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CHALLENGES OF INCLUSIVE EDUCATION IMPLEMENTED FOR STUDENTS WITH AUTISM SPECTRUM DISORDER

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Abstract: Autism spectrum disorder affects cognitive functions such as communication and social interaction, as well as restrictive and repetitive patterns of behavior. The prevalence of this pathology has increased in the last decades and therefore also the number of students added to general education. The objective of the research was to determine the challenges faced in the implementation of inclusive education for people with autism spectrum disorder. A literature review was conducted in which original articles published since 2019 and focused on the perception of teachers were taken into account. It was concluded that the deficient preparation of training systems and teaching staff are the main barriers faced in the classroom.

Keywords: autism; challenges; inclusive education; teacher perspective; review.

INTRODUCTION

In recent decades, with the remarkable scientific and moral progress of human civilization, there have been several changes in the collective idiosyncrasy of society and attitudes that today would be unthinkable, such as racial segregation, denial of rights to women and of course the stigma of disabilities, have been eliminated.

While the stigma of disabilities differs from the other examples because of the inherent difficulty in performing work or social activities inherent to disabilities (each with its different characteristics), in recent years society has adapted so that individuals with a physical or mental disability find ways to be productive and sometimes even be needed for specific jobs.

Autism spectrum disorder (ASD), which according to the Diagnostic Manual of Mental Disorders 5 (DSM-5) affects cognitive functions such as impaired communication and social interaction and restrictive and repetitive patterns of behavior, interests or

activities, also presents levels of severity from 1 to 3 from mild to more severe in that order (American Psychiatric Association, 2014).

Autism despite all this one of the mental disorders that best suits the needs of today's society, coming even to be mentioned in scientific articles the term "high-functioning autism" (although in recent years the use of this terminology is being discarded). (Alvares, et al., 2019) (de Giambattista, Ventura, Trerotoli, Margari, & Margari, 2021)..

The recent relevance of this pathology goes beyond the effort to include people with this disorder in the educational (and later occupational) field, and is due to its undeniable increase in incidence and prevalence in the last two decades. As evidenced by a meta-analysis that covered studies conducted since 2014 globally (Chiarotti & Venerosi, 2020)..

This meta-analysis found striking data such as high prevalences in countries such as Iceland and Sweden (Nordic countries) of 31.3 and 17.4 per 1000 inhabitants respectively, in contrast to data from Mediterranean countries such as the rate of 4.3 per 1000 inhabitants shown in Italy.

Despite its theoretical validity, this meta-analysis proposes that the variability of information, dependent not only on each region according to the area studied and also on the organizations conducting the studies, is an important bias. As an example, in Asia, countries such as Bangladesh have a very low prevalence of 0.83 per 1000 inhabitants, in contrast to Japan, which has presented incidences of 93 per 1000 inhabitants.

A concept that remains valid and is corroborated in comparative studies is the increase in prevalence at a global level. According to a study that analyzed data from 204 regions of the world, global prevalence has increased between 1990-2019 to 39.3% (Yang, Ze, & Xiao, 2022). (Yang, Ze, & Xiao, 2022).

In the South American region, prevalence increased from 240,321 to 313,298; however (as described in the study) the deficiency of material reporting these data (coupled with a presumed under-diagnosis) in middle or low-income regions such as South America or Africa suggests a significant bias, so it may be thought that the increase in prevalence is higher than reported.

Regardless of these figures, providing education to this population group was not the rule in the past and did not seem to be a socially relevant need, since only in the last two centuries have people with disabilities been able to access education, and only in the last few decades have they been able to do so without suffering forced segregation (at least in the United States of America) (Bray & Smith, 2005). (Bray & Smith, 2005).

In contrast, in recent years, several governmental and non-governmental organizations have joined in the effort to make education a universal right, and in 2008 the United Nations Educational, Scientific and Cultural Organization (UNESCO) proposed clear guidelines to be followed to achieve a truly inclusive education (United Nations Educational, Scientific and Cultural Organization, 2008).. Specifically in Ecuador also since 2008 there are several legislative texts that propose guidelines for inclusive education, including the Constitution of the Republic (2008), the Organic Law of Intercultural Education (2011), the Organic Law on Disabilities (2012) and the Code of childhood and adolescence (2015). (Torres, Monserrate, Siguencia, & No-boa, 2023).

As a consequence of the relative novelty of the idea of inclusive education, year after year new scientific treatises are documented that describe the various challenges for teachers and institutions or the new techniques and strategies that have only been tested for a few decades, a situation that makes it difficult to analyze the high or low benefit of these.

