

**Attitudes of parents of typically developing children towards school inclusion: The role
of personality variables and positive descriptions**

Abstract

Attitudes of parents of typically developing children (TDC) towards school inclusion have been neglected by researchers, although their importance is unquestionable. This study characterizes the attitudes of Portuguese parents of TDC towards school inclusion of a child with some type of disability (Hearing Impairment, Down Syndrome and Behavior Disorder). The research also analyzes the impact in parental attitudes of the type of disability and of the neutral or positive description of the child with a disability. The associations between parental attitudes, optimism and the Big Five personality dimensions are also examined.

A sample of 360 fathers and mothers of TDC, who attended elementary school, was collected. Parental attitudes were assessed through the survey *Children with difficulties at school* (Nota, Soresi, & Ginevra, 2015). Another two instruments were also used: the *Life Orientation Test – Revised* (LOT-R - Scheier, Carver, & Bridges, 1994) and the *NEO Five Factor Inventory* (NEO-FFI; Costa & McCrae, 1992).

The results revealed that Portuguese parents tended to demonstrate neutral attitudes towards the inclusion of children with some kind of disability, and that they didn't considered that the presence of a child with a disability could be perceived as a resource or benefit by the school context. Regarding the effect of the variables analyzed, it was found that the type of disability and the type of description of the child with a disability significantly influenced parental attitudes: attitudes were more positive towards children with Hearing Impairment than towards children with Down Syndrome or Behavior Disorder; parental attitudes were also more positive when the child with a disability was described in a way that stressed his/her abilities. Small but statistically significant associations were also found between optimism and personality dimensions (agreeableness; conscientiousness) on one hand and parental attitudes, on the other hand. The implications of the results are discussed.

Key Words: Parental attitudes, School inclusion, Optimism; Personality traits;
Positive description.

The implementation of inclusive education requires the participation and involvement of parents, including those of typically developing children (TDC). Their voices should be heard, since they provide valuable "inside" information (Tafa & Manolitsis, 2003). Their attitudes towards inclusive education also seem essential, since they influence the attitudes of their own children, as shown by de Boer, Pijl, Post and Minnaert (2012). Hence, obtaining knowledge about parents' attitudes and the variables that may influence them can be used to facilitate inclusion.

Nevertheless, very few studies have addressed the attitudes of parents of typically developing children towards inclusive education of children with Special Educational Needs (SEN), as illustrated by the review conducted by de Boer, Pijl and Minnaert (2010). Some years ago, these authors carried out a comprehensive search of empirical studies about this theme and published between 1998 and 2008. Regarding parents of TDC they only identified 4 studies, while regarding studies that included both parents of TDC and parents of children with SEN they identified other 3 studies. In addition, 3 of these 7 studies concern only parents of pre-school children (Rafferty, Boettcher, & Griffin, 2001; Stoiber, Gettinger, & Goetz, 1998; Tafa & Manolitsis, 2003) while the remaining 4 studies cover parents of children with a large age range (e.g., from 2 to 16 years, as in Balboni & Pedrabissi, 2000). The authors of the present work extended the search from 2008 till the present and focused on studies with the following characteristics: they included parents of TDC or of both TDC and SEN; they contained empirical data and used a parents' attitudes assessment instrument. Only 2 additional studies were located (de Boer & Munde, 2015; de Boer et al., 2012). In Portugal, the scenario is identical, since only 2 studies published in Portuguese were located regarding attitudes of parents of TDC (Pinto & Morgado, 2012) or of both TDC and SEN (Freitas, Arroja, Ribeiro, & Dias, 2015). One of these studies is essentially qualitative and has a small sample ($n = 30$; Pinto & Morgado, 2012), and the other (Freitas et al., 2015), although

comprising a large sample, analyses conjointly the attitudes of parents of TDC ($n = 211$) and SEN children ($n = 89$). In the latter study, there is also no information regarding the psychometric properties of the checklist used. Therefore, the authors consider that it is important to have access and to characterize the attitudes of Portuguese parents of TDC towards inclusive education.

