BRAIN. Broad Research in Artificial Intelligence and Neuroscience

ISSN: 2068-0473 | e-ISSN: 2067-3957

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2020, Volume 11, Issue 1, pages: 14-31 | https://doi.org/10.18662/brain/11.1/12

Development and Inclusion of Autistic Children in Public Schools

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Abstract: Characterized by limited or almost inexistent social skills, autistic children imperatively need social integration, in order to ensure a positive social environment in which they could imitate their colleagues and develop better means of communication. A sample of 60 teachers from public and special schools, aged between 29 and 50 years old, was assessed using Inclusion of Children with Special Needs in Public Schools Questionnaire in order to analyse their opinions and attitudes towards inclusive education. A sample of 75 children (aged between 8 and 12 years old) with Autistic Spectrum Disorder, with whom these teachers interact, was assessed with Adaptive Behaviour Assessment System II. We found significant differences regarding communication, community use and self-care, social skills and general adaptive composite (GAC score), between children in special and public schools. Furthermore, teachers emphasize that: (1) society, in general, has a tolerant attitude toward children with educational special needs; (2) families with such children choose a public school mostly in order to integrate their children in society and to ensure them the right to equal chances; (3) differential assessment strategies are needed for these children and adaptation of the curriculum to their needs; (4) children with special needs have a real chance of success in a public school. Results are analysed in relationship with teacher's roles, opinions and attitudes toward the integration of autistic children in public schools.

Keywords: Autistic children; integration; special schools; public schools.

How to cite: Salceanu, C. (2020). Development and Inclusion of Autistic Children in Public Schools. *BRAIN. Broad Research in Artificial Intelligence and Neuroscience*, 11(1), 14-31. https://doi.org/10.18662/brain/11.1/12

1. Introduction

A report of Autism Spectrum Disorders in the European Union (ASDEU, 2018) showed that ASD prevalence is 1 in 89 children between 7 and 9 years of age. Studies show that in Romania, over the past decades, the number of children with ASD has increased, as far as 14.3% (Budişteanu et al., 2017). Many of these children are students in public schools, and this puts the educational system in the situation of implementing plans to foster family support and student success. Furthermore, although in Romania there is legislation for people with ASD, many parents don't know it well enough, and this increases the risk of affecting the chances of children's evolution (Onițiu & Raiu, 2018).

2. Literature Review

2.1. Understanding autism

Classified in the category of pervasive developmental disorders (DSM-5, 2013), autism consists in difficulties of gaining cognitive, linguistic, motor and social skills.

Peeters (2016) defines autism as intellectual loneliness, mentioning qualitative differences in the development of social interactions, communication, imagination or time perception. Children with autism have difficulties in understanding abstract aspects of communication, they largely manifest anxiety or panic, mainly in relation with the uncertainty of things that are about to be.

Wilmshurst (2007) states that ASD is characterized by stereotype behaviours, poor interests and lack of social interactions, limited communication skills, rigidity and inflexibility.

Perry and Condillac (2003) affirm the idea that ASD is accompanied by intellectual deterioration in approximately 75-80% of the cases.

To this framework, Marcelli (2003) added other characteristics, such as: isolation, denial or avoidance of eye contact, lack of facial expressions, echolalia, poor syntax, difficulties in expressing emotions, bizarre reactions, aggression, anguish or anger as a result of environmental changes, motor mannerism, hypo- or hyper-activity to sensorial stimuli and general low performances.

2.2. Aspects of inclusion of autistic children in public schools

While integration refers to adapting a child to an existing environment, inclusion is a process of developing new approaches in the curriculum, in order for a child to be a part of a school community and to

satisfy his/hers need of belonging (Kunc, 1992). Thus, inclusion means a significant restructuration of public school system, in order for each school to be able to host any type of child (Avramidis et al, 2000).

Contact with other children with typical development is considered crucial for autistic children, in order to develop social and communication skills. But only the physical placement of disabled children in inclusive educational environments is not enough for a successful socialization (Pfeiffer & Reddy, 2000; Wagner, 2001). Thus, there are some important aspects that should be considered when including an autistic child in a school community (Chiang & Carter, 2008): (1) developing spontaneous communication skills, like quality of voice, rhythm, gestures, posture, adequate visual contact in specific contexts, when talking face to face with someone, creating a mental model of the speech; (2) motivation to relate to strangers in different conversations; (3) cognitive development – there is a strong positive correlation between the level of verbalization and cognitive development, and thus, irrelevant stimuli should be cut out.

