

Conceptions of Disability at education: A systematic Review

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Abstract

This study explores conceptions of disability in education. Available evidence published in the scientific literature over the last ten years is reviewed, according to the inclusion and exclusion criteria established. A total of 561 studies were found, of which 18 were included in this article. The topics are classified following a thematic analysis that include: 1) conceptions of disability among teachers and students in different educational stages and influence of conceptions of disability on attitudes and actions for inclusive education; 2) impact of training on conceptions of disability. This systematic review reveals that most of the studies coincide in identifying conceptions linked to the deficit or medical model, finding that these prompt negative attitudes that do not facilitate the development of inclusive education. However, as other studies point out, conceptions are dynamic, not static, and can be transformed through disability and/or inclusive education training.

Key words: Conceptions, disability, inclusive education, students, teachers, systematic review.

1. Introduction

Disability is a complex, multidimensional phenomenon that is constructed in accordance with different cultural, social and historical contexts (Gallagher, Connor, & Ferri, McKenzie, 2013). The process therefore involves an interaction between people's biological characteristics (sensory, intellectual, motor and emotional functions) and the characteristics of the society in which they live (attitudes, accessibility of transport and infrastructures, and social support) (World Health Organisation, 2018).

Disability can be interpreted in accordance with different models, which explain how people conceive it. The models most frequently cited in the scientific literature are the medical model and the social model of disability (Oliver, 1990). In the first, disability is perceived as something inherent to the individual. This model views the disability as the central problem of the individual's life that must be treated or rehabilitated as far as possible (Goodley, 2016).

For its part, the social model was developed to move beyond the therapeutic and deficit-based vision which underpins the medical model (O'Byrne, Jagoe, & Lawler, 2019). According to this model, the attitudes, policies and practices of the social context generate barriers and/or aids that either hinder or foster access and participation in different areas (Oliver & Barnes, 2010; Van Aswegen & Shevlin, 2019). In this sense, it is the social, cultural, and economic structures that are either more or less disabling and oppress people with disabilities (Cunnah, 2015; Hutcheon & Wolbring, 2013; Jacklin, Robinson, O'Meara, & Harris, 2007).

In education, there is a need to break away from conceptions of learning based on the medical model, which place people with disabilities at the centre of the problem, viewing them as the ones that have to adapt to the educational institution, rather than the other way around. As stated by Liasidou (2014), inclusive education is the 'antidote' for combating

exclusion practices, recognising and valuing diversity and promoting the elimination of barriers that prevent students from accessing knowledge and participation (Ainscow, Slee, & Best, 2019).

However, despite the fact that several decades have elapsed since some authors first began advocating the inclusive education model, difficulties still persist in moving towards inclusion, promoting participation strategies in the classroom and making reasonable adjustments (Ainscow et al., 2019; Sanahuja, Moliner, & Moliner, 2020; Pivik, McComas, & Laflamme, 2002). To this we must add teachers' lack of knowledge regarding the theoretical-methodological bases, legal frameworks and policies for the inclusion of people with disabilities, which in turn generates a feeling of incapacity and frustration (Black, Weinberg, & Brodwin, 2014).

Indeed, this is so much the case that when students with disabilities arrive at university, many of them, especially those with a 'hidden' disability, decide not to reveal their situation for fear of being labelled and stigmatised (Grimes, Southgate, Scevak, & Buchanan, 2019; Matthews, 2009). These students renounce the aid to which they are entitled because they want to have the opportunity to enjoy a university experience like that of any other student and to reinvent an identity that may have been damaged in other previous educational stages (Prowse, 2009; Zaussinger & Terzieva, 2018).

Furthermore, for students with disabilities, their classmates' perceptions and subsequent acceptance and support of individual differences are important for their satisfaction and educational success. In the context of early relationships, children begin at a very young age to learn what and who is valued in the social world, and to gain a sense of the place they occupy within the social communities to which they belong (Lee & Recchia, 2016). Some studies have concluded that children with disabilities find it more difficult to find peers to play with and that their relationships with them are usually either limited or non-

existent (Skär, 2010). It is therefore very important that all children understand what disability is, since it has been shown that learning about it or having contact with people with disabilities improves attitudes towards them (González & Baños, 2012).