In addition, it is also relevant to identify the variables that may influence parents' attitudes towards inclusive education. **Knowing which variables have impact may allow predicting attitudes or to devise and implement interventions leading to more favorable attitudes.** Thus far, the variables that have been examined by researchers belong to the following categories: parents' variables; child's type of disability; and experience with inclusive education or contact with disabilities.

Regarding parents' variables, the ones studied have been sociodemographic (e.g., age, gender, educational level, socioeconomic status) and the results available can be described as predominantly inconsistent. For instance, in what concerns gender either mothers held more positive attitudes than fathers (Balboni & Pedrabissi, 2000; de Boer & Munde, 2015; de Boer et al., 2012), the reverse happened (Kalyva, Georgiadi, & Tsakiris, 2007) **or fathers and mothers did not differ (Freitas et al., 2015).** In a similar way, although various studies indicated that the educational level was not related to the attitudes of parents of TDC (de Boer & Munde, 2015; de Boer et al., 2012; Kalyva et al., 2007), Tafa and Manolitsis (2003) showed that mothers with higher educational level were less worried regarding the participation of their own child in an inclusive classroom.

Surprisingly, the influence of personality variables on parents' attitudes towards inclusive education has not been explored. Nevertheless, optimism or some of the Big Five personality dimensions should be considered. Optimism has been defined as positive generalized outcome expectancies (Scheier & Carver, 1985) and has been positively related to

psychological well-being, life satisfaction, happiness and physical health and negatively associated with depression and anxiety (Alarcon, Bowling, & Khazon, 2013). Thus, one may assume that more optimistic parents will perceive school inclusion in a more favorable way. Regarding the Big Five dimensions, in recent years there has been a resurgence of interest in the identification of those that can predict attitudes and prejudice. A meta-analysis has found that Agreeableness and Openness to Experience are the two main dimensions influencing prejudice levels (Sibley & Duckitt, 2008), and Page and Islam (2015) corroborated that the two dimensions predicted the attitudes of adults toward people with intellectual disabilities. One may assume that these two dimensions will also be associated with more positive attitudes towards inclusion. However, the influence of other of the Big Five dimensions cannot be ruled out, as previous research has found heterogeneous effects of personality dimensions across prejudice domains (Gallego & Pardos-Prado, 2014; Sibley & Duckitt, 2008).

In what concerns the child's type of disability, the studies about parents attitudes indicate, with one exception (de Boer et al., 2012), that they are more concerned about the inclusion of children with an intellectual disability (de Boer & Munde, 2015; Tafa & Manolitsis, 2003) or a behavior problem (Tafa & Manolitsis, 2003) than with the inclusion of a child with a motor (de Boer & Munde, 2015; Tafa & Manolitsis, 2003) or a sensory disability (Tafa & Manolitsis, 2003). In the same way, Freitas et al. (2015) verified that the majority of Portuguese parents rated the school inclusion of children with a moderate or severe intellectual disability, brain lesions or autism/global developmental disorder as inadequate or very inadequate.

In some of the previous studies, parents were asked to indicate their degree of agreement based on a description of a specific SEN type (de Boer & Munde, 2015; de Boer et al., 2012). These descriptions or vignettes operationalize the disabilities, by describing characteristics

and behaviors. Since parents may have a vague knowledge about specific disabilities, vignettes may be a more valid assessment tool than a single question regarding the school inclusion of one specific disability (or more than one disability; Freitas et al., 2015, Tafa & Manolitsis, 2003). Nevertheless, the influence of the vignettes content on parents' answers has not been addressed. For instance, a neutral description that mentions both strengths and limitations of a disability may have a different impact from a positive description that stresses strengths, while acknowledging limitations. Indeed, it has been suggested that presenting individuals with disabilities in a positive light may influence attitudes (Kallman, 2017; MacDonald & MacIntyre, 1989).