Charlop & Walsh (1986) study the *peer modelling* technique (that implies the imitation of the model offered by children of the same age) and *time delay* technique (that implies the use of social sentences without verbal indications). Although results may vary from a technique to another, the important fact for this research is that socialization and exposure to different groups of children may help an autistic child to develop the verbal behaviour. Another proof of these advantages is the *Milieu* technique (Goldstein, 2002) which is a naturalistic approach of interaction through games, reinforcement of communication attempts, natural awards and natural environment.

The curriculum for autistic children includes the development of the following areas (Bălaș-Baconschi, 2015): Social Communication, Emotional Regulation and Transactional Support. In this context, selecting a school for an autistic child is a big responsibility, and the decision to choose a school may have lasting impact on the child's development and family life, since autism can pose severe challenges for both families and teachers. Each autistic child that goes to a public school must have an Individualized Educational Plan, based on the child's goals and special needs, which in Romanian educational system may also prove to be a challenge. A key to success may be a strong partnership between family, teachers, aides, therapists and guidance counsellors.

3. Metodology

3.1. Objectives and Hypotheses

The objectives set in this research are:

Objective 1 – to investigate teachers' opinions and attitudes towards inclusive education.

Objective 2 – to compare different aspects of development in children with ASD, based on the type of school they go to (public school or special school).

The hypotheses of the research are:

Hypothesis 1 – We presume there are significant differences between children with ASD in public and special schools regarding communication (conceptual area).

Hypothesis 2 – We presume there are significant differences between children with ASD in public and special schools regarding community use (practical area).

Hypothesis 3 – We presume there are significant differences between children with ASD in public and special schools regarding self-care (practical area).

Hypothesis 4 – We presume there are significant differences between children with ASD in public and special schools regarding social skills (social area).

Hypothesis 5 – We presume there are significant differences between children with ASD in public and special schools regarding general adaptive skills.

3.2. Sample and instruments

We used two samples for this research. We opted for two complementary studies, one based on a qualitative approach and the other on a quantitative approach, because we assumed that the inclusion of autistic children in public schools is influenced by two major factors: the development and possibilities of the child, on one hand, and the attitude of the teacher, on the other hand.

The first sample consisted of 60 teachers, from public and special schools, from Constanta County and Bucharest, aged between 29 and 50 years old. All the teachers were women. We used the Inclusion of Children with Special Needs in Public Schools Questionnaire (Chiţu et al., 2016) in order to analyse their opinions and attitudes towards inclusive education.

This sample was used for a qualitative research, the answers that were obtained being analysed in terms of percentages.

The second sample consisted of 65 children (aged between 8 and 12 years old) with Autistic Spectrum Disorder, with whom these teachers interact in their activity. The children were assessed with Adaptive Behaviour Assessment System II (ABAS II, Harisson & Oakland, 2012). We used the Teacher's form (5-21 years). This sample was used for a quantitative research, based on comparisons and statistical analysis.

We used for this research a convenience sample (Sîntion & Călin, 2014), made up of the subjects whose parents allowed the assessment, from a larger group of children with ASD that was previously identified. 35 of these children frequent special schools and 30 of them are students in public schools. The sample comprised autistic children with moderate mental retard, Asperger's Syndrome and highly functional autism. We could not take into account the homogeneity of IQ levels between the sample of children in public schools and children in special schools.

A number of 12 children in public schools have a facilitator (shadow) who accompanies them to classes. In 7 of these cases, the facilitator is a student in psychology or special education, at master's degree level.

The ethics of the research were ensured by obtaining an informed consent from all teachers, schools chairman and from the parents of the children involved.

4. Results

The first objective was to investigate teachers' opinions and attitudes towards inclusive education. We obtained the following results, based on the answers to the questions we analysed:

- The general attitude of society towards children with special educational needs: tolerance (40%), acceptance (20%), isolation (13.3%), ignorance (10%), support (10%), rejection (6.7%).
- The teacher's own attitude toward children with special educational needs: tolerance (56.66%), acceptance (25%), support (13.33%), indifference (5%).
- The reasons why families choose a public school for their children with ASD: the right for equality of chances (43.3%), the opportunity of integration (30%), the interpersonal relationships that children may establish (16.7%), the assimilation of the typical way of life (10%).

