

Breaking the silence:

The experience of listening to children with high-function autism in public schools in Brazil to analyse their sense of belonging.

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Abstract

During the last decades, Inclusive Education and Special Needs Education (SNE) have taken the main protagonism in educational debates and research. Since the Salamanca statement in 1994, there has been a global tendency towards the achievement of total inclusion in mainstream schools by introducing students with SNE in regular classrooms. Children with Autism Spectrum Disorder (ASD) struggle to establish social relationships, face trouble trying to recognise and understand complex emotions, and their oral communication skills may be problematic since sometimes they are unable to express verbally what they are feeling. Also, they tend to be more sensitive to sensorial stimuli such as loud noises or direct light. Nonetheless, they are physically included in regular classrooms; hence, the author wonders whether those children feel belonging in their classrooms and schools.

This study aims to analyse the sense of belonging of children with high-functioning autism educated in public schools in Brazil by listening to their voices and experiences. As mentioned earlier, individuals with ASD struggle to recognise certain emotions and to talk about them; therefore, in order to ensure the comfort of the participants, this study uses a combination of drawings produced by the participants and a semi-structured interview guided by their drawings. The methodology had a positive outcome, proving that some children with high-functioning autism can feel included in the class, developing a sense of belonging. Although every participant experienced the sense of belonging in different manners, there were some common points: the feeling of inclusion (feeling taken into account, accepted and valued), the support systems (recognising and accepting social bonding and support from peers and/or teachers) and the academic outcomes (such as motivation, the willingness of learning, enjoyment in the school).

This paper addresses a current gap in research, listening directly to the voices of a silenced part of the population, in this case, children with high-functioning autism. Moreover, sheds light on the correlation between the sense of belonging and academic performance, proving that those who develop a sense of belonging within their scholarly context enjoy more of their learning process than does who do not.

Keywords: High-functioning autism, sense of belonging, silenced voices, inclusion, Special Needs Education.

Preface

This thesis is the product of the most enriching experience in my life, the research-tandem project. The three months I spent in Brazil, all the knowledge and experiences I acquired, the people I met, the conversations and discussions with my colleagues – now friends-, all the cultural changes, struggles and adventures, all the stories I heard, the new language I – barely- learnt, and the places I visited, all lie within this pages.

I would firstly like to thank Joanna, my research-tandem partner and friend, for the endless help, passion and love towards this project, facing all the challenges with the biggest smile and positivism. You have been the best partner I could ever have asked for. Thank you very much, I will be forever grateful, my dearest friend,

Also, I would like to thank you, Luca and Pina, for allowing us to live this experience, learn from each other and support us from across the globe.

I would like to thank Virginia as well for all the love, support and help she has provided us in Salvador, making us feel at home and looking for solutions when we were completely lost.

Lastly, Marilena and Alex, thank you for living this experience by my side, for all the knowledge you have taught me and for solving almost all of my problems. Obrigada.

Meihua, we went through this together, supporting each other. I am extremely proud of you. We made it. Thank you, I love you.

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1. Introduction

a. Article-based article

This is an Article-based Master's thesis in Special Needs Education graduation from the University of Oslo (UiO). Therefore, accepting their formal requirements, this paper is going to be composed of two parts: the extended summary -which is this first part - and the article-based thesis. This first part, the extended summary, is thought to help understand the thesis more properly - since the thesis has to be ready to be published in an academic journal, and those have quite strict requirements regarding content and length. Therefore, in this first part of the paper, there is going to be an introduction to how this piece of research was ideated, as well as why it is relevant for the field, how it has been developed and what the results have been. Moreover, in this part of the paper, there will be a small part of contextualisation of the study - which is not in the article-based thesis - and plays great importance when trying to understand this research.

In the second part of the paper, there will be a more formal description of the study, with theoretical background, a visual representation of the results and a discussion about the results. On that part of the article, the formatting is going to be different since this part is under the formatting rules of UiO, and the second part has to be ready to be published in the Journal of Autism and Developmental Disorders (JADD) and it has to go through some formatting changes. The combination of both parts of the paper is aimed at making the reader fully understand the study.

b. Journal of Autism and Developmental Disorders

The article-based thesis has been written and formatted to adapt to the formal requirements of the Journal of Autism and Developmental Disorders (JADD) with ISSN 1573-3432 (Electronic). JADD is the peer-reviewed academic journal that leads the research of all aspects of Autism Spectrum Disorders (ASD) and other related developmental disabilities. The journal is published monthly and uses English as its working language. JADD seeks to advance the understanding of autism, as well as advances in diagnoses and the study of treatment efficacy.

