parents, colleagues and other professionals in teaching students (e.g., 'I can assist families in helping their children do well in school'). A high average score on the scale indicates a more positive tendency, high self-efficacy and anxiety to a lesser extent. Previous studies have indicated good psychometrics for this instrument's original version (e.g., Sharma et al., 2012) and the Portuguese version (see Dias, 2017). In the Portuguese version, the number of items was maintained equal (18 items) and three factors were obtained as the original version. The reliability values (Cronbach's alpha) were good, ranging from 0.81 to 0.86 (Dias, 2017). In the current study, Cronbach's alpha of overall scale shows high reliability ($\alpha = 0.92$; 18 items). The Cronbach's alpha of the three sub-scales was good, ranging from 0.80 (5 items) to 0.86 (6 items).

Procedures

The only precondition for participation in the study was being a teacher working in a Portuguese public or private school. Therefore, the online questionnaire was sent by e-mail to all public and private schools in Portugal. It was requested that school directors share the questionnaire with all school teachers. Participants were required to complete an anonymous self-report online questionnaire, including an instruction sheet and a consent form, following APA ethical standards.

All relevant information for the participants' informed consent was presented before the beginning of the questionnaire. No information that would allow identifying each participant was requested, granting all data anonymity. Participants were assured of confidentiality and informed that their participation was voluntary. Data collection occurred between July and September of 2021.

Data analysis

IBM SPSS Statistics 28 software was used for statistical analysis. First, descriptive statistics were computed related to attitudes towards inclusive education, self-efficacy and sociodemographic and professional variables. Second, a correlation analysis was conducted to explore the relationship between teachers' self-efficacy and sociodemographic and professional variables and attitudes regarding inclusive education. To interpret the correlation values, we considered guidelines proposed by Cohen (1988): low (less than 0.29), moderate (between 0.30 and 0.49) and high (between 0.50 and 1.00). Third, four separate multiple hierarchical regression analyses were conducted, with different outcomes in each model (sentiments, concerns, attitudes and total scale of SACIE). Each subscale of TEIP and sociodemographic and professional variables were used as predictors.

RESULTS

Portuguese teachers' characteristics regarding attitudes towards inclusive education, self-efficacy towards inclusion, previous training in teaching people with disabilities, previous teaching experience with people with disabilities and knowledge about national and local policies related to disabilities (RQ1).

The Portuguese teachers' overall attitudes towards inclusive education were slightly above the neutral midpoint of the scale, which ranged from 1 to 4, thus indicating that the teachers did not express extreme attitudes for or against inclusive education. For teachers' sentiments and concerns towards inclusive education, the mean score suggests a low value compared with the theoretical mean of the subscale (2.5). Teachers' attitudes indicate a positive attitude towards inclusive education because the empirical mean value is higher than the theoretical mean (see Table 2). The most positive attitude reported was attitudes about including children with disabilities in mainstream classes, which value was above the neutral midpoint of the scale ($M=3.20$). Their sentiments about what would happen if children with disabilities were included in their classes were the lowest ($M=1.90$) among the three sub-scales.

TABLE 2 SACIE-R and TEIP overall and sub-scale scores.

Scale	<i>M</i>	<i>SD</i>	<i>Min</i>	<i>Max</i>
SACIE-R				
Sentiments towards inclusive education	1.90	0.40	1.00	2.80
Attitudes towards inclusive education	3.20	0.59	1.40	4.00
Concerns towards inclusive education	2.19	0.35	1.00	3.00
Total scale	2.43	0.23	1.60	3.00
TEIP				
Efficacy in managing behaviour	4.73	0.65	1.00	6.00
Efficacy in instruction	5.01	0.64	1.00	6.00
Efficacy in collaboration	5.00	0.71	1.00	6.00
Total scale	4.90	0.60	1.00	6.00

The Portuguese teachers' overall self-efficacy for inclusive practices was at a high level, which ranged from 1 to 6. Regarding teachers' self-efficacy, all the mean scores show a relatively high value compared with the theoretical mean of the scale (3.5). All means of the three subscales, as well as the total mean score, are above 3.5. The Portuguese teachers' level of self-efficacy in using inclusive instruction was the highest of the three sub-dimensions, while they were least confident in managing students' problematic behaviour in their classroom (see Table 2).