METHODOLOGY

The search for scientific articles that could provide relevant information was carried out in the following search engines: Redalyc, SciELO, Google Scholar and PsycNet. For such searches, the terminology included is: Autism Spectrum Disorders, ASD, inclusive education, strategies, challenges, teachers' perspective; with the relevant combinations for the selection of studies.

After the search, the articles useful for the review are filtered, original articles published since 2019 and that focus on the perception of teachers on inclusive education in children with ASD are taken into account. The useful information for the present research work is extracted from the selected articles based on the reading and analysis of their results and conclusions.

ANALYSIS AND DISCUSSION OF RESULTS

BIAS ASSESSMENT OF SELECTED STUDIES

When reviewing studies with both quantitative and qualitative methodology, bias was assessed only in those articles that presented quantitative results, given that the subjectivity of the qualitative studies was not taken into account as bias. For this purpose, the JBI critical appraisal tool was used in the articles that were finally selected for data extraction and analysis. This tool allows the probability of bias to be assessed by analyzing the study designs.

The search in specialized engines according to the proposed methodology identifies 2745 articles of which 275 are eligible according to their titles. After the review of abstracts, a total of 81 articles are selected, of which 11 are chosen after full evaluation, a process shown in figure 1.

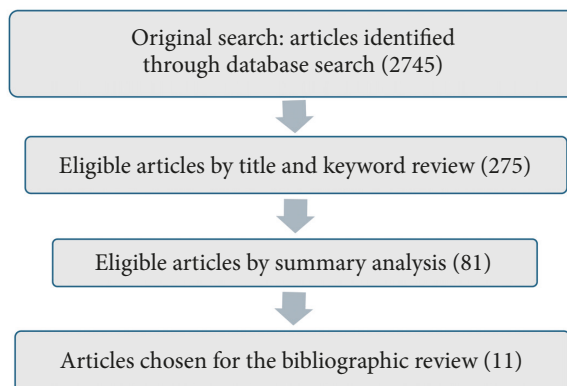


Figure 1. Methodology

As shown in the methodological process chosen for the selection of bibliography in which segments of the articles are reviewed, first the titles and keywords, then the abstracts and finally the complete content to filter the relevant ones.

The selected articles analyze the proposed theme in different geographical and social contexts. The treaties designated as a result of the methodology applied are projected in Table 1.

The main data of the articles chosen for complete review are shown, where the name of the authors, the original title, the year and place of publication and the data indicated for their identification are reflected.

Autism spectrum disorder is a challenge for any teacher, due to the communicative and social barriers inherent in the pathology. Despite this, the undeniable need to access inclusive education regardless of the student's conditions makes it necessary to evaluate the limitations that have been found in inclusive education during the last decades since its legalized implementation in much of the world.

Early childhood teachers, being the "first line" personal resource in educational institutions and therefore a fundamental factor in the social and academic development of children with ASD, are the most appropriate evaluators of the deficiencies and challenges of inclusive education.

| Authors | Original title | Year | Country |
|------------------------------|--|------|----------------------------|
| Iliadou A. | Teacher's perceptions regarding the inclusive education of children with ASD | 2023 | Greece |
| Otaif E; Salih S; Mahfouz M. | Awareness and perceptions regarding autism among schoolteachers in Jazan region, Kingdom of Saudi Arabia | 2023 | Saudi Arabia |
| Fangkun S. | Teachers' Perspectives on Inclusive Education for Students with Disabilities: Empirical Study in Primary Schools in Beijing. | 2023 | People's Republic of China |
| Ngozi O; Uwaoluetan O. | Primary school teacher's knowledge of autism spectrum disorders and their attitudes towards inclusive education | 2022 | Nigeria |
| Kossewska J. et al | Towards inclusive education of children with autism spectrum disorder. The impact of teacher's autism-specific professional development on their confidence in their professional competences. | 2022 | Poland |
| Al Jaffal M. | Barriers general education teachers face regarding the inclusion of students with autism. | 2022 | United States of America |
| Memisevic H. et al | Factors affecting teachers' attitudes towards inclusion of students with autism spectrum disorder in Bosnia and Herzegovina. | 2021 | Bosnia & Herzegovian |
| Jury M; Perri A; Desombre C. | Teachers' attitudes toward the inclusion of students with autism spectrum disorder: Impact of students' difficulties. | 2021 | France |
| Bolourian Y. et al | United states of America, general education teacher's perceptions of autism, inclusive practices, and relationship building strategies | 2021 | United States of America |
| Budiyanto et al | Indonesian educator's knowledge and beliefs about teaching children with autism | 2020 | Indonesia |
| Low H.M; Lee L. W; Ahmad A. | Knowledge and Attitudes of Special Education Teachers Towards the Inclusion of Students with Autism Spectrum Disorder | 2019 | Malaysia |

Table 1. Scientific articles

TEACHERS' PERCEPTIONS OF INCLUSIVE EDUCATION

The studies consulted took into account the perception of teachers on inclusive education for children with autism spectrum disorder and almost all the results showed a majority of respondents with a good perception. In the minority of respondents who mentioned having a negative perception, there were several factors that were concluded to have influenced this ideation, the results are shown in Figure 2.