- The importance of the collaboration between families and school system: very important (23.3%), important (10%), medium importance (43.7%), low importance (23%).
- The learning difficulties are based on: limited intellectual potential (83.3%), lack of differential assessment strategies (16.7%).
- The most important supportive factor of the inclusion of children with ASD: differential assessment strategies (40%), curriculum adaptation and individualized educational plans (30%), specialized staff (20%), social and emotional relationship between students on one hand, and teachers and students on the other hand (10%).
- The chance of success of a child with ASD in a public school versus a special school: large (76%), medium (16.7%), low (7.3%).
- The main reason for exclusion or marginalization of a child with ASD in public schools: difficulties in performing to school tasks (33.3%), poor understanding of the child's needs (26.7%), lack of teacher's experience in working with these children (23.3%), other types of school failure (16.7%).
- The best solution for schooling of children with ASD: special schools (23.3%), inclusion in public schools (56.7%), special classes in public schools (20%).
- The personal choice in working with typical children versus heterogeneous classes: typical children (83.3%), heterogeneous classes (16.7%).

These results will be analysed in the next chapter.

For the second part of the study (Objective 2), we parted the sample of children into two groups, based on the type of school they go to: public (N=30) or special (N=35). For consideration, we named the children in public schools ASD-PS and the children in special schools ASD-SS and we will use these abbreviations in our discussions.

We analysed the distribution of scores for the two groups for each measured variable, and since the distribution was normal, we used T-Test for independent samples (Sandu, 2012; Sîntion & Călin, 2015).

Regarding the assertions we hypothesised, we obtained the following results:

H1: We presume there are significant differences between ASD-PS and ASD-SS regarding communication (conceptual area). We obtained 4.89 (mean of ASD-PS) and 2.67 (mean of ASD-SS). The difference is statistically significant for p=.004. This means that ASD-PS have more developed communication skills.

- **H2**: We presume there are significant differences between ASD-PS and ASD-SS regarding community use (practical area). We obtained 5.64 (mean of ASD-PS) and 3.18 (mean of ASD-SS). The difference is statistically significant for p=.003. This means that ASD-PS have a more developed use of community resources.
- **H3**: We presume there are significant differences between ASD-PS and ASD-SS regarding self-care (practical area). We obtained 5.80 (mean of ASD-PS) and 2.68 (mean of ASD-SS). The difference is statistically significant for p=.005. This means that ASD-PS have better developed self-care skills.
- **H4**: We presume there are significant differences between ASD-PS and ASD-SS regarding social skills (social area). We obtained 5.75 (mean of ASD-PS) and 3.18 (mean of ASD-SS). The difference is statistically significant for p=.002. This means that ASD-PS have more developed social skills.
- **H5**: We presume there are significant differences between ASD-PS and ASD-SS regarding general adaptive skills. We obtained 89.80 (mean of ASD-PS) and 58.71 (mean of ASD-SS). The difference is statistically significant for p=.001. This means that, overall, ASD-PS have more developed general adaptive skills.

5. Discussions

The first objective of the study aims to investigate teachers' opinions and attitudes towards inclusive education. The first important aspect is their opinion about the general attitude of society towards children with special educational needs (SEN). Teachers perceive that the general attitude toward disabled children seems to be a positive one. The main directions are tolerance and acceptance, which are important premises for an inclusive education. Specialists show that for a successful implementation of inclusion, positive attitudes seem to be a key-issue (Florian & Spratt, 2013). Both positive teacher attitudes (Saloviita, 2018) and parents' attitudes (Paseka & Schwab, 2019) for children with SEN are essential for success when these children are placed into mainstream classrooms. Still, we feel that these results are pretty general, since there are studies that contradict these opinions. For example, another important factor of the inclusion of children with SEN is the social acceptance by their classmates. A study conducted by Blândul (2010) shows that non-disabled children are inadequately prepared to accept their disabled classmates. Another study conducted by De Boer et al. (2012) shows that some disabled children experience difficulties in their social participation and cannot find social

connection with their classmates. In this context, we feel important to sustain the need of educational programs aimed at the development of tolerance and acceptance, at the acknowledgement of the need for inclusive education and at attempts of reducing sympathy (Gash, 1996), discrimination and that provide community empowerment for the inclusion of children with SEN.

