

# An insight into the attitudes held by four- to six-year-olds toward people with disabilities: ideas, feelings, and behaviors.

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## ABSTRACT:

Everyone is unique and has their own characteristics, interests, and needs. Consequently, schools must be able to cater to this diversity through an inclusive approach that begins in early childhood education. To this end, the necessary support must be implemented, and the wider educational community — particularly classmates — must adopt positive attitudes toward people with disabilities. Therefore, the present study aimed to determine the attitudes of early childhood education students toward people with disabilities and the variables that influence these attitudes. For this purpose, a sample of 261 participants completed a questionnaire with the help of an adult. Our findings revealed that the children generally have positive attitudes towards different types of disability. Furthermore, it was found that the type of disability, along with the variables of age, gender, and knowledge, impacted certain dimensions of these attitudes.

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## INTRODUCTION

Everyone is unique and has their own characteristics, interests, and needs. Understanding, valuing, and respecting these differences is essential for the proper functioning of schools and society in general. For this reason, legislative efforts have been made in recent decades to ensure that classrooms contribute to creating a fairer and more equal world for all. Indeed, according to the United Nations Educational, Scientific, and Cultural Organization (UNESCO, 2015), an inclusive school is the most effective way to combat discrimination. In particular, the Salamanca Statement (UNESCO, 1994) highlighted the importance of respecting and addressing the needs of each student and providing quality education for all, thus laying the foundations for inclusive schools. Furthermore, UN member countries established education as one of the pillars of the 2030 Agenda, where one of the main goals is to ensure fair, equal, and quality education for all students throughout their lives (Rodríguez, 2020). However, while considerable progress has been made, even decades later, people still discuss the need to create inclusive schools and societies, indicating that these goals have not been met. In particular, people with disabilities continue to be one of the most marginalized groups (Latorre & Liesa, 2016).

Therefore, creating inclusive schools involves not only implementing laws that provide students with disabilities with the necessary support and resources but also ensuring their real contribution to classroom dynamics since students with disabilities continue to participate less than their non-disabled peers (Schwab, 2015). To this end, the entire educational community must hold positive attitudes towards this group, but especially important are the attitudes of their peers since these have a considerable impact on self-concept and self-esteem in the early years of life. According to Bravo (2013), these attitudes can be understood as the way people interact with a specific group of people. However, this way of acting is closely linked to individuals' ideas and feelings towards that group. Therefore, when discussing attitudes, it is essential to consider three distinct dimensions: attitudinal, behavioural, and cognitive. Each of these dimensions must be evaluated because, while they are related, they have distinct features. Specifically, the affective component refers to the set of feelings and emotions evoked by the group to which the attitudes refer. The behavioural component concerns our intention (or lack thereof) to connect with these individuals, along with how this is accomplished. Finally, the cognitive component includes

all the ideas and stereotypes associated with the group — in this case — people with disabilities (Arias et al., 2013).

Therefore, recent decades have witnessed a growing body of research examining the attitudes held by students of varying age groups toward people with disabilities. Notably, most of these studies have been conducted at the university level (Alnahdi et al., 2019; D'Agostino & Douglas, 2021; Girli et al., 2016; Goddard & Evans, 2018; Hamid & Mohamed, 2021; Ijadunola et al., 2022; Navarro-Mateu et al., 2020; Polo et al., 2020). In contrast, studies exploring such attitudes among pupils in the early childhood education stage remain relatively scarce (de Boer et al., 2014; Dyson, 2005; Favazza & Odom, 1997; Hacıbrahimoglu & Ustaoglu, 2020; Nowicki, 2006; Reis et al., 2020; Tekin et al., 2020; Werner et al., 2015), especially in Spain, where no examples have been found.

In general, while various studies indicate that students' attitudes tend to be positive (D'Agostino & Douglas, 2021; Dias et al., 2020; Dyson, 2005; Felipe-Rello et al., 2020; Goddard & Evans, 2018; Reis et al., 2020), in many cases, this disposition appears to be neutral (de Boer & Pijl, 2016; Doreen & Kurniawati, 2018; Petry, 2018; Vignes et al., 2009) or negative (Cáceres et al., 2020; Malinen & Savolainen, 2008; Siperstein et al., 2007; Wang & Qi, 2020), particularly at the early childhood education stage (de Boer et al., 2014; Hacıbrahimoglu & Ustaoglu, 2020; Tekin et al., 2020; Werner et al., 2015). This negative bias could stem from these students having little knowledge about disability, given that such negative attitudes are often linked to a lack of information about this issue (Ison et al., 2010).