At the same time, the more aware students and faculty are of their own conceptions, the more control they have over their actions and the more they can help students with disabilities overcome the barriers that prevent them from enjoying equal academic opportunities (He, 2009). Analysing beliefs and attitudes towards disability is a fundamental element for the inclusion of these students (Glenn, 2018). Some studies conclude that knowledge about disability and conceptions based on the social model promote positive attitudes towards disability and inclusive education, as well as inclusive pedagogical practices (Hockings, Brett, & Terentjevs, 2012; Van Jaarsveldt & Ndeya-Ndereya, 2015).

This is, if possible, even more relevant in the case of teachers, since, as Rouse (2017) states, the lack of knowledge necessary to address the needs arising from disability is one of the main barriers to the development of inclusive education. Therefore, teacher training constitutes an essential element in the inclusion of students with disabilities. Teachers are not only one of the main figures responsible for the teaching-learning process, they also have a duty to identify each individual student's potentialities and needs, in order to make appropriate adjustments and implement effective strategies.

Consequently, in recent years, the study of teachers' conceptions of disability and inclusive pedagogical practices has gained in importance in many different countries. Addressing diversity is a challenge for teachers, whose beliefs and attitudes will determine their educational response (Sanz, Molt, & Puerta, 2015). The presence of students with disabilities is a reality in the classroom and requires different attitudes and approaches to pedagogy (Baker, Boland, & Nowik, 2012; Cavendish, Morris, Chapman, Ocasio-Stoutenburg, & Kibler, 2020; Gordon, Reid, & Petocz, 2010). Teachers must be prepared to

develop inclusive environments and may need to challenge what they think they already know or what they were taught, confronting theoretical knowledge and ways of being. All this will enable them to understand what is missing and create new ways of knowing (Forlin, 2013).

However, changing beliefs and attitudes is not easy (Rouse, 2017). Even teachers themselves admit to having limitations which prevent them from offering these students the attention they deserve due to a lack of information and training in disability and inclusive education (Smith, Woodhead, & Chin-Newman, 2019). It is therefore necessary to establish initiatives in this field, since it has been shown that disability training sensitises teachers to the needs of these students and helps them respond appropriately, not only to students with disabilities, but to all existing diversity in the classroom (Becker & Palladino, 2016). Several studies that have addressed the training of students and teachers in disability and inclusive education have concluded that this training results in the transformation of conceptions about disability, moving from the medical to the social perspective (Carballo, Morgado, & Cortés-Vega, 2019; Vandervieren & Struyf, 2019).

Further research is required into conceptions of disability in the field of education. However, the reality is that this topic has still not been sufficiently addressed (Gordon et al., 2010). Moreover, hardly any studies have analysed what teachers or students need to change in their beliefs and knowledge in order to move towards more inclusive educational practices, and only a few have explored how perceptions of disability are related to the behaviours and practices that take place in the classroom (Wen, Elicker, & McMullen, 2011). In terms of systematic reviews, we know of only two studies that have carried out revisions of conceptions of disability: one (which also covered other topics) analysed teachers' conceptions, but only during early childhood education (Lee & Recchia, 2016); and the other focused on conceptions of intellectual disability among the general population, with no

specific focus on the educational field (Scior, 2011). This study, therefore, aims to fill a gap in the literature, providing an updated analysis (covering the last 10 years) of teachers' and students' conceptions of disability in the educational context, across all educational stages. Moreover, we also intend to determine how these conceptions influence attitudes and actions for inclusive education, as well as the impact of training.

2. Method

The procedure followed to carry out the systematic review involved six steps. First, the research questions were formulated. Second, the search descriptors were defined and appropriate databases were selected. Third, inclusion and exclusion criteria were defined. Fourth, the scientific quality of the publications obtained was evaluated using predefined quality criteria. Only studies that met the quality requirements were included in the review. Fifth, data answering the research questions were extracted, following a document review. Finally, a thematic analysis was conducted of the studies.

2.1. Research Questions

Three research questions guided this study: 1) How do students and teachers from different educational stages conceive disability and how do conceptions of disability influence attitudes and actions for inclusive education? 2) How does training impact conceptions of disability?

