

# Spontaneous Representations of Disability and Attitudes toward Inclusive Educational Practices: a Mixed Approach

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**Abstract:** The present study's primary aims were a) to explore non-disabled adults' spontaneous representation of disability and the specific associations related to adults and children with disabilities; to investigate participants' general perception of specific inclusive educational practices and the potential impact of contact with disabled individuals on children. We used a mixed (qualitative and quantitative) approach in a sample of 628 participants aged 18 to 82 (M=28.59, SD=11.50). Our results suggested that most explicit representations of disability were negatively valenced, i.e., people generally used pessimistic and detrimental related words. Psychomotor deficiencies comprised the most frequent disability category associated with disabled adults, while autism was the most frequent disability related to disabled children. Participants considered that the inclusion of physically disabled children (compared to children with intellectual disabilities) in public schools has a more positive effect on non-disabled children. The previous contact with a friend or a family member with a disability significantly and positively impacted the general attitude toward disability and inclusive educational practices. Results are discussed regarding their practical implications for the educational system and specific strategies related to inclusive public policies.

**Keywords:** *social representation, perception, disability, children, adults.*

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## 1. Introduction

Knowing how people perceive and represent disability [(i.e., "any condition of the body or mind (impairment) that makes it more difficult for the person with the condition to do certain activities (activity limitation) and interact with the world around them (participation restrictions)"; Centers for Disease Control and Prevention, 2020)] is highly important to the research field in disability. Exploring and understanding the differences in people's perceptions about disability is an important step in shaping effective educational programs that promote a positive image of disability and reduce prejudice (Bakheit & Shanmugalingam, 1997). Moreover, the social attitudes toward the disabled also impact both children and adults with disabilities: their knowledge about how society generally perceives them impacts their psychological well-being (e.g., depressive and anxiety symptoms, self-esteem) (Varni & Setoguchi, 1991).

According to the official data (World Health Organization [WHO] & The World Bank, 2011), more than one billion people – i.e., 1 in 7 people, around 15% of the world's population - live with a disability. Mental disorders are the leading cause of disability worldwide (Tyerman et al., 2020), with one in four people being prone to experience a mental illness across their lifespan. In Romania, over 800.000 people live with a disability (around 4%) (National Authority for the Rights of Persons with Disabilities, Children and Adopts, 2020). The same official data suggested that, in Romania, most individuals with disabilities are adults having either a mental/psychic (27%), physical (25%), somatic (19%), or associated disabilities (13%).

### ***How do people generally perceive individuals with disabilities? And, more importantly, why?***

Disability is generally associated with diminished performance, strength, endurance, and competence perception (Fraser et al., 2010; Louvet, 2007; Kaye et al., 2011; Rohmer & Louvet, 2018; Stone & Colella, 1996). Incompetence is one of the most common descriptors of disability, regardless of the disability type (Novak et al., 2011; Rohmer & Louvet, 2012). People with disabilities are often subject to dehumanization (Boysen et al., 2020; O'Brien, 2003), which, in turn, has numerous negative consequences such as social exclusion or bullying (Orehek & Weaverling, 2017). In general, people with disabilities experience lower levels of health, education, and employment than their non-disabled peers (WHO, 2011; Friedman, 2020). According to the Stereotype Content Model (Fiske et al.,

2002), people "may like individuals with a disability but they do not necessarily have respect for them" (i.e., paternalistic prejudice), and "may feel a sense of fear or discomfort when interacting with an individual who is disabled" (Coleman et al., 2014, p. 178) due to perceived lack of similarity (Ouellette-Kuntz et al. 2010). The lack of information about disability, in general, seems to lead to negative attitudes due to the misconception about the limitations, potential, and feelings of people with disabilities, thus fueling a widespread social prejudice against the disabled (Tanaka & Manizini, 2005; Toldrá et al., 2010). In contrast, children and adults' contact with people with disabilities, and more specifically - interventions that use direct or extended contact with people with disabilities to improve the attitudes towards disability – were found to be highly effective (Armstrong et al., 2017; Castillejos Anguiano et al., 2019).

Other factors associated with positive attitudes and perception of disability are related to causal beliefs. For example, biomedical causal beliefs seem to reduce the desire for social distance toward people with mental and emotional disabilities and generally determine more favorable attitudes (Kvaale et al., 2013). Meanwhile, fate causal beliefs seem to determine the opposite (Ellison et al., 2015; Scior & Furnham, 2016), but these findings are not consistent across studies (Schlier et al., 2014; Schomerus et al., 2014; Speerfock et al., 2014).