Regarding variables related to training, experience and knowledge about inclusive education, half of the participants (48.6%) have no training in teaching people with disabilities. However, most have from average to very high teaching experience with people with disabilities. Most participants reported having from average to very good knowledge about national and local policies related to disabilities (see Table 3).

Correlation between Portuguese teachers' attitudes towards inclusive education, teachers' self-efficacy and age, gender, previous training in teaching people with disabilities, previous teaching experience with people with disabilities and knowledge about national and local policies related to disabilities (RQ2).

A correlation analysis was conducted to explore the relationship between the sociodemographic variables, the teachers' self-efficacy and teachers' sentiments, concerns and attitudes regarding inclusive education (see Table 4).

As presented in Table 4, gender was not associated with any scales of the SACIE-R. Regarding age, a significant positive relationship (low correlation) was found between age and teachers' scores on the sentiments scale. Thus, results showed that older teachers

were associated with more positive sentiments towards inclusive education. Instead, results indicated a negative low significant relationship between age and attitudes scale, which means that older teachers were related to lower levels of attitudes towards inclusive education.

A significant negative association (low and moderate correlation) between previous training, previous teaching experience and knowledge about policies related to inclusive education and sentiments and concerns subscales of SACIE-R were found. These results suggest that higher levels of previous training, previous teaching experience and knowledge about policies are related to lower scores of sentiments and concerns towards

inclusive education. Conversely, results indicated a significant positive relationship (low correlation) between these sociodemographic variables and attitudes regarding inclusive education. Thus, increasing training, teaching experience with people with disabilities and knowledge about policies were associated with higher attitude scores.

A significant positive relationship was found between the teachers' scores on the attitudes scale and teachers' scores on both the total and subscales of TEIP. The highest relationship (moderate correlation) was found between efficacy in collaboration and attitudes towards inclusive education. Thus, the higher levels of attitudes towards inclusive education were associated with higher scores of teachers' self-efficacy in collaboration.

Results indicated a negative low and moderate significant relationship between the teachers' scores on the sentiments and concerns subscales of SACIE-R, and teachers' scores on both the total and subscales of TEIP. Therefore, higher levels of teachers' efficacy are associated with lower scores on the sentiments and concerns related to inclusive education. In addition, we found a low negative correlation between efficacy in instruction (TEIP) and the total scale of SACIE-R.

Portuguese teachers' age, gender, self-efficacy for inclusive practices, previous training in teaching people with disabilities, previous teaching experience with people with disabilities and knowledge about national and local policies related to disabilities as predictors of teachers' attitudes (RQ3).

In order to determine whether teachers' self-efficacy and sociodemographic and professional variables, such as age, gender, previous teaching experience with students with disabilities, previous training in teaching people

TABLE 3 Training, experience and knowledge about inclusive education.

Variables	N	%
Previous training in teaching people with disabilities		
None	262	48.6
Some	197	36.5
High	80	14.8
Previous teaching experience with people with disabilities		
Very low	66	12.2
Low	136	25.2
Average	219	40.6
High	87	16.1
Very high	31	5.8
Knowledge about national and local policies related to disabilities		
Very poor	13	2.4
Poor	88	16.3
Average	280	51.9
Good	122	22.6
Very good	36	6.7

TABLE 4 Correlations between the SACIE-R and TEIP scales' overall scores and sub-scale scores and sociodemographic and professional variables.

	Sentiments	Concerns	Attitudes	Total scale (SACIE-R)
Age	0.132**	0.045	-0.095*	0.019
Gender (0—female, 1—male)	-0.047	0.027	-0.021	-0.032
Previous training in teaching people with disabilities	-0.240**	-0.304**	0.299**	-0.037
Previous teaching experience with people with disabilities	-0.268**	-0.294**	0.258**	-0.083
Knowledge about national and local policies related to disabilities	-0.257**	-0.277**	0.250**	-0.075
Efficacy in managing behaviour	-0.210**	-0.199**	0.251**	-0.007
Efficacy in instruction	-0.261**	-0.208**	0.186**	-0.097*
Efficacy in collaboration	-0.376**	-0.310**	0.352**	-0.074
Total scale—TEIP	-0.314**	-0.268**	0.300**	-0.061

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

with disabilities and knowledge about policies related to disabilities, were significant predictors of scores on each scale of SACIE-R, four separate multiple hierarchical regression analyses were conducted, using enter method (see Table 5). In each model, sociodemographic and professional variables and subscales of TEIP were selected as predictors and the SACIE-R scales as outcomes. The total scale of TEIP was removed from the models due to multicollinearity, as this scale was highly correlated with the three subscales ($r > 0.90$).