Nonetheless, the defining factor that made the author decide to use this journal is the fact that they seek to promote the well-being of not only the families but also the children, publishing articles about mental health, support, culture and society and service provision.

Therefore, it really is a meaningful journal for the community, as it tackles a myriad of aspects from the ASD perspective. JADD is published in Springer.

c. Starting Point

Arising from the gathering of two students from Universities in opposite parts of the Globe: the University of Oslo (UiO) and the Federal University of Bahia (UFBA), this paper aims to give voice to children with high-functioning autism, analysing their sense of belonging in the classroom and at the school through their experiences. This qualitative study studies children aged 7 to 9 with diagnosed high-function autism educated in public schools in Salvador, a city in Northeastern Brazil.

It is basic to mention that this article-based Master Thesis has only one author; nonetheless, the data collection was done in Salvador da Bahia (Brazil), thanks to the participation of the author in the Research-Tadem Project, which allowed her to travel for three months to Brazil to collect data for her Master thesis. In Brazil, she had the support of Joanna, a student from UFBA, which has helped the author to translate and has enriched her with lots of significant knowledge and educative discussions about a myriad of topics, from education to psychology to social inequalities, to cultural differences, to racial privileges, feminism and sexualisation, etc.

In fact, the topic of this research came up to the author while discussing - still Online, before meeting in person - the roles of students in research. This is the reason why the author also likes to mention her in the development of this project since if they would not have had that discussion, this study would not exist.

Given the teaching background of the author, the fact of developing the study in schools was not a choice; she knew from the beginning that she would take this opportunity to get to know the Brazilian educational system, as well as the functioning and organisation of their schools. Moreover, the fact of carrying the research in a public school was not negotiable either, as she is a supporter of public education; therefore, it would cross her morals to develop the study in a private school. Furthermore, especially in Brazil, private schools have significantly more resources than public schools, allowing them to have fewer students per class, and more tangible material and support systems within the school. Therefore, there would not be a real representation of education in Brazil.

d. Sociocultural Background of the Study

Although Brazil has successfully alleviated poverty for a significant portion of its population in recent decades, a substantial disparity persists between the wealthiest and least advantaged parts of society (Brazil: extreme inequality in numbers, 2022). The numbers are precise - despite the significant improvement of the last decades, the poverty levels increased during the pandemic (Mapa da Nova Pobreza, 2023a) - 2021 had the highest levels of poverty since the start of CPS's (Centro de Políticas Sociais) annual registers in 2012 (Mapa da Nova Pobreza, 2023a).

According to recent statistical data (Mapa da Nova Pobreza, 2023a), in 2021, 62.9 million individuals in Brazil possessed a monthly income per capita below the threshold of 497 reais per month. This value corresponds to 26.9% of the overall population and represents an increase of 9.6 million individuals compared to the figures recorded in 2019 (Mapa da Nova Pobreza, 2023a). This issue is tackled from an economic perspective since a social reconception of poverty can be done; what defines poverty? What is it really to be poor? Do people under the established poverty threshold recognise themselves as poor? What is the self and social conception of poverty, especially in contexts such as the Brazilian one, defined by its economic inequalities?

Nonetheless, despite its vital importance, this is a discussion that will be left for further research - although it has been a persistent debate in our classes in UFBA, led by international professors such as Jaan Valsiner, Nandita Chaudhary and Giuseppina Marsico and gathering students from Russia, Germany, Spain and Brazil (from a myriad of different socioeconomic backgrounds). In this paper, the approach towards poverty is merely economic, sticking to the international guidelines and standards that define poverty.

Virginia Dazzani, in an oral conversation during a meeting in UFBA in March 2023, claimed that in Brazil, there is no chance to choose between public or private schools: "People do not even think about it, if you have money you go to a private school and if you do not, you go to a public one, there is no choice". Which clearly reflected the educational situation that nowadays Brazil is going through, defined by social inequalities.

Nonetheless, regarding inclusive policies, they are quite advanced. In Brazil, there are no Special Schools; there are some organisations that organise activities for children and adults with special needs but do not have the recognition of schools - moreover, their activities for children are carried out outside of school time. Those are private associations that only those

with money can afford. The Brazilian government is trying to provide that part of the population with extra support - although, as stated by Brazilian colleagues, the help and support vary depending on who the president is.