Two studies were conducted. The first study had three different purposes. The first purpose was to examine the attitudes of Portuguese parents of TDC towards the inclusion of children with a hearing impairment, Down syndrome or behavior disorder in general primary education. According to the literature review of de Boer et al. (2010), it was predicted that Portuguese parents would hold neutral to positive attitudes. The second purpose was to analyze the influence of the type of disability on parents' attitudes, as well as the one of a neutral or positive description of a child disability. It was expected that attitudes would be more positive regarding hearing impairment than the other disabilities, as well as that the attitudes would be more approving when the children with disabilities are described in positive terms. The third purpose was to examine the association between parents' attitudes and optimism. A positive association was predicted.

The second study analyzed the influence of the Big Five personality dimensions on parents' attitudes towards inclusive education. It was assumed that Agreeableness and Openness to Experience would be associated with more positive attitudes towards inclusion.

Method

Participants

The sample of the **first study** comprised 360 parents of which 310 were mothers and 59 were fathers. Their chronological ages ranged from 23 to 54 years, with a mean of 38.59 ($SD = 9.92$), and they usually had 1 or 2 children ($M = 1.81$; $SD = 0.66$). The majority was employed (87.77%) and evidenced a high ($n = 54$, 15%), low ($n = 87$, 24.16%) and mostly medium socioeconomic status ($n = 219$, 60.83%). The parents' socioeconomic status was determined based on the education level and profession of parents according to a Portuguese classification system (Simões, 1994).

The sample of the second study comprised 146 parents. This group of parents is very similar to the sample **of the first study** since it included 126 mothers and 20 fathers, with a mean age of 38.69 years ($SD = 5.10$), mostly employed (89.4%) and from a medium socioeconomic status (43.4%).

Instruments

Children's with Difficulties at School (CDS)

This survey was originally developed at La.R.I.OS (Laboratorio di Ricerca e Intervento per l' Orientamento alle Scelte; Nota, Soresi, & Ginevra, 2015) in Italy. The survey was translated to the Portuguese language according to international guidelines (Tanzer & Sim, 1999).

This survey contains three vignettes (one of a child with a hearing impairment, one of a child with Down syndrome, and one of a child with a behavior disorder), and each one of them has 10 attitude statements. These statements are the same regarding the three vignettes and are rated on a 7-point probability rating scale (from Not Likely to Very Likely).

Due to the purposes of the study, a neutral and a positive vignette were used for each type of disability. The neutral and positive vignettes are identical in the most part, but the positive has one more sentence where three or four positive attributes of the child are mentioned. For instance, the positive vignette of the child with Down syndrome mentions, in its' last

sentence, that she participated in classroom activities, and was kind, punctual and precise in simple tasks performance (see Appendix). Also, half of the vignettes describe a boy and the other half describe a girl. However, the content of the vignette is the same whether it describes a boy or a girl, and only changes accordingly to the neutral or positive description and type of disability. In short, for each type of disability, there are 4 vignettes: a positive and masculine; a positive and feminine; a neutral and masculine; and a neutral and feminine. A total of 90 parents answered each of the 4 vignettes regarding the three types of disabilities. Table 1 summarizes this information.

(Insert Table 1)

The Portuguese version of the survey was subjected to an exploratory factor analysis, with extraction of the factors by the method of Principal Components. Through Varimax rotation, a structure of 3 factors was identified that explained 42.25% of the variance (Pinto, 2016). The 1st factor explained 18.79% of the variance and its 4 items (items 1, 3, 4 and 5) refer to the school performance of a child with a disability (e.g., probability of obtaining good scholastic attainment or completing tasks). Therefore, it was thus named. The 2nd factor explained 13.87% of the variance and was designated Social Acceptance, due to the content of its 3 items (items 7, 8 and 9) that assess whether the child with a disability will be appreciated or avoided by the classmates. The 3rd factor explained 9.6% of the variance, comprises 3 items (items 2, 6 and 10), and was entitled Resource, due mainly to the item with the highest loading (item 10), that evaluates whether the child with a disability is perceived as valuable by the school context. The Cronbach's alpha of the factors and the overall survey were: 0.88 in School Performance; 0.85 in Social Acceptance; 0.36 in Resource; and 0.85 in the overall survey. The values obtained show a good reliability with the exception of the factor Resource that has a more heterogeneous content. So this factor scores will be interpreted with caution.