2.2. Literature Search Descriptors and Databases

The following search terms were used as descriptors: 'conceptions' and 'disability', and 'beliefs' and 'disability'. These descriptors were entered in three scientific databases: ERIC, Scopus and Web of Science. These databases were chosen due to the variety of journals they contain in the field of educational and social science research.

2.3. Inclusion and Exclusion Criteria and Document Selection

Four inclusion criteria were established for the analysis: students' and /or teachers' concepts of disability; peer-reviewed studies; any article that contains the keywords with a temporary restriction limited to the last ten years; and study focusing on any educational stage. The exclusion criteria were as follows: studies on the concept of disability in a setting other than education; other scientific publications such as books, book chapters and conference documents; studies focused exclusively and specifically on a single type of disability; theoretical works on the meaning of disability; and other systematic reviews or meta-analyses on this subject.

The search was conducted in May 2019. The initial search identified 842 publications, although this number was reduced to 561 after repetitions of publications appearing in more than one database were eliminated. All abstracts were read and, based on their content, 129 studies were selected and evaluated according to the inclusion and exclusion criteria. Finally, considering these criteria, 18 articles were selected for analysis.

2.4. Data Extraction and Analysis

To extract and analyse the data, we relied on the research questions, which guided the general review strategy. This strategy was designed to systematise the analysis of the original primary publications and facilitate their comparison, thereby enabling differences and similarities to be identified and examined. To facilitate this process, a thematic analysis was carried out using a matrix to classify the selected publications. First, the main general data (educational stage and type of participant) were taken into account. Next, the studies were analysed according to: students' and teachers' conceptions of disability and educational stage; influence of disability conceptions on attitudes and actions for inclusive education; and finally, the transformation of conceptions of disability after participating in disability and/or inclusive education training programmes.

3. Results

Before reporting the results considering the two research questions raised in this article, we will make an overview of the papers reviewed for the study. Firstly, it can be noticed that most of the studies used qualitative research methods (n=13), with the exception of 3 quantitative and 2 mixed works. Secondly, all of them have been published between 2010 and 2019 (according to one of the established inclusion criteria), being more frequent the articles published between 2017 and 2019.

Most of the studies were conducted in Western countries, mainly in the United States (n=4), Spain (n=2) and Canada (n=2). We found an international study conducted in Spain, the United States and Italy (Cornoldi, Capodieci, Colomer, Miranda, & Shepherd, 2018). A minority of the research was conducted in non-Western countries such as Ghana and Honduras.

As regards the educational stage, the majority was limited to Primary Education (n=7), Higher Education (n=6) and Secondary Education (n=3). Only one study was carried out exclusively in Pre-school Education (Tamakloe, 2018). In addition, one of the works was conducted in several educational stages (Thornton & Underwood, 2013).

Finally, the majority of studies explored teachers' conceptions of disability (n=11), five those of students and two analysed both perspectives. It should be noted that four of the studies focus on studying the concepts of disability of pre-service teachers.

3.1. Conceptions about Disability by Students and Teachers in Different Educational Stages and How these Influence Attitudes and Actions for Inclusive Education

The studies included in this section are presented in historical order and we differentiate between those that deal with students' conceptions of disability and those that focus on teachers' conceptions. Likewise, we analysed the influence of conceptions of disability on attitudes and actions to develop an inclusive education in those studies that these results were also included.

3.1.1. Students Conceptions

First of all, in terms of students' conceptions of disability, Skär (2010) explored the conceptions of primary school children, focusing specifically on perceptions of the word 'disability'. Two hundred and thirty children, aged 7-12 years, drew and commented on the understood by the word 'disabled'. Participants expressed conceptions related to the medical model, with the most represented or best-known disabilities being the most 'visible' ones, such as physical and sensory disabilities, as opposed to other 'hidden' ones, which turned out to be those about which they had the least information. This author observed a significant relationship between students' conceptions of disability and their attitudes towards inclusion. Negative perceptions based on the deficit model were closely related to feelings of pity, fear, rejection and exclusion. The study also concluded that it was important for students to have knowledge of and experiences with people with disabilities from a very young age, as a key element for improving their attitudes.