In 2008, the Decree nº 6.571 established the Operational Guidelines from Special Education to Specialized Educational Assistance (AEE) was signed. With this decision, public and private schools in Brazil should provide students with disabilities, those with pervasive developmental disorders and those with high abilities/giftedness the access and conditions to have a quality education and to be included in the common classes. Therefore, aiming for the autonomy and independence of these students. “The AEE’s function is to identify, elaborate and organise pedagogical and accessibility resources that eliminate barriers to the full participation of students, considering their specific needs” (Ministério da Educação, 2008).

2. Relevance of the study

As stated previously, the voices of children with high-functioning autism are often silenced by research (Haegele & Maher, 2022); nonetheless, this study is based on their own experiences from their own perspectives. Listening directly to children in order to understand how they experiment with the sense of belonging within their scholarly contexts supposes a change and innovation in the field - which are often “conducted on, about, or for autistic people and their families, without the involvement of those with insider expertise” (Crane et al., 2021, p. 1802 in Haegele & Maher, 2022).

Moreover, this study gathers three different cultures and cultural approaches in a single study, as one of the researchers - helping with the translation - and the participants are Brazilian, but the author is Catalan but has been living and studying in Norway for two years. To be able to step aside from your own culture and analyse a phenomenon from a context opposite to your own helps to gain perspective over basic factors in society, which we often ignore given the quotidianly.

For instance, when seeking for participants in public schools, the principals of the schools themselves reported to us that there are almost no children with high-functioning autism educated in public schools in Brazil, but that all of them are in private schools. It was a shocking aspect for the author, who took the protagonism on several discussions with her research-tandem partner and her colleagues and professors from universities.

As stated earlier, there is no chance in Brazil; people with money go to private schools and those with not so much money go to public ones. Given the acquisitive power of the families of children educated in private schools, they can afford a specialist that can diagnose the child as soon as the parents notice that there is a delay in their cognitive and social development. Moreover, since private schools are provided with more resources than public ones, there are fewer children per classroom, which allows the teachers to have a deeper observation of the students and provide suitable materials to stimulate them properly.

In public schools, there were a lot of non-verbal children with autism, as they probably would not have access to an early diagnosis - the process of diagnosis through public schools can take up to three years, as stated by one of the principals -, and would not have received the proper stimulation that might have made them lose their oral communication skills. This was one of the most shocking phenomena for the author, as how your socioeconomic level

can define how your Special Need is going to affect your future. In Spain or Norway, those are cases that, yes, can happen but are very seldom.

Even so, analysing phenomena that is out of your cultural broad, needing the proper knowledge to understand it properly, can lead to cultural impositions, misjudgments and wrong conclusions. Yes, it is enriching to research countries and cultures different from our own, but it is very easy to end up imposing your own perspectives and cultural approaches. For this reason, since the researcher - although she had researched the Brazilian context and the scholarly one in particular - was a foreigner from a different part of the Globe, as well as being a neurotypical researcher - which also leads to discussions about whether the needs of the population with ASD are feeling represented in research, since researchers are neurotypical - it was clear that this study would be guided by the voices and experiences of the participants; this often silenced part of the population.

3. Justification of the Choice of Participants

The participants of this study were all children aged 7 to 9 with a diagnosis of high-function autism, educated in public schools in Salvador da Bahia. Those are not random facts; they are defining factors to understand the context and network within the participants. Moreover, as stated earlier, given the teaching background of the author, her morals to support public education, and the Brazilian reality defined by social and economic inequalities led to the decision to only focus on public and not private schools. Public and private schools in Brazil are two opposite contexts, one dealing with the reality of overpopulation, lack of resources and the hard reality of social-economic issues of the students and their families, and the other, having more resources to provide an idea of exclusive education, even providing one caregiver to each child.

The age of the students is also a relevant factor in this study, not only in practical terms but also in theoretical ones. All of the participants are educated in the first years of Ensino Fundamental I (Brazilian first years of school), and all are in the same Piagetian developmental stage, the Concrete operational stage. Therefore, in order to understand the participants' context and networks - moreover, using drawings as a part of the data collection - it is basic that all of them are in a similar stage of development.