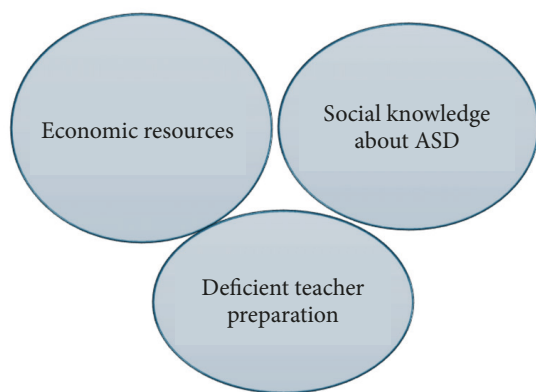


Figure 2. causal factors of negative perceptions

The figure plots the causal of negative perceptions about inclusive education in ASD identified in the reviewed studies.

FINANCIAL RESOURCES

A higher rate of negativity about inclusive education for students with ASD was found in developing countries. This may be due to several variables, but the most evident was the lower access to resources.

The scarcity of economic resources reflected in limited access to tools and physical spaces oriented to inclusive education hinders its implementation. Several of the selected studies (Al Jaffal, 2022) (Bolourian, Losh, & Hamsho, 2022) concluded that physical space adapted to the social and learning needs of students with ASD positively influences effectiveness, efficiency, and practicality.

In developed countries, the use of digital tools that are beneficial for inclusion is already being evaluated (Gallardo, Caurcel, & Rodríguez, 2022). (Atherton & Cross, 2021) However, in the South American context, this is still a distant issue and in order to think

about its implementation, it is first necessary to comply with quality parameters in inclusive education, which are still elusive in developing countries.

SOCIAL KNOWLEDGE ABOUT ASD

ASD is not a novel pathological entity, however, there is still an important social stigma (even being seen as a taboo subject in some countries), even though primary school teachers should be oriented about the pathology, the idiosyncratic thinking of a society can impose itself on individuals.

The studies chosen for this literature review allowed to make a relationship between knowledge about ASD and the perception of inclusion in this population group, as a result teachers who lacked sufficient knowledge were those who had the worst perceptions. (Kossewska, Bombinska-Domzal, & Cierpialowska, 2021). (Bolourian, Losh, & Hamsho, 2022) (Budiyanto, Kieron, & Khofidotur, 2020) (Jury, Perrin, & Desombre, 2021).

Another influencing factor is the age of the teachers, it was reported that older teachers had worse perceptions about inclusive education for children with ASD and held stigmas about the condition (Iliadou, 2023) (Otaif, Salih, & Mahfouz, 2023)..

POOR TEACHER PREPARATION

Many of the studies analyzed took into account in their surveys teachers' self-perceptions of their abilities as tutors of children with ASD.

The idea of having deficiencies when working with children with ASD responds to several causes, ranging from problems in the curriculum of teachers to lack of experience, even many teachers were unaware of elementary factors of the pathology at the time of answering the surveys. (Kossewska, Bom-

binska-Domzal, & Cierpialowska, 2021). (Bolourian, Losh, & Hamsho, 2022) (Jury, Perrin, & Desombre, 2021) (Fangkun, 2023) (Memisevic, Dizdarevic, & Mujezinovic, 2024).

The insecurity generated by the low understanding of ASD among teachers in charge of implementing inclusive education was mentioned in several of the articles reviewed as one of the most relevant factors for teachers' poor perception of inclusive education and, in turn, as the cause of the possible poor outcomes of inclusive education.

DISCUSSION

While the selected studies mostly presented positive results in their surveys, they did not show any significant differences in their results. (Ngozi, Uwaoluetan, & Uwaoluetan, 2022) (Low, Lee, & Ahmad, 2020) (Memisevic, Dizdarevic, & Mujezinovic, 2024) (Otaif, Salih, & Mahfouz, 2023) (Fangkun, 2023) This literature review focused on detecting and analyzing the barriers and deficiencies of this education methodology, which is already a legal obligation for educational institutions in many countries.