At the university level, another study (Baker et al., 2012), through an online survey, explored the conceptions of students both with (n=53) and without disabilities (n=232), finding that the data indicated conceptions based on the social model, showing signs of educational inclusion. As regards the conceptions of students with disabilities themselves, there was a feeling of well-being and inclusion at university. The results revealed that some students often feel uncomfortable revealing their disability to other members of the educational community, although they also felt that, in general, they were not treated differently and their teachers met all their needs. The importance of both teachers and students learning about disability from an early age was mentioned as an essential element for generating a climate that improves relations between students with disabilities and other students and teachers, thus helping to move towards inclusive education.

In 2013, Eleftheriou, Stamou, Alevriadou, and Tsakiridou addressed primary school

students' conceptions of disability (n=59). Specifically, these authors collected data from 4th grade primary school children's (10 years old) drawing about people with disabilities. The authors conducted 4 read-aloud with students. The researchers wrote up reflective notes based on observations and students comments. In this study, the authors compared two groups of students from two different schools. Group A did not share a school environment with students with disabilities, whereas group B did. The study concluded that students' knowledge of disability was limited to the deficit discourse, mainly involving physical or sensory disabilities. No significant differences were found between the two groups in terms of their conceptions, although group B did show greater interest and closeness. Although the authors failed to find any significant differences in students' conceptions of disability, they did observe that the group which shared classroom with students with disabilities were more likely than their counterparts in the other group to have closer personal relationships with these students and evinced a greater interest in and concern for people with disabilities in general. They pointed out that a lack of experience with people with disabilities might affect attitudes.

Some years later, Wilkins, Howe, Seiloff, Rowan, and Lilly (2016) again studied the conceptions of primary school students. A total of 83 third- and fourth- grade students in 3 elementary schools participated in this study. The authors selected to analyse 12 books with accurate portrayals of character with disabilities. They concluded that participants felt more curiosity about and interest in those disabilities with which they were more familiar and had a greater knowledge of physical and sensory disabilities. They also evinced an interest in the orthopaedic adaptations required by these people. On the contrary, however, they showed little awareness of more 'hidden' disabilities, such as, for example, Asperger syndrome.

Another study analysed the beliefs and attitudes of both secondary school students (aged 12 and 18 years) and teachers who had previous experiences with people with

disabilities (González & Cortés, 2016). The study was characterized by a mixed methodology, using questionnaires and interviews. As regards students' beliefs (n=71), the study concluded that as participants' contact with peers with disabilities increased, so did their knowledge about disability (albeit only slightly). Their conceptions were mainly linked to the social model of disability. This study supported the relationship between conceptions of disability and attitudes towards inclusive education

Finally, at this same stage, the study by McLean et al. (2017) analysed secondary school students' conceptions of disability (n=12), aged 13-15 years. A qualitative approach was adopted and focus group interviews were conducted. In this case, participants expressed limited knowledge framed within the medical model of disability, along with negative and even hostile attitudes. These authors also explored both conceptions of and attitudes towards disability among secondary school students, finding a close association between both, with limited knowledge linked to the medical model of disability correlating with negative and even hostile attitudes towards the inclusion of these students.

3.1.2. Teachers Conceptions

In terms of teachers' conceptions, Baker et al. (2012) carried out a study, using an online survey, among 76 faculty members, concluding that faculty had a positive view of disability, close to the social model. The participants in this study considered students with disabilities to be perfectly capable of satisfying academic demands.

The study by Thornton and Underwood (2013) was qualitative and used questionnaires and interviews. Four teachers participated in the research, two of them were early childhood educators. The other two participants were certified teachers working in elementary classrooms. This work found a relationship between teachers' beliefs and their personal and professional experiences with people with disabilities, with their responses being framed within the social model of disability. This work concluded that conceptions

based on the social model fostered more positive attitudes towards inclusion.

Another study also analysed conceptions of disability among 30 primary teachers working with students with disabilities (20 general education teachers and 10 special education teachers), finding that their responses were framed within the medical model (Lalvani, 2015). The results revealed that teachers considered disability categories and labels to be useful for determining the most appropriate education option and the learning goals to which their students could aspire. Conceptions were related to the medical model of disability. Participants considered disability to be comparable to deterioration and defined it as something fixed, universal and individual. This study confirmed that interpretations of disability influenced the process of educational decision-making. When, as in these studies, these interpretations were equated with impairment and deficit, they manifested in negative attitudes towards inclusion by teachers.