A generous amount of studies explored the various factors associated with a more favorable or, by contrast, a significantly negative attitude toward people with disabilities. For example, De Laat, Freriksen, and Vervloed (2013) suggested that age and familiarity with a disabled person might have a substantial, positive effect on attitudes toward deaf, blind, paralyzed, or intellectually disabled individuals. More specifically, their results suggested that being older and more familiar with disabled persons seems to increase the favorable attitude toward disability, in general. By contrast, Iorga and her collaborators (2016) explored the social perception of mentally disabled children in a sample of Romanian teachers. They found that female and younger participants had significantly more favorable attitudes. In terms of gender differences related to disability attitudes and perception, researchers suggested contrasting results. For example, Chen, Brodwin, Cardoso, and Chan (2002) found no related gender differences, while Yuker and Block (1986) suggested that women generally express more favorable attitudes.

### ***Culture and Disability***

Attitudes and perceptions of disability are also subject to cultural impact (Crotty & Doody, 2016; Huang et al., 2020; Ravindran & Myers, 2012; Robey et al., 2013; Sabatello, 2019). For example, specific communities in Kenya and Zimbabwe – explored by Franzen (1990) consider a child's disability as a symbol of a curse that brings shame to the family. Therefore, the child experiences exclusion and lack of medical care, affection, education, and attention (Munyi, 2012). Similar findings were reported throughout Africa, where disability is often attributed to witchcraft or supernatural forces, fueled by magical-religious philosophies that negatively impact the attitudes towards illness and disability (e.g., Haihambo & Lightfoot, 2010; Paget et al., 2016). Moreover, one's exposure to people with disabilities (which, in turn, generates a more favorable attitude towards them) is also a result of the cultural impact (Armstrong et al., 2017).

In Europe, the social and cultural aspects related to the perceptiveness of the disabled in the community (especially causal beliefs associated with the magical-religious field) were explored by various researchers (e.g., Ingstad, 1990) that revealed similar patterns in developing countries and rural communities. However, nowadays, European countries - Romania included - are focused on inclusive policies specially designed to reduce the stigma around disability (Gherguț & Frumos, 2019).

### ***People with physical versus mental disabilities***

Attitudes and perceptions related to mental and physical disabilities have been explored in a wide range of studies that generally emphasized the associated negative attitudes, stigma, and discrimination primarily associated with the mentally or intellectually disabled (Farina et al., 1971). Over time, the research highlighted the differences related to attitudes towards the mentally versus the physically disabled, suggesting that the mentally disabled are subject to the more negative perception and attitude patterns (Furnham & Pendred, 1983; Martin et al., 2020; Nagata, 2007). By contrast, the physically disabled are perceived as more favorable than the mentally disabled (ten Klooster et al., 2009). One potential explanation is related to the *invisibility* of mental disabilities, which negatively impacts the general perception of non-disabled individuals (Moss & Dyck, 2002). However, these findings seem to contradict theories related to physical attractiveness (Stone et al., 1992), which generally suggests that the more unattractive a disability is perceived, the more people express adverse behavioral responses toward those individuals (Stone & Colella, 1996).

Given the previous findings related to the representation, perception, and attitude of disability, it is essential to explore the spontaneous representations and the potential differences related to the disabled person's age (i.e., children versus adults). Understanding how these initiatives might work might depend on the various ways people represent and think about disability and the patterns that might emerge within these representations. Therefore, we consider the present study an important and necessary step in further constructing inclusive programs and initiatives, as our results might provide guidance on the mechanisms that could determine, as previously suggested, successful inclusive programs and generally favorable attitude changes related to disability (Diamond et al., 1997).

## **2. The present study**

Our primary aim was to explore non-disabled adults' spontaneous representation of disability and their specific associations with adults and children with disabilities. We were also interested in exploring participants' general perception of inclusive educational practices (i.e., the inclusion of children with physical and intellectual disabilities within the public educational system) and the potential impact of contact with disabled individuals on children. To our knowledge, at the current moment, there are no specific references related to the differences between the perception and attitudes toward adults versus children with disabilities.