There was a time limitation in the study, which led to a reduced amount of participants; therefore, although the experience of analysing children of different ages and in different developmental stages would have been interesting, the author decided to focus on a restricted focus group defined by their diagnosis, age - thus, developmental stage - and socioeconomic background - all educated in public schools. By doing an intensive analysis of the needs of a certain group, the data collected and discussions arising from it can bring relevance and significant knowledge to the field, not only academically but also in the reality of children in similar realities as the participants. It is not clear that the results, discussions and analysis done can be exported to other age groups or children in other developmental stages. Nonetheless, it was possible to see its relevance for those in the same realities as the participants.

Moreover, the author of this chapter realised that research in this field is often focused on methodological, theoretical and psychological aspects, finding students' voices silenced, as mentioned earlier in this chapter. There is a need to tackle the reality of children with high-function autism from a significant and relevant perspective; therefore, listening to the

thoughts, experiences and voices of children diagnosed with high-function autism. By asking the participants to produce a drawing and later explain its meaning and what it represented for them, researchers were able to develop a semi-structured interview, mediated by the drawing and uncovered as an informal dialogue between the researchers and the participants.

4. Extended Report of Results

The aim of this piece of research was to analyse the feeling of belonging of Brazilian children with high functioning-autism educated in public schools by listening to their own experiences, perceptions and voices. Although half and half of the students went to the same school, shared a diagnosis and were within the same age range, how they deal with their scholarly context is the opposite. The article-based thesis will discuss how, despite sharing characteristics and diagnoses, each child has a different personality; therefore, they build different strategies and have opposite perceptions of the same phenomena.

Peu, for instance, does not feel included in his class or in his school; he feels bored in his classes, alone and misunderstood: “The room is kind of boring (...), there are many people in my classroom, they joke and disobey (...), they like many games, but I do not (...)”. Moreover, when he explained the drawing, he described the first image as himself thinking, being bored waiting for his classmates to finish a task he had already finished. He described the second image as “waiting for the time to end” and the third one as “being sleepy and waiting to go home with Mum”.

Also, he reported that he is left behind by his classmates, not letting him play with them. The drawings of himself are also very small, which according to Farokhi and Hashemi (2011), indicates a “feeling of incompetence (...) shame, fear and depressive” (p.2222), as well as the use of faint lines, which also indicates “low level of physical and mental energy, shame and depression associated with severe pressure (Farokhi and Hashemi, 2011, p.2222).

Eduardo is in a similar situation as Peu (they go to the same school); when he was asked to describe his drawing, he stated, “I draw myself sitting down, my notebook, and this is what I am feeling (...) I feel sad”. When he was asked why he felt sad in class, he answered that it was because he disobeys and he is unable to control himself sometimes. Moreover, he said that if he had the opportunity, he would change most of his classmates: “I cannot stand some

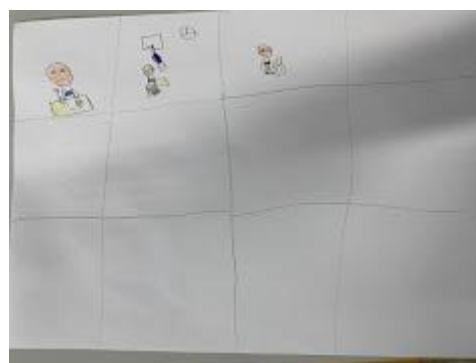


Figure 1: Diaz Forn, M. (2023). *Photo taken by the author during the data collection process. Peu's drawing.* [Photo]. Salvador da Bahia

of my classmates, they are loud, and they scream”. Also, he does not have a person of reference among his classmates or teachers. Nonetheless, he wishes to collaborate and work with his colleagues, as when given the opportunity to decide between working alone or with his classmates, he would choose to work with his colleagues. When Eduardo feels sad, he goes to the bathroom and does not talk to anybody, and when he feels happy, he studies and does not talk to anyone either. His drawing is simple, using just a pencil, thin lines and no colour; nonetheless, it is a big drawing, taking almost the whole sheet of paper.