In each model, predictors were entered into three blocks. In the first block, age and gender were included as a control variable, due to the unbalanced distribution of sample regarding to these variables. In the second block, they entered the other sociodemographic and professional variables, such as previous training and teaching with people with disabilities, and knowledge about policies related to disabilities. Finally, the third block included the three self-efficacy scales.

In the first model, we tested the sociodemographic and professional variables and subscales of TEIP as predictors of the sentiments related to inclusive education. This analysis yielded a statistically significant model, $F(8, 529) = 16.425, p < 0.001$, explaining 19.9% of the variance of the sentiment towards inclusive education ($R^2 = 0.199$). Age and gender, included in the first block, explain 2.0% of the variance in the scores of sentiments ($R^2 = 0.020, p < 0.01$). Block 2, in which other sociodemographic and professional variables were added to the model, makes a statistically significant contribution to sentiments' scores, further explaining 9.3% of the variance. When self-efficacy scales entered into the model, in block 3, slight decrease the R^2 value, explaining 8.4% of the variance of the sentiments scale scores. Age, gender, previous teaching experience with people with disabilities, knowledge about policies related to disabilities and efficacy in collaboration were the only significant predictors of the sentiments related to inclusive education. Higher levels of sentiments towards inclusive education were related to older and female teachers, with lower teaching experience with people with disabilities, lower knowledge about policies related to disabilities and lower level of efficacy in collaboration.

The second model tested the same predictors of the first model and concerns related to inclusive education as an outcome. The model including these variables explains 15.4% ($R^2 = 0.154$) of the total variance of the scale of the concerns, $F(8, 529) = 11.992, p < 0.001$. Results showed that age and gender, included in the first block, were not significant predictors of concerns. Adding, in block 2, the other sociodemographic variables resulted in a significant increase in R^2 , explaining 11.5% of the variance. The addition of TEIP subscales, in block 3, decreases the R^2 value, explaining 3.5% of the variance. The association between previous training and previous teaching experience with people with disabilities, knowledge about policies, and efficacy in collaboration were

negative and significant or marginally significant, such as higher values of previous training and previous teaching experience with people with disabilities, knowledge about policies and efficacy in collaboration were associated with lower levels of concerns scale.

In the third model, we tested the same predictors on attitudes towards inclusive education as an outcome. Results indicated that the set of predictors explains 19.0% of the total variance of the attitudes related to inclusive education, $F(8, 529) = 15.540, p < 0.001$. In the first block, age and gender explain 0.09% of the variance ($R^2 = 0.009, p < 0.10$). Including the other sociodemographic variables (block 2) and subscales of TEIP (block 3) increased the R^2 value, explaining 10.3% and 7.8% of the variance of the sentiments scale scores, respectively. Results pointed to age, previous training in teaching people with disabilities and the three subscales of TEIP as significant predictors of the attitudes related to inclusive education. Higher scores of attitudes towards inclusive education were related to younger teachers, with higher levels of previous training in teaching people with disabilities, higher levels on both subscales of efficacy in managing behaviour and efficacy in collaboration, and lower levels on efficacy in inclusive instruction.

In the fourth model, we tested the same predictors and total scale of SACIE-R as an outcome. This model was not statistically significant, $F(8, 529) = 1.809, p > 0.05$.

DISCUSSION

This study explores Portuguese teachers' attitudes towards inclusive education and predictor factors. Attitudes have been considered a relevant factor to the well-succeeded implementation of educational policies and laws (as is the case of Portugal, considering the late publication of the law related to inclusive education).