### ***Procedure***

We designed and ran a web-based survey at the beginning of October 2020. The link was available for three months, and it was advertised using social media platforms and e-mail services. The study's protocol was designed in concordance with ethical requirements specific to the Faculty where the authors are affiliated. All participants voluntarily participated in the study and gave written informed consent following the Declaration of Helsinki and the national laws from Romania regarding ethical conduct in scientific research. Participants were informed that their answers would remain anonymous and that they could leave the study anytime they wanted. The time needed to answer the questions was around five minutes.

### ***Participants***

The current sample consisted of 628 participants aged 18 to 82 - see Table 1. The only inclusion criteria were related to age (i.e., participants had to be 18 or older) and disability (non-disabled participants only).

**Table 1.** Sample characteristics (N=628)

Variables	<i>M</i>	<i>SD</i>	<i>N</i>	%
Age	28.59	11.50	628	
Gender				
<i>female</i>			527	83.9
<i>male</i>			101	16.1
Parental status				
<i>with children</i>			184	29.3
<i>without children</i>			444	70.7
Personal contact with disability (family/friends)				
<i>yes</i>			399	
<i>no</i>			229	36.5

**Measures**

We measured how participants spontaneously represented disability and associated specific types of disability to adults and children using three items: Q1) What are the first three words that come to mind when you think, hear, or see the word "disability"?; Q2) When I think of an adult with a disability, I think of an adult who has the following disability", and Q3) When I think of a child with a disability, I think of a child who has the following disability."

Next, we used four items measured on a 5-point Likert scale (ranging from 1 = totally disagree, to 5 = totally agree) to assess participants' general perception of inclusive education practices and the potential impact of contact with individuals with disabilities on children (see Table 2).

**Table 2.** Perception of inclusive educational practices and contact with disability

Item Key-area	
1. I believe that the inclusion of children with visible physical disabilities (e.g., in a wheelchair) within the public education system has a positive effect on non-disabled children.	Physical disability
2. I believe that the inclusion of children with intellectual disabilities within the public education system has a positive effect on non-disabled children.	Intellectual disability
3. I believe that the school curriculum should contain information and generally teach children about disability.	School curriculum
4. I believe that children's contact with people with disabilities has a positive effect on them and their attitude towards disability.	Contact

Finally, a demographic scale assessed participants' gender, age, educational level, parental status (i.e., "Do you have any children?"), and previous personal contact and experience with persons with disabilities (i.e., "Do you personally know someone close to you with a disability (i.e., a family member or a friend) ?").

### 3. Results

We first performed content analyses to explore participants' spontaneous representations and associations related to disability. We used an identical procedure for all three open questions. Three different researchers analyzed the data to increase our results' reliability. Consistency among the coders' ratings (i.e., categories and subcategories) provided by the three coders was high for all three analyses, with Cohen's kappa coefficients higher than .82. We further performed thematic analyses, using an inductive approach, allowing the data to determine the primary themes (Braun & Clarke, 2019).

The first question – "*What are the first three words that come to mind when you think, hear, or see the word "disability"?*" generated 1768 answers, comprising 151 specific representations. We then divided these representations into three major valence-based categories, i.e., positive, neutral, or negative. For example, the positive cluster included terms such as *abilities, love, acceptance, equality, empathy, kindness, and respect*. The negative cluster included words such as *sickness, pity, pain, misfortune, shame, loneliness, bullying, loss, or incapacity*. The neutral category included terms such as *child, society, reality*, or specific disabilities (i.e., Asperger syndrome, autism) and disability markers (i.e., wheelchair, crutches, ramp). Furthermore, out of the 198 particular representations (i.e., the number of specific words spontaneously associated with disabilities), 54 were included in the *positive* category ( $N=347$  answers), 44 in the *neutral* one ( $N=229$  answers), while most of the participants' representations (100) were included in the *negative* category ( $N=1192$  answers). Overall, around 68% of the explicit representations of disability comprised negatively-valenced words.

Several emotional indicators and personality traits were expressed in both the positive and negative clusters. For example, in the positive cluster, participants made explicit associations between disability and *love, ambition, perseverance, positivity, will, and strength*. Meanwhile, in the negative cluster, we found explicit associations with emotional states and personality traits such as *unhappiness, shame, anger, frustration, sadness, helplessness, low self-esteem, desperation, embarrassment, anxiety, depression, or regret*. However, these negative

emotions and personality traits were more frequent (N=171) than the positive ones (N=76).