### *Variables that influence attitudes*

However, it should be noted that these attitudes may vary depending on different factors such as gender, age, and knowledge about this group (de Boer et al., 2012). In addition, Werner et al. (2015) found that the type of disability can also determine attitudes.

Thus, in terms of gender, most studies conclude that girls have more favourable attitudes toward people with disabilities (Alnahdi et al., 2020; de Boer & Pijl, 2016; Felipe-Rello et al., 2020; Ijadunola et al., 2022; Navarro-Mateu et al., 2020; Wang & Qi, 2020). However, several cases have also been found in which male students are more willing to interact with students with disabilities (Abellán et al., 2020; Al-Kandari, 2015), while other studies have reported no significant gender differences in these attitudes (de Boer et al., 2014; Doreen & Kurniawati, 2018; Hacıbrahimoglu & Ustaoglu, 2020; Reis et al., 2020).

Age also appears to determine students' attitudes toward people with disabilities. More specifically, although the vast majority of research indicates that older students hold more favourable attitudes (de Laat et al., 2013; Navarro-Mateu et al., 2020; Pivarč, 2022; Suriá, 2011), some studies have found the opposite, that is, younger students were more supportive of this educational inclusion (Chullo & Flores, 2020; Soulis et al., 2016). However, as with the gender variable, some studies have found no significant differences according to age (Abellán et al., 2020).

Knowledge or lack of knowledge about disability is undoubtedly a determining factor in students' attitudes toward people with disabilities. Generally, it appears that students in pre-primary education have very poor knowledge of this concept (Diamond & Hong, 2010; Diamond & Tu, 2009; Dyson, 2005). However, at higher levels, a close relationship has been found between attitudes towards people with disabilities and participants' knowledge of the subject, demonstrating that those at more advanced educational levels were more supportive of the educational inclusion of these students (Al-Kandari, 2015; Alnahdi et al., 2020; Bossaert et al., 2011; Goddard & Evans, 2018; Hampton & Xiao, 2008; Hong et al., 2014; Hoskin et al., 2015; Navarro-Mateu et al., 2020).

Furthermore, contact with people with disabilities is also an important factor to consider when assessing attitudes, as numerous studies have found that those who had some kind of contact with people with disabilities held more positive attitudes toward them (Alcedo et al., 2013; Al-Kandari, 2015; Alnahdi et al., 2020; Álvarez, 2020; Blackman, 2016; Chullo & Flores, 2020; De Laat et al., 2013; Dias et al., 2020; Felipe et al., 2018; Kwon et al., 2017; Mavropoulou & Sideridis, 2014; Pivarč, 2022; Polo et al., 2020; Suriá, 2011; Wang & Qi, 2020; Yu et al., 2012). However, in some cases, no relationship between these two variables has been found (Abellán et al., 2020; Georgiadi et al., 2012; Haciibrahimoğlu & Ustaoglu, 2020; Hoskin et al., 2015; Malinen & Savolainen, 2008; Navarro-Mateu et al., 2020; Rakap et al., 2016; Schwab, 2017; Tekin et al., 2020).

Finally, several studies have shown that students' attitudes may vary according to the type of disability presented (Brown et al., 2011; De Laat et al., 2013; Hellmich & Löper, 2018; Nowicki, 2006; Petry, 2018; Polo et al., 2020; Rakap et al., 2016). In general, these findings indicate that students with intellectual disabilities (Brown et al., 2011; De Laat et al., 2013; Nowicki, 2006) or behavioural problems (Petry, 2018; Pijl et

al., 2008) are more negatively perceived by their peers. In contrast, students with sensory (De Laat et al., 2013; Polo et al., 2020) or motor (Brown et al., 2011; Nowicki, 2006; Rakap et al., 2016) disabilities are the most highly rated by their peers.