The results indicated that Portuguese teachers' overall attitudes towards inclusive education were positive. However, teachers' sentiments about interacting with persons with disabilities were negative, and concerns about including children with disabilities in their classrooms were somewhat neutral, as in other studies (e.g., Savolainen et al., 2020). This finding further supports the idea that the teachers were more critical about including children with disabilities in their classrooms, experiencing some levels of anxiety related to it, even though many teachers thought inclusive education was necessary (Savolainen et al., 2020; Yada & Savolainen, 2017). As in other studies with Portuguese teachers (Carvalho et al., 2019), there is an agreement about the value of inclusive education since attitudes towards inclusion are somewhat positive. Nevertheless, diversity and inclusion in the classroom seem to be experienced as a challenge (Alves et al., 2020; Carvalho et al., 2019), with teachers experiencing concerns and less positive sentiments about it.

TABLE 5 Model summary of multiple hierarchical regression analyses (Enter method): effect of sociodemographic and professional variables and subscales of TEIP in predicting the scales of SACIE-R.

Variable	Sentiments			Concerns			Attitudes			Total scale—SACIE-R		
	B	SE	β	B	SE	β	B	SE	β	B	SE	β
Block 1	$R^2=0.020^{**}$			$R^2=0.003$			$R^2=0.009^\dagger$			$R^2=0.001$		
Constant	1.531	0.125		2.077	0.108		3.604	0.183		2.404	0.073	
Age	0.007	0.002	0.132 ^{**}	0.002	0.002	0.045	-0.008	0.004	-0.095 [*]	0.001	0.001	0.019
Gender ^a	-0.052	0.046	-0.048	0.025	0.040	0.026	-0.032	0.068	-0.20	-0.020	0.027	-0.032
Block 2	$\Delta R^2=0.095^{***}$			$\Delta R^2=0.0115^{***}$			$\Delta R^2=0.103^{***}$			$\Delta R^2=0.009$		
Constant	1.892	0.130		2.416	0.112		3.056	0.190		2.455	0.079	
Age	0.009	0.002	0.155 ^{***}	0.003	0.002	0.062	-0.009	0.003	-0.107 [*]	0.001	0.001	0.030
Gender ^a	-0.070	0.044	-0.064	0.006	0.038	0.006	0.000	0.065	0.000	-0.021	0.027	-0.034
Previous training in teaching people with disabilities	-0.039	0.031	-0.071	-0.077	0.026	-0.161 ^{**}	0.155	0.045	0.190 ^{**}	0.013	0.019	0.040
Previous teaching experience with people with disabilities	-0.056	0.023	-0.146 [*]	-0.042	0.020	-0.125 [*]	0.045	0.034	0.080	-0.018	0.014	-0.079
Knowledge about policies related to disabilities	-0.064	0.027	-0.136 [*]	-0.043	0.023	-0.106 [†]	0.067	0.039	0.098 [†]	-0.013	0.016	-0.049
Block 3	$\Delta R^2=0.084^{***}$			$\Delta R^2=0.035^{***}$			$\Delta R^2=0.077^{***}$			$\Delta R^2=0.015$		
Constant	2.598	0.175		2.806	0.153		2.308	0.255		2.553	0.110	
Age	0.007	0.002	0.131 ^{**}	0.002	0.002	0.050	-0.008	0.003	-0.100 [*]	0.001	0.001	0.016
Gender ^a	-0.129	0.044	-0.119 ^{**}	-0.023	0.038	-0.024	0.058	0.064	0.037	-0.031	0.028	-0.050
Previous training in teaching people with disabilities	-0.010	0.030	-0.019	-0.060	0.026	-0.125 [*]	0.114	0.043	0.139 ^{**}	0.014	0.019	0.045
Previous teaching experience with people with disabilities	-0.038	0.023	-0.097 [†]	-0.031	0.020	-0.093	0.016	0.033	0.029	-0.017	0.014	-0.078
Knowledge about policies related to disabilities	-0.039	0.026	-0.082	-0.030	0.023	-0.073	0.046	0.038	0.067	-0.007	0.017	-0.027
Efficacy in managing behaviour	0.050	0.037	0.082	-0.003	0.033	-0.005	0.117	0.054	0.130 [*]	0.055	0.024	0.154 [*]
Efficacy in inclusive instruction	0.008	0.042	0.012	0.026	0.037	0.049	-0.217	0.061	-0.235 ^{***}	-0.061	0.027	-0.167 [*]
Efficacy in collaboration	-0.217	0.037	-0.383 ^{***}	-0.117	0.032	-0.241 ^{***}	0.296	0.054	0.359 ^{***}	-0.012	0.023	-0.038
Total model	R^2 total=0.199			R^2 total=0.154			R^2 total=0.190			R^2 total=0.027		

^a0=female and 1= male.