Life Orientation Test-Revised (LOT-R)

The LOT-R was developed by Scheier, Carver and Bridges (1994) and, nowadays, is the self-report scale most used to assess dispositional optimism. It includes 10 items rated on a 5-point Likert scale. The Portuguese version (Laranjeira, 2008) has shown an adequate internal consistency (Cronbach alpha = .71) and a one factor structure.

NEO-Five Factor Inventory (NEO-FFI)

The NEO-FFI is a well validated and reliable inventory that assesses the Big Five personality dimensions (Costa & McCrae, 1992). It contains 60 items, 12 relative to each personality dimension, that are rated with a 5-point agreement scale. The Portuguese version of the NEO-FFI evidenced very good or respectable internal consistency values: .81 in Conscientiousness and Neuroticism; .75 in Extraversion; .72 in Agreeableness and .71 in Openness (Magalhães et al., 2014). The construct validity of the Portuguese version of the NEO-FFI was analyzed with exploratory and confirmatory factor analysis and the results obtained showed that the five dimensions of personality are present in the Portuguese population.

Procedure

The research was first analyzed by the Portuguese Ministry of Education and subsequently approved. Next, through a random sampling process, 4 school groups/units from several cities in the center of the country were selected. Nine schools of these groups agreed to participate. The researchers visited the schools and distributed an envelope to TDC attending them. The envelopes contained a letter explaining the study and inviting the parents to participate, as well as the instruments. In what concerns the CDS, each type of disability was presented in a separate page and ordered in an alternated way (e.g., hearing impairment could figure in page 2, 3 or 4).

The completed questionnaires were returned to the teachers in the envelope and subsequently collected by the researchers.

Parents were contacted through schools located in central Portugal. In the first study, 550 exemplars of both the CDS and the LOT-R were distributed and 360 of each were returned (response rate = 65.45%). In the second study, 250 exemplars of both the CDS and the NEO-FFI were distributed and 146 were returned (response rate = 58.4%).

Results

Data were analyzed with IBM SPSS Statistics 20 Package.

Regarding the first study, it was predicted that Portuguese parents would hold neutral to positive attitudes towards the inclusion of children with different types of disabilities. This hypothesis was analyzed through descriptive statistics and attitudes were considered neutral or positive according to the cutoffs proposed by de Boer et al. (2010). In their revision of the literature, de Boer et al. (2010) considered that outcomes of studies about attitudes towards disabilities could be counted as positive when the percentage of positive scores was above 70% or when the mean score was above 3.5 (on a five-point Likert scale; 4.9 on a seven-point Likert scale as in this study).

(Insert Table 2)

Table 2 shows the factor and total scores of the CDS regarding each type of disability. One may recall that the total score could attain a maximum of 70 points, and that the factor scores could attain a maximum of 28 (School Performance) or 21 points (Social Acceptance and Resource). In this study, the mean total score ranged from 44.63 to 38.31 and the mean school performance score is situated between 17.78 and 15.44. The mean social acceptance score is comprised between 16.04 and 12.14 and therefore is higher than the mean resource score that attained 10 points. Thus, the scores obtained in this study are not particularly high. Although the cutoffs proposed by de Boer et al. (2010) are relative, in the present study the

percentages of total scores above 49 and that reflect positive attitudes were of: 24.7% for hearing impairment (HI); 18.9% for Down syndrome (DS) and 7.5% for behavior disorder (BD). Nevertheless, it should be stressed that mean scores are intermediate and that the scores range is large, as evidenced by the standard deviation values.