Figure 2: Diaz Forn, M. (2023). *Photo taken by the author during the data collection process. Eduardo's drawing.* [Photo]. Salvador da Bahia

Sasha (educated in a different school than the previous participants) drew a similar representation to Eduardo's one, but in his case, it was 2cm big. I was happy”. Moreover, when asked how he feels in class, he answered, “While the teacher is talking to my classmates, I feel happy”; nonetheless, if he had the chance to change something within his classroom, he would change his classmates and swap them for the ones of 5th year (he is in 2nd year). Even so, he states he feels happy in class; he likes going to school; he likes “Everyone (...) because they are very beautiful”, and if he had the chance to choose whether to come to school or not, he would come because “it is very cool”. The small and simple representation of himself might represent his introverted personality and shyness since he is a shy child.



Figure 3: Diaz Forn, M. (2023). *Photo taken by the author during the data collection process. Sasha's drawing.* [Photo]. Salvador da Bahia

On the other hand, Isa has a good relationship with his classmates, even representing one of them in his drawings. Moreover, when he was asked what he does when he is happy at school, he answered: “I talk to someone, I play sometimes (...) with my classmates”. Also,

unlike Peu, he stated that he has a favourite person at school (one of his classmates) and that he likes coming to school.

As Isa, Alex also decided to draw a colleague in his artistic representation, a colleague that is also his cousin. Alex stated that he felt happy at school, and when the idea of having the possibility of changing something from her classroom or school, he said: “I would be sad (...) yes, because the kids leave the school, then I am sad (...) I really like my classmates”. Also, his classmates have a very present role in his perception of himself in the classroom, a positive one, talking about them on various



Figure 5: Diaz Forn, M. (2023). *Photo taken by the author during the data collection process. Alex's drawing.* [Photo]. Salvador da Bahia

occasions during the interview and saying that he talks with them (as

well as with his teachers) when he is feeling happy. Alex was the first participant to mention his teacher, and he values her positively, having her as a figure of support.

The only girl participating in the study, Ana Clara, also decided to draw a colleague, in her case, her classmate and best friend, a deaf girl. In any case, Ana Clara mentioned to the researchers that her friend was

deaf - it was clarified afterwards by her teacher. Ana Clara struggled with fluid oral communication, but she helped herself with writing on the drawing to make herself understood. The semi-structured interview was not very successful for her, she struggled to understand the questions and just repeated the last word of the questions, but she kept drawing and writing as the interview went on. The picture was taken at the end of the interview - after a mix of topics and words covered by drawings - and although she struggled with oral communication, her spelling, writing and drawing skills were advanced, with a complex imaginary world and the capacity to make correlations of diverse and abstract topics.



Figure 4: Diaz Forn, M. (2023). *Photo taken by the author during the data collection process. Isa's drawing.* [Photo]. Salvador da Bahia



Figure 6: Diaz Forn, M. (2023). *Photo taken by the author during the data collection process. Ana Clara's drawing.* [Photo]. Salvador da Bahia

Ana Clara stated that she liked going to school, playing and learnings; nonetheless, if she had the chance, she would change some of her classmates. Moreover, between staying at home or coming to school, she would choose both, as she enjoys going to school, although she also stated that at school, she does not talk much to her classmates, just to her best friend - which, pinpointing this fact again, is deaf.

5. Evaluation of the Methodology Used

Without any doubt, the methodology used was a success. Once the author decided that she would tackle the sense of belonging of children with high-function autism, it was clear to her that, in order to gather significant and real pieces of data, she could not use traditional methods of data collection. The participants were not only young children but also children with high-functioning autism - who might struggle to recognise and express complex emotions, might have trouble communicating themselves and might find social interactions challenging.

Please note the use of possibility in the statements, as it is a common mistake to generalise within the population with ASD by taking for granted that a person with a diagnosis would achieve certain behaviours or conditions. As stated by Sacks (1996), there are no two similar individuals with autism, although it might be easy to diagnose - given some of their obvious and characteristic traits - when trying to get to know them or understand them with the same ease as it is obvious to see that the individual might have ASD, a challenge will arise, being very hard to identify the personality traits of the individual.

Coming back to the choice of methodology, the author, given her past experience in using art as a successful technique of inclusion of children with SNE, and remembering an oral intervention of Tateo (2022) in a seminar at the UiO, where he stated that artistic expression allows researchers to express what is difficult to express by words, the author decided to use the children's artistic productions to listen to their voices in a natural way. Moreover, as stated in the article-based thesis, the connection between drawing and the improvement of oral communication in children is a widely studied topic. Therefore, before starting the data collection process, there was a myriad of studies proving the improvement of conversations with children (producing more quantity of words and it being more emotionally related than in regular conversations); nonetheless, those studies were carried out with neurotypical children.