[†] $p < 0.10$;

^{*} $p < 0.05$; ^{**} $p < 0.01$; ^{***} $p < 0.001$.

Some of these results are similar to results from other Portuguese studies previous to the publication of the inclusive education law in 2018 (e.g., Dias, 2017; Santos, 2008; Santos & César, 2010). For instance, Santos and César (2010), in a study about Portuguese teachers' attitudes towards inclusive education, concluded that participants presented positive attitudes about inclusion but less positive attitudes towards inclusion of students with disabilities. In this same study, Portuguese teachers presented some concerns about their preparedness for inclusion. It is interesting to note that, despite the decade difference between this study and Santos and César's study, some similarities exist in teachers' attitudes. Some possible explanations may be discussed concerning policies and laws and Portuguese teachers' profiles.

Regarding educational policies and laws, both studies have occurred 2 years after the publication of relevant decree-laws with impact on schooling—Decree-law 3/2008, to support students with special educational needs in mainstream schools and classes; Decree-law 54/2018, to support inclusive education for all students (for more information, see Alves, 2019). With different frameworks, training was organized to support the implementation of both laws. Thus, teachers had opportunities to have knowledge and preparation, giving them more positive attitudes. However, concerns about inclusive education and aspects of teachers' profiles may be discussed here.

Teachers' profiles related to self-efficacy and other sociodemographic variables determine teachers' attitudes towards inclusion. In this study, teachers' age, self-efficacy, previous training in teaching people with disabilities, previous teaching experience with people with disabilities and knowledge about national and local policies related to disabilities are correlated with teachers' attitudes towards inclusion which corroborate other studies' results (e.g., Avramidis & Norwich, 2002; Mieghem et al., 2020; Özokcu, 2018; Sharma et al., 2012).

Regarding teachers' self-efficacy, there was a moderate correlation between self-efficacy and attitudes, as suggested by some previous studies (Savolainen et al., 2020), with higher values relating attitudes to efficacy in collaboration. This is particularly noteworthy in the case of Portugal since the relevance of teachers' teamwork, collaborative practices and multidisciplinary-based services has been acknowledged in the last years with various laws, programmes and guidelines, as well as in the latter published law about inclusive education (cf. Alves, 2019). Portuguese teachers are experienced in collaborating and teamwork, recognizing it as an asset when working more inclusively. Portuguese teachers seem to recognize collaboration between teachers themselves, the collaboration between teachers and other stakeholders and support from multidisciplinary teams as strengths of the educational system (Carvalho et al., 2019), which may explain higher results in teachers' self-efficacy in

collaboration and also the higher correlation to teachers attitudes towards inclusion.

In addition, self-efficacy was negatively correlated with teachers' concerns and sentiments. These results were expected if we look at the way the questions are asked in each of these dimensions. The sentiments and concerns subscales evaluate attitudes towards inclusion in a negative sense with higher levels in these dimensions indicating higher levels of concern (negative thoughts) and nervousness when dealing with individuals from this group (Navarro-Mateu et al., 2020). Therefore, this result indicates that teachers who believed to be more capable of implementing inclusive practices were less concerned about including learners with disabilities in their classrooms. However, it must be addressed that other variables also influence teachers' attitudes in a more complex and dynamic way.

One interesting result is those older teachers, with lower teaching experience with people with disabilities, with lower knowledge about educational laws and policies and with lower efficacy in collaboration, present more negative sentiments about inclusive education. Age and teaching experience are relevant if this also means contact with diverse populations, quality in teaching experiences and collaboration through the practice (Forlin et al., 2014). This argument gains more relevance when considering results related to teachers' concerns. Lower levels of concern are associated with more training and teaching experiences with persons with disabilities. Besides, more positive attitudes are presented by younger teachers, with higher levels of previous training in teaching persons with disabilities, higher levels of efficacy in managing behaviour and collaboration and lower levels of efficacy in inclusive instruction. Again in these results, previous training and collaboration appear as relevant variables. Thus, attention should be paid to training quality and collaboration experiences as opportunities to improve attitudes and related behaviours towards inclusion.