The items that obtained the highest mean scores were items 7 and 9 regarding hearing impairment and Down syndrome, which reflect a low probability of the children with these disabilities to affect others' children school performance (item 7 with reverse scoring- HI = 5.77; DS = 5.57) and a high probability of being accepted by other children (item 9- HI = 5.40; DS = 5.37). On the contrary, the item that obtained the lowest mean score was item 10, regarding all three types of disabilities (HI = 3.81; DS = 3.79; BD = 3,50), which express a low probability that the child with a disability will be perceived as a resource or contribute by the school context.

Table 2 also shows that the scores are highest in the hearing impairment and lowest in the behavior disorder, while the scores in Down syndrome fall in between. The exception is the factor Resource where the scores are very similar across all disabilities. The influence of the type of disability was examined with a Repeated-Measures Analysis of Variance (ANOVA), and as sphericity could not be assumed, degrees of freedom were corrected with Huynh-Feldt adjustment (Field, 2000). Effect sizes were calculated with partial eta squared and considered as large (.14), medium (.06) and small effects (.01) according to Cohen description (1988). There were statistically significant differences in most scores with medium effects size in the school performance score and large effects size in the social acceptance and total scores. Pairwise comparisons, with Bonferroni adjustment for multiple comparisons, showed statistically significant differences between: hearing impairment and Down syndrome in school performance ($p < .001$) and total score ($p < .001$) favorable to hearing impairment; hearing impairment and behavior disorder in school performance ($p < .001$), social acceptance

($p < .001$) and total score ($p < .001$) favorable to hearing impairment; Down syndrome and behavior disorder in school performance ($p < .001$), social acceptance ($p < .001$) and total score ($p < .001$), all the differences advantageous to Down syndrome.

(Insert Table 3)

To test the influence of the description of the child with a disability, the CDS scores relative to the positive and neutral description of each type of disability were compared through an independent samples t test. Effect sizes were calculated with Cohen d and classified as large (.80), moderate (.50) and small effects (.20; Cohen, 1988; Fritz, Morris, & Richler, 2012). When the description of a child with a disability was positive, the scores of the CDS were always higher than the ones of a neutral description (see Table 3). The comparison of the CDS scores indicated various statistically significant differences, regarding mainly almost all the hearing impairment scores. Nevertheless, there were also significant differences in some scores of Down syndrome (total and school performance scores) and behavior disorder (total and social acceptance scores). The effects size were small.

(Insert Table 4)

The Pearson correlations between CDS and LOT-R scores in the first study, or CDS scores and NEO-FFI personality dimensions in the second study are presented in Table 4. The LOT-R was significantly correlated with the CDS scores, predominantly with the ones concerning hearing impairment and Down syndrome. However, the correlations were small.

The dimensions Agreeableness and Conscientiousness evidenced positive associations with the CDS scores and, although of small magnitude, some were statistically significant. Neuroticism also evidenced a few significant associations with the CDS, but negative. There was also a slight variability in the associations according to the type of disability.

Discussion

As previously mentioned, the parents' scores in the CDS were not particularly high, and attending to de Boer et al. (2010) guidelines, the attitudes towards the school inclusion of children with disabilities are best described as neutral. However, there was a high variability in the scores obtained and so, the hypothesis that Portuguese parents would hold neutral to positive attitudes was partially corroborated. A predominance of neutral parental attitudes has also been reported in studies conducted in other countries, namely in Italy (Balboni & Pedrabissi, 2000), the Netherlands (de Boer et al., 2012), and Greece (Tafa & Manolitsis, 2003). In Portugal, inclusive education has become mandatory both for public and private schools in 2008 (Law 3/2008), but was not followed by the necessary conditions for its effective implementation. Thus, it is possible that parents of TDC have some knowledge of this fact, and concern themselves regarding the supports available in schools, such as the paucity of special teachers and other specialized personnel or the number of children per class (e.g., 20 or more). Portuguese parents of TDC may also hold other concerns, already reported in the literature, such as: the preparedness or efficacy of school teachers in managing an inclusive classroom (de Boer & Munde, 2015; Tafa & Manolitsis, 2003); the possibility that teachers devote too much time and attention to children with disabilities (Peck, Staub, Gallucci, & Schwartz, 2004; Pinto & Morgado, 2012); the lowering of academic expectations or of the quality of instruction in inclusive classrooms.