Thus, given the positive results that art had had with students with Special Needs on previous occasions and the number of pieces of research with positive results, the author decided to combine artistic productions done by the participants and a semi-structured interview. The goal of the author was that the participants would feel comfortable, would have fun and would be willing to participate and keep talking. She, and her Research-tandem partner, were strangers to the participants, and given their possible troubles establishing social

interactions that would challenge the goal of making the participants feel comfortable, the data collection was adapted to the participants' possible needs. In order for them to feel safer, the author decided to develop the interview at their schools, so they would be in an area that they would know and they would feel safer being with two complete strangers.

Moreover, in order to lower the levels of discomfort of the participants, when they would come to a classroom of their school, they would find a desk full of coloured pencils, markers and blank sheets of paper. Then they were presented with the project and the importance of their collaboration in it, as well as the researchers. Then they were asked to sign a consent form, and they were asked to draw their representation of what they felt in the classroom. After they were done, the researchers would start asking questions about the drawing and starting a semi-structured interview, with a feeling of a natural conversation about the drawing, that led the researchers to gather information about their perceptions within their classroom and school.

This process is already stated in the second part of this paper; nonetheless, it is essential to pinpoint the more than positive results gathered through the use of this methodology. Children felt comfortable, had long conversations with the researchers and were able to talk about their feelings and thoughts.

Moreover, in Ana Clara's case, who struggled to follow a fluid conversation, the fact of having the drawing in front and she could draw and write, eased the communication process, helping her to make herself understood and helping us to understand what she was trying to explain. It would be interesting to implement this methodology with children with different Special Needs.

6. Self-reflection and Further Discussion

The fact of being able to participate in this research, collecting data and living in Brazil for three months has made the author reflect on her role. She is a 23-year-old white woman from a working-class family in Catalonia, but living, studying and working in Norway, with a strong passion for education and, most specifically, the social implications of education. For the author, education is the most powerful tool in the world that can change societies and build a better system.

That last sentence used to be one of the author's favourite sentences, using that to justify her studies and approaches to education, to study to be able to - in the future - be part of a social change that would allow us to create a better system. Nonetheless, now, after she participated in this project and her trip to Brazil, she wonders, "What is a better system?", "A better system for who, for me?", "Who am I to impose and judge a new social, organisational structure?", "Would it be beneficial for the majority of population?".

In Spain, she was part of a humble family, which made her take the role of full-time worker and student for four years, complaining about the precarity of students of the social division that represented having to pay for university (although she received a scholarship from the government that allowed her to study) and the poor educational system, taking away the creativity and critic spirit of children. In Norway, she was a poor immigrant who had to work full-time as a waitress in order to be able to survive and finish her studies, and did not speak the language but worked in the service industry, which created some xenophobic encounters.

Once she moved to Salvador da Bahia, her roles changed completely: she received a grant from the university, so she was not working for three months, and she had savings from working full time, so she was in an economic position of privilege. Moreover, for the first time, she became aware of the colour of her skin and realising as well of her position of privilege in Brazil, above all in the schools, where only one child per class would be white. In schools where your future would be determined, more especially if you had a Special Need, where your need might not be identified, and if so, the diagnosis could take up to three years.

Then she wonders now, who are we to impose our vision of reality and justify our practices with the goal of changing the current reality to a "better reality"? Firstly, before imposing actions for social changes, it is basic to take distance from ourselves and analyse our role and position within society. Listening to the voices of silenced individuals, making them

feel listened to and valued, made the author reflect on her role as a person and as a researcher.

Another debate that is basic to discuss is whether foreign, privileged neurotypical researchers should be the ones analysing the voices of children with high-functioning autism. Would it be more correct or moral that a Brazilian researcher with ASD analysed the voices of those students? How should we tackle the situation as neurotypical foreigner-privileged researchers?

This discussion has been recurrent during the stay in Brazil and also among colleagues. The author faced this moral dilemma; nonetheless, one of her colleagues from the Research Tandem was also facing a similar moral dilemma of whether a non-handicapped researcher should analyse the experiences and thoughts of a handicapped individual. Would he be able to understand the message and situation that the participant is trying to share? Would the author be able to analyse the sense of belonging of children with high-functioning autism through their voices and experiences?