Regarding the teacher's own attitude toward children with SEN we see that they manifest mostly tolerance, acceptance and support. These results are consistent with the ones above and indicate that Romania is making efforts to align to other European countries regarding the educational practices. However, the sample of SEN we referred to in this study is based on ASD, and it is possible that results differ when other SEN are considered (Čagran & Schmidt, 2011).

Teachers feel that the reasons why families choose a public school for their children with ASD are mostly related to the right for equality of chances and the opportunity of social inclusion. In the context of the development of human rights legislation rose the opportunity to shape more effective educational practices (Darling-Hammond et al., 2019). Disabled children gain access to free and appropriate public education and their families benefit from different types of support. Schools must provide children with SEN with the same opportunities for education as other children. Furthermore, schools are required to evaluate children and create an individual educational plan based on their current development and needs.

Regarding the importance of the collaboration between families and school system, almost half of the teachers consider is to be of medium importance, while approximately 30% consider it to be important and very important. We feel that the reason for these opinions is the fact that in many cases, the biggest problems in working with children with ASD are the attitudes of parents. As teachers report, some of these attitudes are: (1) lack information about ASD; (2)consistent victimisation; overcompensation and superiority (up to a certain point) due to economic and social status; (4) the overall attitude of Romanian parents interfering with the educational process; (5) denial of the children's problems; (6) guilt, shame, anxiety; (7) unrealistic expectations. All these problems may cause difficulties in working with children with ASD and there are cases in which teachers avoid having unnecessary encounters with parents. Still, parents are an important source of valuable information about the children and according to Ontario Ministry of Educations' Effective Educational Practices for Students with Autism Spectrum Disorders. A Resource Guide (2007), these are:

developmental history, health issues, other professionals who were involved with the student, their child's likes, dislikes, special interest, behaviour and communication strategies that have been successful at home and in other environments, etc. Furthermore, parents should be included in the transition process and planning process of their children through school programs.

Teachers feel that the most important supportive factors of the inclusion of children with ASD are differential assessment strategies, curriculum adaptation and individualized educational plans. Comprehensive assessments are necessary to recognize and understand the various strengths and needs of individual students with ASD. This will be a valuable point to develop an individualized educational plan that eliminates dangerous generalizations and unrealistic expectations. A variety of professionals should provide comprehensive information, useful for teachers in making accurate decisions about programs for their ASD students. In this context, most teachers in our sample believe that children with ASD have a large chance of success in going through the public school system.

Regarding the reasons for exclusion or marginalization of a child with ASD in public schools, teachers think that (1) difficulties in performing to school tasks, (2) poor understanding of the child's needs and (3) lack of teacher's experience in working with these children are the main contributing factors. The first one is related to the cognitive development of the children and, as previously said, most ASD cases are associated with intellectual impairment. The second and the third are related to the professionals working with these children. It is an alarm signal regarding the opportunity for teacher training in managing a class where children with ASD are included. In this context, of poor skills of working with these children, teachers may feel that the best solution for schooling of children with ASD is special schools. However, no matter how hard managing the situation might be, most of the teachers we interviewed feels that inclusion in public schools is still the best solution for children with ASD, at least as far as the children's wellbeing is concerned. However, when asked about their own personal choice in working with typical children versus heterogeneous classes, the majority of the teachers preferred typical children. This fact is another alarm signal in the sense that Romanian school system has still a lot of things to improve when it comes to children with SEN. The large numbers of children in a classroom, the lack of appropriate didactic means, the load of the curriculum or the lack of appropriate management are challenges that Romanian teachers have to face on a daily basis. Overall, public schools are social systems in which multiple demands compete with limited resources (Pierce & Tincani, 2007).

As we already said before, we felt the need to do two complementary studies that are correlated through the fact that the inclusion of autistic children in public schools is influenced by two major factors: the development and possibilities of the child, on one hand, and the attitude of the teacher, on the other hand. Over the last decades, it has been emphasized the importance of including children with and without disabilities in the same classroom (Bredekamp & Copple, 1997, apud Leatherman & Niemeyer, 2005). Using Bronfenbrenner's ecological systems theory, Odom & Diamond (1998) studied the empirical literature that underlies the practice of inclusion and emphasized the fact that the success of these approaches is dependent both on classroom practices, children's social interactions, teacher beliefs and professional collaboration (as the closest influences on the children), and on families' perspectives, social policy, community and culture (as influences that occur on a much larger scale).