The second item – "*When I think of an adult with a disability, I think of an adult who has the following disability?*" generated 623 answers, comprising 26 categories. Similarly, the third item – which was almost identical, i.e., "*When I think of a child with a disability, I think of a child who has the following disability?*", generated 612 answers, comprising 21 categories (see Table 3). Some of the participants' responses did not specifically indicate a disability. Still, rather specific characteristics (e.g., severe lack of autonomy) related to various disabilities or highly general representations (e.g., any physical disability).

**Table 3.** Types of disabilities associated with adults and children

Disability representations	Adults		Children	
	N		N	
	%		%	
Intellectual disability	75	12.03	129	21.07
Asperger syndrome	3	0.5	2	0.33
Paralysis	43	6.91	10	1.64
Down Syndrome	17	2.8	65	10.7
Psychomotor deficiencies	175	28.08	44	7.2
Schizophrenia	5	0.80	0	0
Alzheimer's	8	1.28	0	0
Paraplegia (and the use of wheelchairs)	44	7.06	14	2.3
Blindness	10	1.60	0	0
Speech disability	6	0.96	14	2.3
Missing limbs / amputees	34	5.45	6	0.99
Autism	23	3.69	160	26.2
Obsessive compulsive disorder	1	0.17	0	0
Vision impairment	22	3.53	44	7.2
Hearing impairment	30	4.81	30	4.91
Emotional disabilities	2	0.4	0	0
Rickets	2	0.4	0	0
Any physical disability	85	13.64	41	6.7
Combined disabilities	2	0.4	0	0
Sclerosis	1	0.17	0	0
Renal diseases that implies dialysis	1	0.17	0	0
Major depression	1	0.17	0	0
ADHD	3	0.5	21	3.44
Dyslexia	0	0	4	0.66
Dysgraphia	0	0	1	0.17



Learning disabilities	0	0	6	0.99
Severe lack of social skills	0	0	1	0.17
Severe lack of personal autonomy	0	0	3	0.5
Rett syndrome	0	0	1	0.17
Any developmental disorder	0	0	15	2.45

Results suggested that *psychomotor deficiencies* comprised the most frequent disability category associated with disabled adults (28.08%), while *autism* was the most frequent disability associated with disabled children (26.2%). Other disabilities frequently associated with adults were physical disabilities in general (i.e., "any physical disability"; 13.64%) and intellectual disabilities (12.03%). Disabilities frequently associated with children, other than autism, were physical, intellectual disabilities (21.07%) and Down syndrome (10.7%).

We further analyzed participants' answers to the four items assessing the general perception of inclusive education practices and the potential impact of contact with individuals with disabilities on children (see Table 4). First, we explored whether there were any significant differences between participants' answers to the first two items related to the inclusion of children with either physical or intellectual disabilities within the public educational system. Wilcoxon test results suggested significant differences ( $Z=-15.79$ ,  $p<.001$ ), i.e., the inclusion of physically disabled children (compared to the intellectually disabled children) in public schools being considered to have a more positive effect on non-disabled children.

**Table 4.** Means and standard deviations for the four variables

Variables		<i>M</i>	<i>SD</i>
Age group: < Mdn=23 (N=355)	Item 1 (inclusion of children with physical disabilities)	4.49	0.08
	Item 2 (inclusion of children with intellectual disabilities)	3.65	1.20
	Item 3 (inclusive curriculum)	4.75	0.58
	Item 4 (perceived impact of children's contact with disability)	4.62	0.76
Age group: > Mdn=23 (N=273)	Item 1 (inclusion of children with physical disabilities)	4.55	0.83
	Item 2 (inclusion of children with intellectual disabilities)	3.36	1.25
	Item 3 (inclusive curriculum)	4.72	0.68

	Item 4 (perceived impact of children's contact with disability)	4.53	0.77
Overall sample	Item 1 (inclusion of children with physical disabilities)	4.51	0.81
	Item 2 (inclusion of children with intellectual disabilities)	3.52	1.23
	Item 3 (inclusive curriculum)	4.74	0.62
	Item 4 (perceived impact of children's contact with disability)	4.58	0.76
	Total score (overall attitude)	17.36	2.40