The acceptance of a child with a disability by her classmates was one of the items that obtained a highest mean score. This suggests that parents may recognize benefits of school inclusion, such as tolerance to individual differences, and sensitivity to others and their needs. Although the great majority of literature on the impact of school inclusion has focused on outcomes for children with SEN rather than on TDC, some studies do acknowledge the social and emotional benefits to the latter (Gilmore, Campbell, & Cuskelly, 2003; Peck et al., 2004). Other studies have also indicated that there are no academic adverse effects on TDC of

including pupils with special needs in mainstream schools (Kalambouka, Farrell, Dyson, & Kaplan, 2007; McDonnell et al., 2003).

Since Portuguese parents attributed the lowest mean score to the item of the CDS relative to the perception of the child with a disability as a resource by the school context, and their attitudes are best described as neutral, it is also possible that they don't have full information regarding the abovementioned benefits. Although there is a link between attitudes of parents and children towards inclusive education (de Boer et al., 2012), parents of TDC are usually neglected from sensitizing actions or intervention programs designed to influence attitudes. Evidence of benefits coming from Portuguese schools and testimonials corroborating them would have a role to play in those parents sensitizing actions.

Regarding the influence of the type of disability **the hypothesis was corroborated since** there were statistically significant effects, favorable to hearing impairment and disadvantageous to behavior disorder. First of all, these data indicate that parents' attitudes should be researched regarding specific types of disabilities, rather than in general terms. In this context, two studies that examined the impact of these specific disabilities in the attitudes of parents of preschool children without disabilities (Peck et al., 2004; Rafferty et al., 2001) registered results identical to the ones of this study. Hearing impairment may be perceived as a circumscribed disability, with consequences only at the auditory perception and oral communication levels. On the contrary, and as shown by this study results, parents may perceive a behavior disorder as having a generalized impact both at the level of school performance and interpersonal relationships. Parents may also fear the impact of the behavior disorder in the classroom management and in the behavior and performance of their own child. Hearing impairment and Down syndrome are much less prevalent than behavior disorder, which may constitute one of the most common types of SEN. Thus, concerns of

parents of TDC regarding behavior disorder inclusion should be clearly specified and addressed.

Down syndrome obtained a social acceptance score similar to the one of hearing impairment and significantly different from the one of behavior disorder. This may be due to the well-established stereotype of the child with Down syndrome as affectionate and sociable. As pointed out by Gilmore et al. (2003), this stereotype may enhance her social acceptance, but may also set up expectations, which if unmet, could undermine effective inclusion.

As predicted, a positive description of the three different types of disabilities exerted a favorable and statistically significant influence on parents' attitudes. People hold misconceptions and misperceptions about disabilities, dominated by deficits and damages located within the individual. These misconceptions reflect the influence of the medical model of disability and parents who lean towards this model may be more resistant to inclusive education. Thus people with disabilities need to be portrayed in a positive manner, although only a few attempts have been made to influence attitudes in this way (Kallman, 2017; MacDonald & MacIntyre, 1999). The results obtained in this study are important, since they were observed regarding different types of disabilities, and were a consequence of adding mention to three or four positive attributes. However, further research is needed to compare the impact of neutral and positive descriptions of children with disabilities.

The first study showed that, as predicted, optimistic parents hold more positive attitudes towards inclusive education, although the correlations were small. Optimism has been studied regarding physical well-being, psychological well-being and personality traits (Alarcon et al., 2013), but neglected regarding attitudes. Nevertheless, optimism has already been associated with more positive attitudes regarding minority groups (Fenster, 2004).