For their part, González and Cortés (2016) analysed, through interviews, the conceptions of physical education teachers (n=6) working in secondary education. The results revealed that teachers had more information and also stronger feelings of security and self-efficacy in relation to those disabilities with which they had worked. They agreed that the same rights should exist for all students, both with and without disabilities. However, conceptions of disability deficit were detected, especially in relation to students with physical disabilities, since, according to participants, from the perspective of physical education, these students would be the ones with the most limitations.

In primary education, Schneider (2017) studied teachers' perceptions of disability and normalcy. Participants (n=27) were interviewed and expressed conceptions of disability rooted in a medical and religious-moral model, resulting in a strong intersection between poverty and the influence of the context in which it developed and their ideas of disability, which were closely related to their ideas of normality and disability. The study also revealed

that conceptions based on a medical model negatively influence attitudes and actions towards inclusion.

In the international study (Italy, Spain and the USA) carried out by Cornoldi et al. (2018), teachers' conceptions were found to differ in accordance with the political and geographical context. However, in this case, the results revealed that teachers were sufficiently informed about disability. Their conceptions were related to the social model and participants were in favour of the policies that supported the needs of these students. This work concluded that previous contact with people with disabilities had a positive impact on attitudes towards it. Lastly, the study by Tamakloe (2018) explored conceptions of and attitudes towards disability among preschool teachers (n=6) working in schools described as inclusive. A qualitative case study was conducted with observations and interviews. Conceptions of disability were found to be closely related to context, religious beliefs and, mainly, the medical model. There was also a frequent use of pejorative comments and labels, with a greater focus on the limitations than on the strengths of these students. This work stressed that inclusive attitudes and practices were influenced by teachers' conceptions of disability and normality. In this case, they were related to cultural and religious beliefs and greatly impacted the idea that teaching students with disabilities was too difficult and problematic and would require a lot of time and effort. Moreover, conceptions generated negative attitudes that devaluated students with disabilities, with the authors observing expectations based always on limitations and never on strengths.

3.2. Training Transforms Conceptions of Disability

Another group of studies focuses on analysing how teacher training in disability and education can impact on conceptions of disability. In general, although most of the studies coincided in identifying conceptions related to the deficit model and highlighting their influence on attitudes to and engagement in inclusive education, several also showed that

these conceptions are dynamic, not static, and can be transformed in different ways.

This was demonstrated by studies that analysed conceptions before and after participation in some kind of training in disability and / or inclusive education. Most focused on teaching staff, with one exception (Evans et al., 2015) that explored the impact of a programme on secondary school students.

In this section, as in the previous one, we will present the works following a historical order and organizing them by the profile of the participants in the training: in-service teachers, pre-service teachers and students.

3.2.1. In-service Teacher Training

Firstly, Carballo et al. (2019) designed, developed and evaluated a training program for faculty members on disability and inclusive education. Data were collected through questionnaires, observations and interviews with 20 faculty members. The work showed that training in disability and inclusive education could impact faculty' conceptions. The practical part of the training programme, in which university students with disabilities shared their academic experiences with teachers, was fundamental to changing perceptions and attitudes. The training dispelled negative conceptions about disability and helped participants gain a greater understanding of their own role in fostering inclusion, giving them greater security and offering them tools that would help them in their educational practice.

On the other hand, Gesser and Martins (2019) carried out a qualitative study using a focus group that aimed to identify the contributions of the discipline of 'Disability and Inclusion' for people with disabilities. This work reported a substantial change in primary school teachers' conceptions of disability after participating in a training course on disability and inclusion. Prior to the course, nine teachers' conceptions were linked to context, personal experiences and religious beliefs, were based mainly on the medical model and were related to feelings of piety, discrimination and fear. After completing the training, participants were

found to hold very different beliefs, much closer to a positive view of inclusion, and were more aware of how diversity can enrich society.

3.2.2. Pre-service Teacher Training Similarly, but this time in relation to teachers still in training, various studies observed a positive and significant change in pre-service teachers' conceptions of disability, as well as a transformation in their attitudes and feelings towards inclusive education. Thus, in the study by Swain, Nordness, and Leader-Jansen (2012) 1,002 undergraduate students enrolled in an introductory Special Education course completed a survey. This research found that following a course on special education for teachers in initial training, a marked change was observed in terms of their attitude to inclusion and, above all, a significant improvement was found in their sense of safety and self-efficacy for working with people with disabilities. Moreover, by the end of the training programme, the teachers themselves had become aware of their initial misconceptions about disability and inclusive education.