So, grounded in their opinion, our study supports the idea that a positive teacher attitude toward inclusion (Niemeyer & Proctor, 2002) is a key factor in this process. Although inclusion is not an easy process, positive experiences that teachers may have in this approach leads to positive beliefs about inclusion and ultimately, this affects the inclusion process (Niemeyer & Proctor, 2002).

The second major objective of the research was to identify differences between the development of children with ASD learning in public and special schools. Five areas were identified as statistically significant, based on ABAS II scores: communication (conceptual area), community use and self-care (practical area), social skills (social area) and general adaptive skills.

Adaptive functioning includes a series of behaviours critical to an autonomous life: daily living skills, social skills and communication skills (Kenworthy et al., 2012) and children with ASD generally display adaptive behaviour impairments across all domains. Still, our results show that children with ASD that go to public schools have better performances in all five areas mentioned above than children with ASD going to special schools.

Communication is part of the cognitive area, and it covers language, speech, listening skills needed for communication with other people, including vocabulary, responding to questions and conversation skills. These skills are greatly used in the educational process, in order to meet school's demands. Although they are used in special schools as well, in the public school system the interaction is facilitated by both teachers and children with typical development. The classmates represent a constant source of

stimulation for the child with ASD, so much so that not only during classes, but in breaks as well, typical children become role models that children with ASD can imitate. As a result, all communication skills are better put to use and trained in this kind of social group. In conclusion, although autism-specific placements or special schools can provide intensive care for children with ASD, inclusion settings provide interaction with typically developing peers, the importance of which is increasingly recognized (Nahmias et al., 2012). Furthermore, studies show that educators who have incorporated the use of Picture Exchange Communication System (PECS) in their inclusive classrooms report positive outcomes for both children with ASD and typical children, as PECS help to facilitate reciprocal communication (Simpson, 2005, *apud* Woronko & Killoran, 2011). This could be a great suggestion for Romanian teachers, since the mentioned authors cite increased independence and confidence, reduced tantrums and frustrations over the inability to communicate.

Another aspect to be taken into account is the fact that children with weaker motor skills have greater social communicative skill deficits (MacDonald et al., 2013). Ill motor skills development impairs social interaction and it is another challenge that teachers should overcome.

Community Use is part of the practical area and includes skills needed for functioning in the community, including use of community resources, shopping skills, and getting around in the community. These skills help people get involved, participate and gain independence in the community (Dymond, 2008). Schools are social and physical environments that provide the framework for interpersonal interactions, in order to achieve educational and socialization objectives (Germain, 1988). Participating actively in all the learning situations that the teacher offers, allows the children with ASD to develop such skills. For example, the Ministry initiative *Şcoala altfel* can be used as an opportunity to create inclusive settings and to increase students' awareness regarding children with ASD and their needs.

Self-care is part of the practical area and includes skills needed for personal care, including eating, dressing, bathing, toileting, grooming and hygiene. The school daily program provides plenty opportunities for the development of these skills. Furthermore, once again, typical peers become models that autistic children may consider and imitate.

Social skills are needed to interact socially and get along with other people, including having friends, showing and recognizing emotions, assisting others, and using manners. Children with ASD can live relatively secluded lives, with little social interaction outside of school hours (Walker

& Berthelsen, 2008, apud Woronko & Killoran, 2011). But participation in meaningful social activities and relationships helps children with ASD find purpose and meaning in life (Hochhauser & Engel-Yeger, 2010, apud Woronko & Killoran, 2011). Furthermore, positive play experiences with their peers during breaks and even in classes has a significant role in creating a learning community within which all children are valued (Walker & Berthelsen, 2008, apud Woronko & Killoran, 2011). So, it is the responsibility of the teacher to create these situations, alongside other specialized staff that interacts with the children with ASD. Furthermore, teaching typical children about autism in a generalized manner, in which students learn about acceptance and sensitivity, is another means to develop the social skills of children with ASD. These trainings provide new inclusion opportunities. Also, parents of typical children are usually informed of the presence of a child with ASD in the classroom, and this is another opportunity of building awareness and sensitivity. As a consequence, involving the overall school community may benefit everyone involved.