In the second study, Agreeableness and Conscientiousness were also significantly associated with more positive attitudes towards inclusion, while Neuroticism showed

negative associations. The results of Agreeableness are in line with those of previous research that indicated that high Agreeableness predicted less prejudice and more positive attitudes towards minority groups (Page & Islam, 2015; Sibley & Duckitt, 2008). This is expectable, since persons high in Agreeableness are more tolerant, patient and tender-minded towards other people in general. Departing from previous results, this study did not confirm the influence of Openness to Experience, but instead of Conscientiousness and Neuroticism. These data can be explained in different ways, but first of all one must attend to the specific theme and sample of this study. The Big-Five personality dimensions have been related to generalised prejudice or to particular prejudice types, such as sexism or racism (Gallego & Pardos-Prado, 2014; Sibley & Duckitt, 2008). They have rarely been studied in relation to disabilities (e.g., Page & Islam, 2015), and to the best of our knowledge have not been studied in relation to school inclusion. Secondly, other research showed heterogeneous effects of personality dimensions across prejudice domains or the groups that were studied (Gallego & Pardos-Prado, 2014; Sibley & Duckitt, 2008). For instance, in a research about attitudes towards immigrants, Openness to Experience was only weakly related to attitudes, while Neuroticism was negatively associated (Gallego & Pardos-Prado, 2014). Thirdly, Conscientiousness is linked to being dutiful, organized and diligent, to follow rules and to be sensitive to violations of rules underlying social exchanges (Costa & McCrae, 1992). Therefore, people high in Conscientiousness may be sensitive to the rights of children with SEN, such as that all children should learn together regardless of the differences they may have. Fourthly, the data concerning the influence of personality dimensions are conditioned by the relatively small sample size that was used for this particular purpose.

Attitudes are influenced by many variables and this study only focused on a few. Variables that may also be relevant have not been included, such as the parents experience with inclusive education (Balboni & Pedrabissi, 2000) or the parents' perception of the resources

available in schools for inclusive education. In the future, it would be important to analyze conjointly and in a more integrated way, variables related to the child with a disability, to the parents of TDC and to the school context.

The samples of the two studies comprise mostly mothers and fathers represent a comparatively small number of the participants. Other studies about the same theme (e.g., de Boer & Munde, 2015; de Boer et al., 2012; Tafa & Manolitsis, 2003) have an identical sample composition in terms of the number of mothers and fathers that may reflect a greater willingness of mothers to participate in educational research. However, and since the gender of the parents has yielded inconsistent results regarding inclusive education, it would be relevant to have samples with similar numbers of mothers and fathers.

Another limitation is relative to the small number of items of the attitudes instrument and the fact that it only assesses explicit attitudes. The use of instruments that assess explicit and implicit attitudes might be important, since self-report surveys are sensible to social desirability and may be unable to capture covert prejudices.

Appendix

Example of the vignettes used in the *Children's with Difficulties at School*

Down syndrome Neutral and Feminine

Paula is a girl of the same age as your son/daughter that has Down syndrome and a developmental delay. Paula has difficulty in reading and comprehension, and her former teachers describe her as a girl with difficulties in receptive and expressive language, but also as a very sociable girl.

Down syndrome Positive and Feminine

Paula is a girl of the same age as your son/daughter that has Down syndrome and a developmental delay. Paula has difficulty in reading and comprehension, and her former teachers describe her as a girl with difficulties in receptive and expressive language, but also as a very sociable girl. In her previous school experience, Paula has participated in the different classroom activities, and has also been described as kind, punctual and precise in simple tasks performance.