For her part, Barber (2018) analysed the experience of pre-service primary teachers after participating in a programme related to disability and inclusive physical education. The study used qualitative case study methodology to explore pre-service teachers' perceptions of inclusive physical education. The instruments used for data collection were focus groups, videography and interviews. The programme comprised a one-day practical session with people with disabilities. The study found that, although a one-day intervention did not bring about substantial changes in participants' conceptions of disability, it could facilitate a change and initiate a shift towards more positive attitudes towards inclusion.

In 2018, and again working with teachers in pre-service training, Lanterman and Applequist attempted to determine the impact of training courses in disability and Universal Design for Learning. The quantitative study involved 77 pre-service teachers enrolled in an introductory Special Education course. These participants completed a questionnaire. They

identified a change in the conceptions initially held by participants, which were already framed within the social model. Thus, by the end of the course, participants' conceptions of disability, learning and teaching were even more positive, and they had developed a tendency to support all students, both with and without disabilities. Ashton and Arlington (2019) conducted a qualitative study with 28 pre-service teachers. The participant wrote some reflections on their experiences with a service learning program about disability. The study showed the impact of a service learning program on pre-service primary teachers' conceptions of and attitudes towards disability. In this experience, both theoretical information and practical sessions with people with disabilities were found to be fundamental. The training helped teachers challenge their conceptions of disability and normalcy, and encouraged them to face their fears when working with these students, giving them the tools to do so and providing them with a sense of security.

3.2.3. Students training

Finally, the study by Evans et al. (2015) involved 50 non-disabled secondary school students. Data was collected through interviews and observations. Wheelchairs basketball sessions were delivered by coaches during a period of 12 week. The results showed that wheelchair basketball training was very effective in changing perceptions, making students more empathetic and tolerant towards people with disabilities. Likewise, it was concluded that the programme challenged students' preconceptions and encouraged them to think more deeply about inclusion.

4. Conclusions and Discussion

The studies analysed in this systematic review coincide in concluding that the social context determines students' and teachers' conceptions of disability (Banks, 2015, Cornoldi et al., 2018, Gesser & Martins, 2019, McLean et al., 2017, Schneider, 2017; Tamakloe,

2018). In these studies, disability is defined as a dynamic concept that is built and which evolves over time, adjusting to each era and society (Gallager et al., 2013).

Student and faculty conceptions of disability are located mainly in the medical model. Thus, disability is considered an inherent problem of the individual in question (Eleftheriou et al., 2013; González & Cortés, 2016). According to this perspective, it is people with disabilities who must adapt to the educational context. Educational institutions, in this sense, are not responsible for transforming their policies and practices to enable students with disabilities to learn, participate and be recognised as valuable members of the community (Anastasiou, & Kauffman, 2011; Cunnah, 2015; Oliver & Barnes, 2010).

This can prove worrisome since, as reported by Rouse (2017) and Sanz et al. (2015), teachers' beliefs and perceptions about disability are fundamental to ensuring an inclusive response (Baker et al., 2012; Cornoldi et al., 2018; González & Cortés, 2016; Lalvani, 2015; Schneider, 2017; Tamakloe, 2018; Thornton & Underwood, 2013). In fact, in those studies in which conceptions of disability were framed within the medical model, they were found to be related to negative attitudes towards inclusion. Moreover, teachers evinced feelings of insecurity and ineffectiveness in relation to the attention they provided to students with disabilities and for their part, students also felt insecure in relation to classmates with disabilities (Eleftheriou et al., 2013, Evans et al., 2015, Lalvani, 2015; McLean et al., 2017; Schneider, 2017; Skär, 2010; Tamakloe, 2018).

Therefore, one conclusion that can be drawn from this study is that conceptions determine attitudes and practices aimed at ensuring an inclusive educational response to people with disabilities (Hockings et al., 2012; Van Jaarsveldt & Ndeya-Ndereya, 2015). This is why teachers may need to challenge their conceptions of disability, and although this is no simple task, it is necessary to carry out initiatives in this field. Education systems should implement policies to guarantee the right of any student to receive a quality education

(Ainscow, et al., 2019), since these policies can help improve student permanence and success (Thomas, 2016).