Further analyses suggested that younger participants expressed more favorable attitudes toward the inclusion of children with intellectual disabilities, compared to older ones ( $U=42205$ ,  $p=.004$ ), and believed more that children's contact with a disability would have a generally positive impact upon them, and would also increase their positive related attitude toward disability ( $U=45022$ ,  $p=.05$ ). Participants who reported the previous contact with a close disabled person (i.e., friend or family member) had significantly more favorable attitudes toward the inclusion of children with physical disabilities, compared to participants who did not report such contact ( $U=39105$ ,  $p<.001$ ), and were more supportive to an inclusive school curriculum ( $U=42058$ ,  $p=.013$ ). Participants who did not have children were significantly more supportive of the idea of including children with intellectual disabilities in public schools, compared to participants who were parents ( $U=34861$ ,  $p=.003$ ).

Finally, we computed an overall score of the participants' answers to the four questions. We considered that the higher the score, the more favorable the general attitude toward disability and inclusive educational practices. We found no significant age-related differences, though younger participants generally scored higher ( $M=17.52$ ) than older ones ( $M=17.16$ ). However, the previous contact with a friend or a family member with a disability significantly and positively impacted the general attitude toward disability and inclusive educational practices ( $U=39215$ ,  $p=.003$ ).

**4. Discussion**

The present study aimed to explore non-disabled adults' perceptions and attitudes toward people with disabilities and inclusive educational practices. We used a mixed approach, in which we combined both qualitative and quantitative measures to better understand these issues. Furthermore, we challenged our participants' spontaneity using three open

questions with no other indications to obtain explicit, unconditioned representations of disability. We also aimed to investigate potential differences between the way participants perceive adults versus children with disabilities, given that, to our knowledge, there is yet no clear data related to this area of research. Finally, we explored the potential associations between a series of demographical variables such as age, parental status, and previous contact with a close person with disabilities (i.e., a family member or a friend). Overall, most explicit representations of disability (around 70%) comprised negatively-valenced words, and negative emotional cues and personality traits associated with disability were more than twice as frequent.

Thus, participants' explicit representations of disability were mostly negative, i.e., the semantic fields used to describe it (i.e., to represent) have a rather negative valence. This specific result is particularly important in understanding the ways non-disabled people actually perceive disability and people with disability, in general. For example, it is hard for people with disabilities to be treated as regular individuals with all kinds of abilities since people's initial, spontaneous reaction is a negatively-valenced one (i.e., *pih*). Moreover, the way we think about disability shapes our behavior toward people with disabilities. If our representation of disability is mostly shaped by negative emotions, traits, and characteristics, as our results suggested, then, implicitly, their reaction toward our behavior might be adverse, as well. Previous research generally suggested that people with physical and intellectual disabilities reported being mistreated or discriminated against, especially by those around them who do not personally know them – such as people in public places like educational settings, public transportation, or urban areas (e.g., McEvoy & Keenan, 2014).

Many attitudinal sources might explain our findings. Some of them are detailed by Livneh (1982), who suggested that, among others, socio-cultural conditioning, childhood influences, psychodynamic mechanisms, anxiety, aesthetic aversion, prejudice or in-group/out-group biases, in addition to ambiguity tolerance, age, and educational level are some of the factors that seem to impact non-disabled people toward disability and individuals with a disability, in general.

We already presented some of the most recent data related to the importance of culture and one's socio-cultural background in shaping one's attitude and perception about disability (e.g., Huang et al., 2020; Sabatello, 2019). The Romanian society, for example, had to face some major changes in a very short period: on the one hand, the post-communist years determined severe and profound changes in both social and individual levels, and – on the other hand – the joining of the European Union came along

with the need to adapt to the new and strict regulations quickly. Therefore, the social perception of the disabled met significant changes, research on this subject, gaining increasing relevance. However, things are still difficult for Romanians with disabilities: for example, even if the social protection of people with disabilities is now stated by law, and efforts are made to promote equal opportunities within organizational contexts, data shows that only 24 % of the population with a disability is employed, comparing to the 65 % of employees without a disability (INSSE, 2011). In general, it seems to be a significant discrepancy between the Disability Rights legislation and reality for Romanians with disabilities (Pașcalău-Vrabete, et al., 2020).