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Table 1

Participants and instruments

	Hearing Impairment	Down Syndrome	Behavior Disorder
1st Study			
Children with Difficulties at School (N = 360)			
Positive and Masculine	90	90	90
Positive and Feminine	90	90	90
Neutral and Masculine	90	90	90
Neutral and Feminine	90	90	90
Life Orientation Test - Revised (LOT-R) (N = 360)			
2nd Study			
Children with Difficulties at School (N = 146)			
Positive and Masculine	13	12	12
Positive and Feminine	12	12	12
Neutral and Masculine	12	13	12
Neutral and Feminine	12	12	12
NEO-Five Factor Inventory (N = 146)			

Table 2

Type of disability

	Hearing Impairment (N=360)			Down Syndrome (N=360)			Behavior Disorder (N=360)			<i>F</i> (<i>df</i>) ^a	η_p^2
	<i>M</i>	<i>SD</i>	Min- Max	<i>M</i>	<i>SD</i>	Min- Max	<i>M</i>	<i>SD</i>	Min- Max		
CDS											
School Performance	17.78	4.30	4-28	16.19	4.45	4-28	15.44	4.40	6-28	54.59** (1.913, 358)	.13
Social Acceptance	16.04	3.49	3-21	15.75	3.49	4-21	12.14	3.68	3-21	267.63** (1.507, 358)	.48
Resource	10.71	2.36	3-18	10.83	2.35	3-19	10.72	2.43	3-20	.42 (1.814, 358)	.00
Total CDS	44.63	7.06	16-64	42.78	7.37	11-67	38.31	7.46	17-62	145.96* (1.868, 358)	.29

** p <.001

^aHuynh-Feldt adjustment of the degrees of freedom

Table 3

Positive or neutral description of a child with a disability

	Hearing Impairment				Down Syndrome				Behavior Disorder			
	<i>M</i>	<i>SD</i>	<i>t</i> (358)	<i>d</i>	<i>M</i>	<i>SD</i>	<i>t</i> (358)	<i>d</i>	<i>M</i>	<i>SD</i>	<i>t</i> (358)	<i>d</i>
Positive - Total CDS	45.81	6.36			43.76	7.12			39.38	7.42		
Neutral - Total CDS	43.45	7.53	-3.22**	0.34	41.80	7.49	-2.54*	0.27	37.23	7.35	-2.76**	0.29
Positive - School Performance	18.52	3.97			16.81	4.39			15.78	4.57		
Neutral - School Performance	17.23	4.53	-2.87**	0.30	15.57	4.50	-2.66**	0.28	15.11	4.21	-1.44	0.15
Positive - Social Acceptance	16.24	3.25			15.93	3.35			12.68	3.42		
Neutral - Social Acceptance	15.85	3.71	-1.06	0.11	15.58	3.55	-0.96	0.10	11.60	3.85	-2.82**	0.30
Positive - Resource	11.06	2.27			11.02	2.40			10.92	2.46		
Neutral - Resource	10.37	2.41	-2.77**	0.29	10.65	2.28	-1.49	0.16	10.52	2.38	-1.57	0.17

* $p < .05$ ** $p < .01$

Table 4

Correlations of attitudes with optimism and personality dimensions

	LOT-R		NEO-FFI			
	(N = 360)		<i>Neuroticism</i>	<i>Extraversion</i>	<i>Agreeableness</i>	<i>Conscientiousness</i>
Hearing Impairment						
Total CDS	.14**	-.16*	.10	.19*	.23**	.14
School Performance	.11*	-.12	.09	.13	.14	.10
Social Acceptance	.16**	-.17*	.15	.24**	.25**	.16
Resource	.00	-.02	-.08	-.03	.08	.01
Down Syndrome						
Total CDS	.14**	-.08	.07	.15	.18*	.09
School Performance	.11*	-.07	.09	.12	.19*	.06
Social Acceptance	.17**	-.11	.07	.20*	.14	.15
Resource	-.01	-.02	-.04	-.03	.04	.00
Behavior Disorder						
Total CDS	.05	-.14	.13	.26**	.18*	.06
School Performance	.13*	-.18*	.15	.25**	.19*	.08
Social Acceptance	.03	-.08	.12	.19*	.13	.04
Resource	-.13*	.01	-.03	.08	.03	-.01

*p<.05 ** p <.01