Our results in this area are supported by other studies that show the existence of more behaviour problems and poorer social skills for students in non-public school placements compared to public school settings (Laurderdale-Littin et al., 2013).

Finally, the last hypothesis showed significant differences in the general adaptive skills of children with ASD frequenting public schools. Adaptive behaviour means the ways an individual meets his or her personal needs, and deals with the natural and social demands of the environment. These general adaptive skills are in close relationship with cognitive development (Ditterline et al., 2008). Our results are explained by the fact that most students in Romanian special schools have severe mental retard. They could not adjust to the requirements of the mainstream school system. Thus, their level of adaptive behaviours is less developed. Once again, the genetic factors and the social community of a public school turn out to be decisive influences in the development of children with ASD.

In the end, it is important to emphasize that because of the uneven profiles that characterize individuals with ASD and the behavioural difficulties that often occur during standardized testing, it is necessary that the examiner has experience in both administering and interpreting standardized assessments and in understanding of how the symptoms of ASD may interfere with test performance (Goldstein & Ozonoff, 2018).

Furthermore, the heterogeneity and the developmental nature of the disorder make it unlikely that one specific intervention will be best for all

children, or will work for any one child throughout his or her entire educational career (Stahmer et al., 2011).

6. Limits of the research

Although, generally, autism is characterized by impairments in social interaction and communication (Muson et al., 2008), deficits in social and emotional information processing (Dawson et al., 1998), and by a restricted repertoire of activities and interests, one of the most important factor that makes the difference in severity levels is IQ. Due to the difference in intellectual functioning, there is a considerable variability in specific impairments, range of symptoms, levels of adaptive functioning and prognosis (Muson et al., 2008). Due to the fact that we used a convenience sample, made up of children whose parents agreed to the study, we could not specifically control the intellectual development of the subjects comprised in the sample. The sample was not homogenous and this represents a limit of our research. Further investigation should be conducted by comparing more explicitly autistic children's development based on their different IQ levels.

Another limit was the fact that some autistic children in public schools have a facilitator (shadow) that has not yet completed the high education programs, and the lack of experience may alter the results in the development of the autistic child.

Another limit of the research is the fact that not all public schools teachers have the necessary training and skills to engage with autistic children. Many of them, in fact, adjust their methods as they adapt to different situations. Still, we considered that this limit someway balances the situation in special schools where, although there are more difficult cases, the number of children is reduced and there more specialists working with impaired children. Nevertheless, further investigation should take into account these limits as well.

7. Conclusions

We feel important to emphasize the important role that teachers have in the inclusion of children with ASD in public schools. The teacher plays an active part in developing cognitive, practical or social skills, in managing the group of students, in creating learning opportunities for both typical and autistic children. In order to achieve his objectives, the teacher needs training, available resources, support from an interdisciplinary team of professionals. Our empirical observations have shown that in many cases

teachers refuse to work with autistic children, especially because the system does not train them enough, in order for them to ensure an inclusive environment for the children. There are many teachers scared they will not be able to manage the class well enough and that the presence of an autistic child may be a problem for the other children with typical development. Furthermore, based on our empirical observations as well, there are many parents that insist for their children to be included in a public school, many of them being unable to admit their child has an impairment that could make inclusion difficult. Still, our study has shown that to a certain extent, if efforts of teachers (meaning their positive attitude, their openness and their efforts to develop their own professional skills), are combined with positive attitude and acceptance from typical children and their parents, with the interventions of specialists (like facilitators, therapists, counsellors, psychologists), the success of inclusion of children with ASD may be achieved.

It is important to reinforce the need for teamwork with the people within the school community who know an individual student best. Communication is the key for each member of the school community should feel knowledgeable and empowered when they interact with school's students.

We also tried to emphasize the fact that the teacher can also play an important part in the process of increasing awareness and sensitivity among parents of typical children, school board and classmates, by organizing training sessions alongside social workers, psychologists and other professionals in order to familiarize people regarding the needs of children with ASD. Such educational programs may result in changed attitudes, positive attitudes and the diminution of sympathy, marginalization, bullying or isolation of children with ASD.

Our research has also tried to show the fundamental role that typical peers have for autistic children as they become role models for almost every type of skill.

Finally, we sustain the need of innovative research strategies, particularly new interventions in school settings using community-partnered participatory research approaches.

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