However, attitudes are not static but modifiable, so it is important to determine students' predispositions so that appropriate interventions can be implemented if necessary. Children's participation in school and social life depends largely on the attitudes and acceptance of their peers, so negative attitudes and isolation could lead to problems in the social, personal, and academic development of students with disabilities (Petry, 2018; Schwab, 2017). Thus, we need to cultivate favourable attitudes among peers since these attitudes — whether negative or positive — can hinder or facilitate progress (Shannon et al., 2009). Moreover, this assessment must be done from an early age because the earlier we intervene in these attitudes, the easier it will be to modify them, as they will be less ingrained (Cameron et al., 2011).

Therefore, the purpose of this study was two-fold. We wanted to (1) examine the attitudes of a group of early childhood education students and (2) analyse the variables that influence the formation of these attitudes.

## METHODOLOGY

### *Participants*

The study sample consisted of 261 participants from seven different schools in the province of Granada to explore the attitudes of infant education students. For this purpose, a quasi-experimental design was used, which was chosen for ease of access to the educational centre and to recruit a heterogeneous sample, thereby enhancing its representativeness. All participants were Spanish speakers, and the sample was balanced in terms of gender, with 53.6% (n=140) girls and 46.4% (n=121) boys. Moreover, in terms of age, most of the participants were 5-year-olds (n=138), followed by 4-year-olds (n=84) and 6-year-olds (n=39). In this sense, it is worth noting that although the infant education stage covers the 0–6-year age range, only participants from 4 years of age were included since, according to Magiati et al. (2002), attitudes are consolidated from this age onwards. Finally, considering the type of centre attended by the participants, most of them (n=153) attend a subsidised centre (funded by government and private entities), while the rest attend a public (government financed) (n=63) or private (n=45) centre. In general, the families of these children reported having a medium

socio-economic level. Furthermore, only 6 of the 261 participants (2.3%) reported having had contact with a person with a disability, either in the family (n=3) or at school (n=3).

### ***Instruments***

First, to determine participants' comprehension of disability, a modified version of Esposito and Peach's (1983) *Understanding Disability Scale* was used. This instrument asks the child whether they are familiar with the concept of a person with a disability. If the answer is yes, the child is asked to draw a picture to illustrate their understanding, providing them with crayons and blank sheets of paper; to identify the source of this knowledge, and to assess the extent to which they perceive that person to be similar to or different from themselves.

Second, to identify the attitudes held by the participants towards people with disabilities, we used the scale for the evaluation of attitudes towards disability in Early Childhood Education students (Aparicio et al., 2023), based on an adaptation of three instruments: Nowicki's Pictographic Scale (2006), The Behavioural Intent Scale (Dimitrova-Radojichikj & Chichevska-Jovanova, 2018), and The Multi-response attitude scale developed by Nowicki (2006). This instrument has shown satisfactory psychometric properties of validity and reliability (Cronbach's Alpha = .804) and was used to identify attitudes towards four different types of characters: one without a disability, one with a sensory disability, one with a motor disability, and one with an intellectual disability. Moreover, this questionnaire identifies the cognitive, affective, and behavioural dimensions of these attitudes.

For the affective dimension, each child must state how they feel in response to four questions. The response options are: Very happy (5), Happy (4); I don't care (3), Sad (2), I am afraid (1). Thus, higher scores are taken to indicate a more positive attitude.

To explore the behavioural dimension of attitudes, the children were asked to answer either different questions by choosing from three response options: Yes (3), Maybe (2), or No (1). As in the previous case, a higher score indicates a more positive attitude.

Finally, in the cognitive dimension, participants were asked to match a series of 16 adjectives (8 positive and 8 negative) to each of the characters, being freely able to choose one, all, or several possibilities. On this occasion, a score of +1 was awarded for choosing a positive adjective and -1 for negative adjectives. Therefore, higher scores indicate more favourable attitudes.

### ***Procedure***

Initially, the research team contacted eight selected schools. Subsequently, the authors conducted in-person visits to seven schools that expressed their willingness to participate. During these visits, the team explained in more detail the importance of this analysis, described the research procedure, and agreed upon dates and times for data collection. Given that the participants were minors, written authorisation was requested from the families to allow the children's involvement in the research. At the same time, the children were also approached and given the option to participate. Viewing the experiment as a game, they accepted without hesitation.