One intriguing result that must be discussed is the relation of positive teachers' attitudes (subscale) to lower levels of efficacy in inclusive instruction, which may lead to the interpretation that teachers who do not feel efficacious in instructing all children in the classroom have more positive attitudes towards inclusion. In this study, inclusive instruction is used to refer to strategies that promote the inclusion of all learners and efficacy of inclusive instruction refers to teachers' perceptions of their teaching efficacy in using inclusive instruction (e.g., I can provide appropriate challenges for competent students; I am confident in designing learning tasks so that the individual needs of students with disabilities are accommodated; I can use a variety of assessment strategies) (Forlin et al., 2013; Sharma et al., 2012). However, despite the relevance of these actions in inclusive education, lower efficacy related to positive attitudes emerges in younger teachers with efficacy in collaboration and

managing behaviour and more training. As mentioned earlier, collaboration is a high-value practice in the Portuguese educational system. Schools promote collaboration by various means (e.g., peer lessons observation, co-joint lessons, collaborative decision-making and multidisciplinary teamworking). Probably, teachers have confidence in collaboration as a way to support and improve their practice, which may be one possible explanation for this result.

CONCLUSION

This study examines Portuguese teachers' attitudes towards inclusive education and how attitudes relate to teachers' self-efficacy towards inclusion and other sociodemographic variables. Although policies and laws are enacted to promote inclusive education, Portuguese teachers are still challenged and concerned about including all children in their classrooms. Implementing inclusive education depends on teachers' attitudes (Avramidis & Norwich, 2002; Forlin et al., 2011), which must be addressed when designing educational policies and training professionals to align their practices to it.

Teachers' age, self-efficacy, previous training in teaching people with disabilities, previous teaching experience with people with disabilities, and knowledge about national and local policies related to disabilities have a differentiated and dynamic impact on teachers' sentiments, concerns and attitudes towards inclusion. These relations must be considered at individual (e.g., how teachers feel in teaching situations), classroom (e.g., how teachers design lessons for all students in the classroom considering diversity in learning styles, language, culture, disability and among others), school (e.g., how pedagogical teams are organized and who leads teamwork), local (e.g., how policies are disseminated in communities) and national (e.g., what and how training opportunities are provided) levels. Therefore, teachers must be supported in their professional development regarding their attitudes, concerns, sentiments and sense of personal efficacy. Particular attention should be paid to the preparation and training of teachers both at initial teacher education and through continuous professional development (Alves, 2019; Alves et al., 2020; Pappas et al., 2018). Diverse collaborative approaches in schools are an asset for continuous professional development, specifically in-service training, supporting changes in teachers' attitudes and dealing with less positive sentiments and concerns that may be barriers to well-succeeded policy implementation.

Some limitations of this study must be considered. One limitation relates to the measures used. Our focus was on teachers' related factors, despite our awareness of other relevant factors non-teachers related that may influence teachers' attitudes towards inclusion (e.g., students related factors, cultural-related factors and school-related

factors). For instance, in this study, some measures referred to people with disabilities without differentiating between types of disabilities, which is known to have a differentiated impact on teachers' attitudes (Mieghem et al., 2020; Savolainen et al., 2020). Additionally, our inclusive education framework supports the diversity concept, but in this study, the measures used referred mostly to disabilities. Future studies may adapt or include instruments related to other populations or diversity dimensions so that differences related to teachers' attitudes towards inclusion of diverse students can be explored. Another limitation relates to data collection instruments. Only participants' self-ratings were used, which may carry the risk of bias, such as a tendency towards social desirability. Future studies should address diverse populations and, concerning disabilities, what types are referred to. Other data collection instruments and sources of information can be used to gain deep knowledge about teachers' attitudes towards inclusion.

Despite the above-mentioned limitations, this study offers insights about relevant teacher-related factors to consider when designing and implementing educational policies. For instance, teachers' career stage and challenges related to age and experience must be addressed, previous preparation of communities, schools and teachers through information sessions, sharing experiences, peer discussions and local and national panels must be organized and intentional and strategic training and support opportunities must be provided along the school years.

CONFLICT OF INTEREST STATEMENT

The authors report there are no competing interests to declare.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

ETHICS STATEMENT

Ethics approval was not required.

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