In all the studies reviewed which explored conceptions in relation to ‘hidden’ and ‘invisible’ disabilities, it was found that participants had more information about visible (physical and sensorial) disabilities (Evans et al., 2015; Skär, 2010; Wilkins et al., 2016). In these studies, ‘hidden’ disabilities were unknown and were the ones that caused the strongest feelings of insecurity among participants. Given that most conceptions of disability are based on the deficit or medical model and invisible disabilities are the least known, it is understandable that when students with such disabilities arrive at university, they sometimes decide not to disclose their situation (Matthews, 2009). If the responses of educational institutions were proactive instead of reactive and based on the social model, the teaching and learning environments would be modified to be inclusive. However, the opposite usually occurs and it is students with disabilities who must adapt to a context that does not value diversity and sees disability as a problem (O’Byrne et al., 2019). Precisely for this reason, students with disabilities prefer to go unnoticed and renounce the aids to which they are entitled (Grimes et al., 2019). In this context, one of the measures that education systems can take is to train both staff and students. Indeed, the studies by González and Cortés (2016) and McLean et al. (2017) found that greater knowledge about disability resulted in more positive attitudes toward it.

Another relevant conclusion of this study is that conceptions of disability are dynamic and can be transformed through training in disability and inclusive education. Those studies that analysed conceptions before and after training programmes found not only that participants’ perceptions of disability were modified, but also that their attitudes towards inclusive education had changed. Teachers felt they had the tools necessary to include students and were more secure (Ashton & Arlington, 2019, Barber, 2018, Carballo et al.,

2019, Evans et al., 2015, Lanterman & Applequist, 2018, Swain et al., 2012). These results corroborate that reported by Becker and Palladino (2016), who found that teachers who received training in disability manifested greater sensitivity to the needs of students with disabilities, and acquired the tools required to serve not only them, but all other students also.

Similarly, another of the most relevant conclusions of our study is the confirmation that knowledge about disability, as well as experience or greater contact with people with disabilities, also considerably improves attitudes towards it (González & Baños, 2012), as shown in some of the studies analysed (Eleftheriou et al., 2013, González & Cortés, 2016, Thornton & Underwood, 2013).

Most of the studies explore conceptions of disability from the perspective of students and/or teachers from primary, secondary and higher education. There is only one study dedicated exclusively to the study of these conceptions among teachers working in early childhood education (Tamakloe, 2018), and none at all that analyse students' points of view in this stage. This leads to the conclusion that not only is further research required into conceptions of disability, but also that other voices should be included. In the context of early relationships, children begin at a very early age to develop an initial sense of the place they occupy within the social communities to which they belong, learning what and who is valued (Lee & Recchia, 2016). This is why knowledge of disability and positive attitudes towards it are essential for fostering socialisation among all students, with and without disabilities, since the former often have more trouble finding partners with whom to establish these relationships (Skär, 2010 Lee & Recchia, 2016).

Moreover, the few studies which explore the outlook of students with disabilities prompt a reflection on the importance of these students' own conceptions of disability and the value of being aware of the key elements in the teaching-learning processes that lead to inclusion (Baker et al., 2012). As other studies reveal, the voice of students with disabilities is

a key tool for changing educational practices and moving towards inclusive education (Canning, 2017, Dare & Nowicki, 2018).

Finally, we can conclude that conceptions of disability constitute an avenue of research that requires greater attention from the scientific community since, according to Goodley (2016), disability is part of the social world in which we live and is part of life itself. Therefore, future research should continue to study conceptions of disability in the educational field and their influence on inclusive education. It should seek to analyse the repercussions of thinking about and receiving training in one's own beliefs and attitudes as a key process for the development of inclusive practices. Similarly, knowing which conceptions of disability lead to the development of inclusive education may provide well-founded clues about the way forward, thus confirming the need for institutional action to ensure the information, training and support required for inclusion.

Limitations

This review has certain limitations linked to the arbitrariness of the choice of primary studies and, consequently, selection bias, which may modify the conclusions presented in this type of research. Also, since some of the articles included in the review present the results obtained in more detail than others, some relevant information may be missing from the analyses carried out.

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