Thus, at the scheduled time, each child attended the centre. The children answered the questions in individual and separate sessions with the researcher to ensure minimal distractions and external influences. The children responded to the questions verbally or by pointing to the icons representing each answer. Each session took approximately 10 minutes. Additionally, if a question was not understood, the researcher provided clarification.

All the procedures used in this study followed the ethical standards of the relevant institutional or national research committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards on studies involving human participants.

Finally, all the information collected was transferred to a database to conduct relevant analyses. The statistical software package SPSS (Version 28 for iOS) was used to structure, organise, and analyse the data. Means and standard deviations were calculated for the study variables. Levene's test of homogeneity of variances was applied to test for the equality of variances between the groups to be compared.

## **RESULTS**

The results obtained for all dependent variables show a significance level greater than .05, therefore confirming the above assumptions. When the normality criterion was met, that data were subjected to an ANOVA to determine the effects of age, gender, knowledge, type of disability, and contact with people with disabilities on the dimensions that constitute the scale of attitudes towards people with disabilities.

### ***Students' attitudes towards people with disabilities***

The results presented in Table 1 indicate the students generally had a positive attitude toward all types of characters, including those with disabilities, in the affective and be-

Table 1. Descriptive analysis of participants' attitudes

Type of disability	Attitudinal components	M	SD
Non-disabled	Affective	4.36	0.56
	Behavioural	2.80	0.35
	Cognitive	0.20	0.21
Sensory disability	Affective	4.20	0.72
	Behavioural	2.76	0.46
	Cognitive	0.03	0.20
Motor disability	Affective	4.18	0.88
	Behavioural	2.75	0.48
	Cognitive	0.09	0.19
Intellectual disability	Affective	3.99	0.95
	Behavioural	2.65	0.58
	Cognitive	0.01	0.22

Note. M=Mean; SD=Standard Deviation

havioural dimensions. Specifically, the higher (indicating a more positive attitude) scores were found for the affective ( $M=4.36$ ;  $SD=.56$ ) and behavioural ( $M=2.80$ ;  $SD=.35$ ) dimensions of attitudes towards the non-disabled character, and the most negative scores were found for intellectual disability ( $M=3.99$ ;  $SD=.95$  and  $M=2.65$ ;  $SD=.58$ ).

However, more neutral attitudes (neither positive nor negative) were found towards the cognitive dimension. Again, the non-disabled character was viewed more favourably ( $M=.20$ ;  $SD=.21$ ), while the opposite result was observed for the intellectual disability character, to which the most negative attitudes were directed ( $M=.01$ ;  $SD=.22$ ).

### ***Variables that influence attitudes***

Subsequently, analyses were conducted to identify the variables that may determine attitudes toward the various disabilities. First, concerning the gender variable, the results revealed girls showed more favourable attitudes than boys towards people with disabilities. Specifically, the greatest differences were found in the cognitive dimension of attitudes towards students with intellectual disabilities, where girls obtained a value of  $M=.02$  ( $SD=.22$ ) and boys  $M=.01$  ( $SD=.21$ ). For the affective dimension of attitudes towards motor disabilities, boys obtained a mean score of  $M=4.09$  ( $SD=.93$ ) and girls' attitudes were slightly more positive, as their mean score was  $M=4.25$  ( $SD=.82$ ).

Significant differences were found only in the cognitive-motor disability dimension [ $F_{(19,617)} = 1.259$ ,  $p < .000$ ], with girls obtaining higher scores on this dimension.

When analysing attitudes according to age, a common pattern emerged across all the dimensions of attitudes towards the various disabilities. The older students show more positive attitudes than their younger counterparts. This difference was particularly marked in the affective dimension of attitudes towards motor disability, where 4-year-olds obtained a mean score of  $M=3.90$  ( $SD=1.06$ ), 5-year-olds obtained a mean score of  $M=4.28$  ( $SD=.74$ ), and for 6-year-olds this mean score was  $M=4.40$  ( $SD=.74$ ). Moreover, these differences are also clearly observed in the attitudes towards students with intellectual disabilities, for both the affective (4 year-olds:  $M=3.85$ ,  $SD=1.04$ ; 5-year-olds:  $M=4.01$ ,  $SD=.95$ ; 6 year-olds:  $M=4.25$ ,  $SD=.71$ ) and behavioural dimensions (4-year-olds:  $M=2.56$ ,  $SD=.66$ ; 5-year-olds:  $M=2.65$ ,  $SD=.56$ ; 6-years-olds:  $M=2.83$ ,  $SD=.39$ ).