Age and education are also important, as previous research suggested, in shaping our attitudes and perception toward disability. In the present study, we found that younger participants expressed more favorable attitudes toward the inclusion of children with intellectual disabilities, compared to older ones, and believed more that children's contact with a child with disabilities would have a generally positive impact upon them and would also increase their positive related attitude toward disability. According to a series of early studies related to disability attitudes, they seem to be "generally, more positive at late childhood and adulthood, and less favorable attitudes are recorded at early childhood, adolescence, and old age" (Livneh, 1982, p.343). Our younger group was formed by participants aged 18 to 23 (our sample's median value). Therefore, our results seem to contradict these findings, as well as more recent ones, such as the data reported by De Laat, Freriksen, and Vervloed (2013). However, our results are in line with previous data suggested by Iorga and her collaborators (2016), therefore – with results from a Romanian socio-cultural setting. Thus, the importance of cultural, social, and even geographical backgrounds are once again emphasized through the present data.

Multiple factors could explain that younger participants seem to have more favorable attitudes toward inclusive educational practices. For example, older individuals (i.e., participants over 50, for example), who lived through communism not very long ago, might have biased knowledge about disability, in general, given that, before the Romanian revolution in 1989, people with disabilities were hidden and excluded from the society (Walker, 2009). The post-communist Romanian policies and practices about inclusive education are, indeed, opposed to the ones before the 1989 Revolution. However, people over 40 or 50 might still be biased by the negative image of disability presented in the previously communist Romanian society, through the media, and by institutional forums, in general. Additionally, younger generations are more exposed to positive (and also accurate) information

related to disability via the Internet and various educational and non-governmental initiatives.

In contrast to their parents, today's Romanian teenagers and young adults are thought-about diversity, anti-discrimination strategies, and inclusion. They might have several schools or work colleagues with disabilities, which was very unusual in the '80-the '90s. Moreover, as previously suggested (e.g., De Laat et al., 2013), the more familiar with disabled persons a person is, the more favorable their attitudes toward disability, in general (as our results also suggested). Most of the time, the media describes disability in terms of heroes that need to be admired or tragic cases that people should feel compassionate or sorry for (Stamou & Padelidu, 2009; Van Kraayenoord, 2002), using either the medical, the social, or the supercrip models (Clogston, 1990). Research generally emphasizes the media's significant impact on people's representations and attitude toward disability, acknowledging the harmful effects of negative film images on this (already) stigmatized group's psychological state (Davies et al., 2002; Quinlan & Bates, 2010). Data on the diffusion of technology suggested that older people do not significantly differ from younger ones in terms of frequency use of the Internet, as they do in terms of the technology domain (Olson et al., 2011). Therefore, we are more inclined to assume that non-governmental inclusive programs and educational initiatives that increase exposure to accurate information related to disability might better explain younger participants' more positive reactions.

Interestingly, our results suggested that participants who did not have children were significantly more supportive of the idea of including children with intellectual disabilities in public schools compared to participants who were parents. One potential explanation relates to the ones previously mentioned concerning the age differences from the current study. In our study, participants who had children who belonged to the *older* group., i.e., are subject to the various reasons previously mentioned that might explain their less favorable attitudes, compared to younger participants. Additionally, previous research generally suggested that parents of children without disabilities hold less favorable attitudes toward the inclusion of children with disabilities (Stoiber et al., 1998) due to worries related to the "possible negative effects of unusual behavior of children with disabilities on their own children" (de Boer & Munde, 2015, p.180), and teachers' skills and qualifications (i.e., whether teachers are qualified to work with children with disabilities) (Rafferty et al., 2001).

Our data also indicated that psychomotor deficiencies, physical disabilities in general, and intellectual disabilities comprised the most

frequent disability category associated with disabled adults. Simultaneously, autism, intellectual disabilities, and Down syndrome were the most frequent disabilities related to children. The noticeable difference here is related to physical versus developmental and intellectual disabilities. Interestingly, a series of disorders were considered disabilities were only expressed concerning adults (i.e., schizophrenia, Alzheimer's, blindness, obsessive-compulsive disorder, rickets, emotional disabilities, sclerosis, renal diseases that implies dialysis, or major depression). In contrast, others were only expressed in relation to children (i.e., dyslexia, dysgraphia, learning disabilities, severe lack of social skills or personal autonomy, Rett syndrome, or any developmental disorder). Though many of them are, indeed, specific to adulthood, given their diagnostical timeline (i.e., schizophrenia, Alzheimer, or sclerosis) - thus, these associations seem logical- the others are interestingly associated with only one category or the other (adults or children).