Although students with ASD could be analyzed according to their progress and improvement in social aspects according to their exposure or not to inclusive education, the deficiency of literature focused on this methodology limits the idea. This deficiency may be due to the fact that a measurable improvement could take several years and would require a large prospective study that, due to the relatively recent mandatory implementation of inclusive education, may have little evidence. However, interesting methodologies have already been applied and could be reproducible in the field of ASD (Kart & Kart, 2021) (Kefallinou, Symeonidou, & Meijer, 2020).

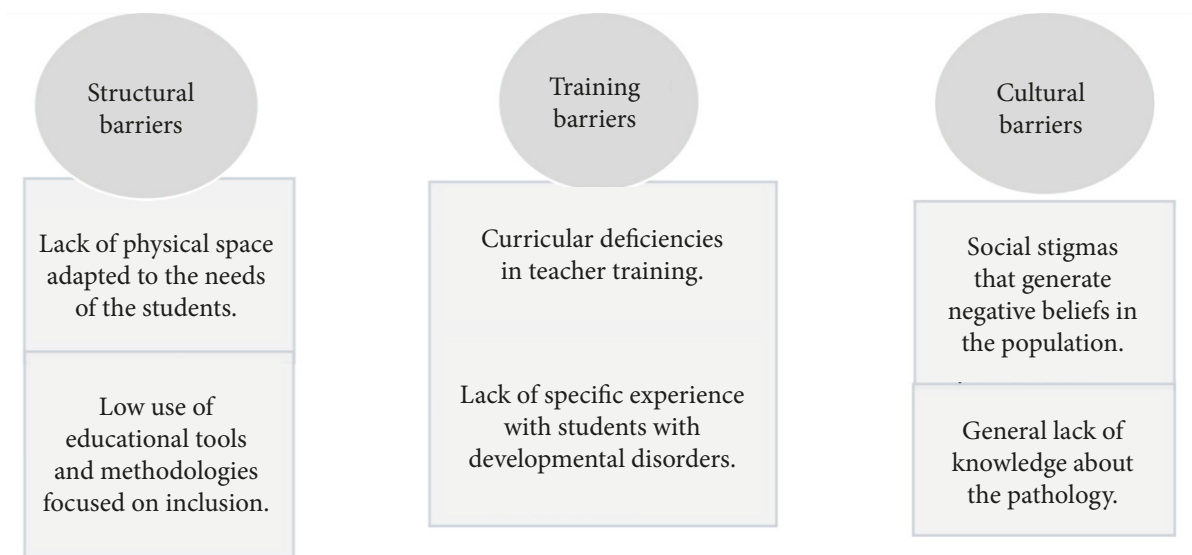


Figure 3. Barriers to inclusive education.

Source: Own elaboration

Another source of information that was analyzed for this literature review was the perception of parents of children with ASD about inclusive education, but information deficiencies ruled it out.

The most important reason for deciding on the implemented methodology was to appeal to the direct experience of teachers of children with ASD included in general education and their assessments of the usefulness and barriers of inclusive education.

The factors that have influenced a negative perception of inclusive education have been witnessed in several countries in almost all regions of the world and are not foreign to any type of society.

The shortcomings of inclusive education in children with ASD are a problem of implementation, caused by a global trend that rightly instills the inclusion of all conditions. The eagerness to reproduce methodologies correctly implemented in developed countries is hasty and many times the necessary foundations are not prepared for this type of policies to produce good results.

This systematized literature review demonstrates that barriers to inclusive education exist and are palpable in all regions of the world, but are not student, teacher or pathology dependent.

The barriers to inclusive education in patients with ASD identified appear to be correctable with governmental economic investment and with a gradual and constant implementation of inclusive education. Figure 3 shows the barriers to inclusive education.

As noted, the barriers to the implementation of inclusive education that were identified through the literature review are collected.

CONCLUSIONS

A systematized bibliographic review was carried out that includes the most recent challenges and barriers evidenced by teachers in the field of inclusive education for children with ASD, determining that one of the challenges at the time of implementing inclusive education is the lack of preparation of the educational systems, which prevents having the necessary foundations to build a quality education.

The existing theoretical lack of knowledge about ASD among professional teachers is another challenge to be corrected. This lack of knowledge about the disease was mentioned by teachers as a barrier to implementing inclusive education. It was found that teachers do not have the necessary preparation to meet

the academic needs of their pupils with this disorder due to deficient curricular and practical preparations.

It is recommended to improve the preparation of teachers by instilling pre-professional practical activities focused on inclusive education.

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