More specifically, significant age differences were found for the following dimensions: affective-motor disability [ $F_{(6,778)} = 2,258$ ,  $p < .001$ ]; behavioural-motor disability [ $F_{(4,906)} = 2,258$ ,  $p < .008$ ]; cognitive-no disability [ $F_{(8,129)} = 2,258$ ,  $p < .000$ ]; cognitive-sensory disability [ $F_{(6,854)} = 2,258$ ,  $p < .001$ ]; cognitive-motor disability [ $F_{(2,488)} = 2,258$ ,  $p < .003$ ], with the 6-year-olds scoring higher, and therefore showing more positive attitudes.

Regarding knowledge about disability, while a minority of participants claimed to be familiar with the notion of a child with a disability ( $n=12$ ), their attitudes were only more positive towards motor disability, where their scores were higher for the affective (with knowledge:  $M=4.19$ ;  $SD=.94$  and without knowledge:  $M=4.17$ ;  $SD=.87$ );

behavioural (with knowledge:  $M=2.78$ ;  $SD=.52$  and without knowledge:  $M=2.75$ ;  $SD=.48$ ) and cognitive dimensions (with knowledge:  $M=.22$ ;  $SD=.18$  and without knowledge:  $M=.08$ ;  $SD=.19$ ). Thus, in the cognitive dimension, more positive attitudes towards students with motor disabilities were found [ $F_{(6,009)} = 1.259$ ,  $p < .015$ ]. Coincidentally, when these students were asked to draw a picture of a child with a disability, they all depicted a person with a physical or motor disability (figure 1).



Figure 1. Drawing by a student to depict a physically disabled person (without an arm).

Moreover, as already noted, the type of disability also determines the participants' attitudes since significant differences were found according to this variable across all dimensions. Specifically, students with intellectual disabilities were viewed the most negatively in all dimensions, although this difference was particularly marked in the cognitive dimension ( $M=0.10$ ;  $SD=.22$ ). Moreover, although the differences are small, the participants showed the most positive attitudes towards the affective ( $M=4.20$ ;  $SD=.72$ ) and behavioural ( $M=2.76$ ;  $SD=.46$ ) components of the sensory disability and the cognitive component ( $M=.09$ ;  $SD=.19$ ) of the motor disability.

Finally, analysing the differences in contact with people with disabilities, no significant differences were found among students, as most reported no contact with people with disabilities ( $n=255$ ).

## CONCLUSIONS

In pursuing a more just and egalitarian society, schools must promote values centred around equal opportunities and respect for diversity. To this end, it is essential to cultivate positive attitudes towards plurality and particularly

towards people with disabilities, as this continues to be one of the most marginalised groups in contemporary society.

For this reason, our research aimed to analyse the attitudes held by infant education students towards people with disabilities, as these will determine, to a large extent, whether there is genuine inclusion in daily classroom dynamics, that is, authentic and high-quality participation of all students, without exception, in both academic and social spheres.

Our findings revealed that, in general, while students held positive attitudes towards people with disabilities, these were more negative compared to those attitudes shown towards non-disabled students. This observation differs from the findings reported by other studies at this educational stage (de Boer et al., 2014; Hacıbrahimoğlu & Ustaoglu, 2020; Tekin et al., 2020; Werner et al., 2015), where attitudes were directly found to be either neutral or negative. These discrepant findings could be due to the fact that in this study, the instrument used to assess attitudes includes images of people with disabilities and a brief introduction to their characteristics, which could encourage a more favourable attitude to the various disabilities. When considering the type of disability, our participants showed a less favourable attitude towards intellectual disability, a finding previously reported in other studies (Brown et al., 2011; De Laat et al., 2013; Nowicki, 2006). Furthermore, if we consider the attitude components, it appears that while the students were generally unaware of the concept of disability and, therefore, displayed more neutral attitudes in the cognitive component, more positive scores were observed for the affective and behavioural components, which might explain their favourable predisposition towards relating to all students without exception. Thus, while these three components are closely related, they are also independent since, as we have seen, scores obtained in one component do not necessarily determine the scores in the others.