We consider these specific results important for two primary reasons: 1) they offer interesting insights related to the ways individuals with disabilities associate specific conditions to children versus adults, i.e., they reflect their knowledge about these conditions, in general; and 2) they might be useful in designing an effective information campaign to promote accurate knowledge about disabilities, in general. Our results should also be interpreted within the framework of postmodern theories, such as the medicalized society, human enhancement, and risk society. Medicalization refers to "the process by which some aspects of human life come to be considered medical problems, whereas before they were not considered pathological" (Maturó, 2012, p.122). Similarly, "risk society" refers to the various ways that modern society deal with the hazards and uncertainties created by modern society itself. Therefore, disability representation might be subject to these theoretical frameworks, which, according to Maturó (2012), encourage a more individualistic and neoliberal view of society and a risk-factor model that seems to generate health inequalities and representations. As Maturó (2012) concludes, "the risk of medicalization is to neglect the role of social determinants in shaping human health. A new phenomenon which is emerging is human enhancement, that is, use of biomedical devices to optimise normality (and not to cure illness" (p.130). Therefore, future studies might want to explore spontaneous representations of disability and attitudes toward inclusive educational practices by also including the variables associated with the risk-model and medicalization framework, in order to shape a deeper understanding of disability in today's' postmodern society.

A series of limitations need to be addressed for the current research. First of all, our sample was not balanced in terms of gender. As previous studies already suggested, females tend to have more positive attitudes than males (e.g., Yunker & Block, 1986; Iorga et al., 2016). Thus, future studies might want to address this issue. Also, future studies might also want to explore how various educational backgrounds might impact individuals' perception and attitude towards disability, given that research has previously suggested that higher educational levels seem to generate more favorable attitudes toward the disabled (e.g., Au & Man, 2006; Mangili et al., 2004). Another interesting approach would be to explore the associations people without disabilities would make when exposed to disability access symbols, as those encountered in the present study (e.g., the image of a wheelchair), and investigate whether there are significant differences compared to the associations people made with the word "disability".

Another limitation is related to the fact that we asked participants how they would approve the inclusion of a child with intellectual disabilities in a public school/classroom without specifying the level of intellectual disability that we refer to. Some participants might have in mind a child with severe and extremely severe intellectual disability; thus, including them in a public school system would maybe harm them, instead of benefiting them (without considering that, in Romania, as in so many other countries, children with severe intellectual disabilities are included in special educational programs, in specially designed educational settings).

Finally, our results might have been subject to people's causal beliefs about disability. Research already suggested that biomedical causal beliefs might determine more favorable attitudes toward disability (Kvaale et al., 2013); meanwhile, fate causal beliefs might determine the opposite (Ellison et al., 2015; Scior & Furnham, 2016). Thus, future studies might benefit from accounting for this variable, as well.

## **5. Conclusion**

Despite these limitations, our results are valuable from both a theoretical and a practical perspective. First, we consider that the present study contributes to the scarce related literature describing people's attitudes and perceptions toward disability in Romania. Second, the present results are important in designing and implementing effective inclusive strategies for children and adults with disabilities in both educational and different social and organizational settings. People with disabilities generally experience negative social responses, such as social isolation or unemployment

(Requero et al., 2019; Hunt & Hunt, 2004). Therefore, it is imperative to promote a generally favorable attitude toward inclusion and acceptance of people with disabilities in social, educational, and professional settings (Requero et al., 2019). However, inclusive initiatives determined mixed results in terms of attitude change across time. For example, some studies suggested that inclusive programs on attitude change regarding people with disabilities generated adverse responses, increasing people's negative general attitude (Shteynberg et al., 2011), while others suggested a general lack of efficiency (Crosby, 2004). Nevertheless, research generally suggested that specific interventions aimed to increase the general knowledge about disability and the various strategies aimed to include people with disabilities within professional, social, or educational settings were found to be highly effective in children and adults alike (Armstrong et al., 2017; Harrison et al., 2019; Lindsay & Edwards, 2013; MacMillan et al., 2014; Moraña & Carballo, 2017; Scior et al., 2013). Therefore, the current study's data might help shape these programs and enhance people's positive attitudes and perceptions toward disability and inclusive education.

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