Additionally, these attitudes appear to be shaped by several factors. First, concerning gender, and in line with the majority of studies in the literature (Alnahdi et al., 2020; de Boer & Pijl, 2016; Felipe-Rello et al., 2020; Ijadunola et al., 2022; Navarro-Mateu et al., 2020; Wang & Qi, 2020), girls showed significantly more favourable attitudes towards inclusion, particularly in the cognitive dimension of motor disability.

Concerning the age variable, our findings are again compatible with the results of other studies (de Laat et al., 2013; Navarro-Mateu et al., 2020; Pivarč, 2022; Suriá, 2011), since older students generally presented more

favourable attitudes towards people with disabilities. These differences were significant for the three dimensions of motor disability, the cognitive dimension of sensory disability, and the non-disabled character. Generally, when students are older, not only do they have a higher level of development and maturity, but they have also had more opportunities to learn about diversity through information provided by others or through their own experience, which could explain this greater willingness to relate to people with disabilities.

Despite the clear advantages of having specific knowledge about disability in terms of facilitating peer relationships, the findings of this study agree with those reported by other authors (Diamond & Hong, 2010; Diamond & Tu, 2009; Dyson, 2005), showing that only a minority are familiar with the notion of a child with a disability. Nonetheless, our participants have shown more favourable attitudes towards this group, particularly in the cognitive aspect of motor disability. Interestingly, motor disability was used by all of the children to represent a child with a disability, which supports the notion of a link between knowledge and positive attitudes, which has already been demonstrated in other studies (Al-Kandari, 2015; Alnahdi et al., 2020; Bossaert et al., 2011; Goddard & Evans, 2018; Hampton & Xiao, 2008; Hong et al., 2014; Hoskin et al., 2015; Navarro-Mateu et al., 2020). It is, therefore, essential to create inclusive materials that promote greater awareness and more positive portrayals of disabilities. This approach can potentially contribute to developing positive attitudes in early childhood classrooms. Furthermore, the observation that students at this developmental stage predominantly associate disability with motor impairment may be because, according to Dyson (2005), children at this age show a more pronounced tendency to perceive physical attributes.

Finally, as previously noted, the differences found in terms of interaction with people with disabilities were not significant since only a minority of participants reported having any form of contact with someone from this group. This lack of contact could, in turn, be related to the lack of knowledge of disability expressed by the participants.

## LIMITATIONS AND FUTURE DIRECTIONS

First, it is important to acknowledge that one limitation of this study is the sample size, which may be unrepresentative.

To address this concern, future studies should seek to use more extensive samples to provide a more comprehensive understanding of the attitudes held by these students and to identify potential variables that could influence such attitudes. However, it is essential to consider the characteristics of the students at this educational stage and the time required to evaluate their attitudes, as these data are collected individually, and the process takes around 10 minutes per participant.

Furthermore, identifying the attitudes held by students towards people with disabilities represents a very important step toward establishing an inclusive school system that facilitates the complete development of all students both in the classroom and in their daily lives. This research has effectively shown both teachers and researchers that children can be given a voice from an early age and can convey important messages. Consequently, given the appropriate tools, children can serve as strong allies in pursuing an inclusive school and society. Moreover, our findings provide a preliminary insight into the three components of attitudes held by early childhood education students towards various forms of disability. This issue had been previously unexplored in Spain, largely because the necessary tools were unavailable. However, it is essential to continue research efforts and work towards improving these attitudes, particularly within the cognitive domain, as this is where the most negative attitudes have been observed. Although intervention programs have shown greater effectiveness when implemented at an early age (Broekhuizen et al., 2016), only a limited number of such interventions have been employed within the context of early childhood education to raise awareness among these students (Birtel et al., 2019; Firat et al., 2022). To address this gap, we are committed to designing and implementing specific intervention programs in the future to improve knowledge and foster positive attitudes towards individuals with disabilities among infant education pupils.

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