After neverending discussions with different points of view, one possible answer could be that a researcher should take a neutral position, trying to learn as much as possible about the part of the population you are researching about in and within their context, trying to deconstruct the ideas that you previously had about that topic, in order to avoid impositions and misjudgements.

This piece of research has not only given the author the opportunity to get to know another country and culture, meet a wide range of different people and learnt about topics I would never have imagined to learn, but also has grown a researcher in her. Questioning what is established, willing to listen to the voices surrounding her and enjoying learning new pieces of knowledge.

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Attachments to the Extended Summary

Instructions for Authors. Journal of Autism and Developmental Disorders (JADD)

Editorial procedure/ Double-Anonymous Peer Review

MANUSCRIPT FORMAT

All JADD manuscripts should be submitted to Editorial Manager in 12-point Times New Roman with standard 1-inch borders around the margins. Please disregard the suggestion of 10-point font in the Text section below.

APA Style

APA Publication Manual standards must be followed.

As of January 20, 2011, the Journal has moved to a double-anonymous review process. Therefore, when submitting a new manuscript, DO NOT include any of your personal information (e.g., name, affiliation) anywhere within the manuscript. When you are ready to submit a manuscript to JADD, please be sure to upload these 3 separate files to the Editorial Manager site to ensure timely processing and review of your paper:

- A title page with the running head, manuscript title, and complete author information. Followed by (page break) the Abstract page with keywords and the corresponding author e-mail information.
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- Article by DOI Hong, I., Knox, S., Pryor, L., Mroz, T. M., Graham, J., Shields, M. F., & Reistetter, T. A. (2020). Is referral to home health rehabilitation following inpatient rehabilitation facility associated with 90-day hospital readmission for adult patients with stroke? *American Journal of Physical Medicine & Rehabilitation*. Advance online publication. <https://doi.org/10.1097/PHM.0000000000001435>
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Abstract

This qualitative study analyses the sense of belonging of children with high-functioning autism educated in public schools in Salvador da Bahia, Brazil. Given the challenges that some individuals with Autism Spectrum Disorder (ASD) might present to recognise and express complex emotions, affecting their oral communication skills, as well as the difficulty that some might present in establishing social interactions, the voices of this part of society are often silenced. Nonetheless, this study uses the experiences and voices of children with high-functioning autism to analyse their sense of belonging within their scholarly context. The methodology used for the data collection is a combination of artistic productions made by the students and a semi-structured interview guided by those drawings. Six children diagnosed with high-functioning autism educated in public schools in Salvador da Bahia were asked - individually - to draw a representation of how they felt in the classroom, a drawing which would lead to a semi-structured interview with a feeling of an informal conversation about the drawing. The findings were clear, children with high-functioning autism experience a sense of belonging in different manners; nonetheless, they share some general traits, such as: the feeling of inclusion (feeling taken into account, accepted and valued), the support systems (recognising and accepting social bonding and support from peers and/or teachers) and the academic outcomes (such as motivation, the willingness of learning, enjoyment in the school). Proving that children with ASD can develop a feeling of belonging in class.

Keywords: High-functioning autism, sense of belonging, silenced voices, inclusion, Special Needs Education.

Breaking the silence: The experience of listening to children with high-function autism in public schools in Brazil to analyse their sense of belonging.

Inclusive education has been an even a more basic topic in the international educational systems since the World Conference on Special Needs Education: Access and Quality in Salamanca in 1994, where global governments and scholars were gathered to discuss and establish the guidelines of a new educational perspective based on Special Needs Education and Inclusion. The current global tendency in the academic field is inclusion and the achievement of education for all: “The practice of ‘mainstreaming’ children with disabilities should be an integral part of national plans for achieving education for all. Even in those exceptional cases where children are placed in special schools, their education need not be entirely segregated” (UNESCO. World Conference On Special Needs Education: Access And Quality, 1994, p. 17). As an example of this current global tendency, in 2019, 43% of Norwegian pupils who needed special needs support received it in their regular class, while in 2013, only the 28% did so (Ministry of Education and Research, 2019).

A myriad of pieces of research about the benefits of inclusive education has been developed (Hehir et al., 2016; Kefallinou et al., 2020; Mag et al., 2017); nonetheless, when tackling Autism Spectrum Conditions (ASC), the social context plays a basic role. According to Petrescu and Dorin Mihai (2013), “Autism is a pervasive developmental disorder resulting in problematic social interactions, activities, and language development, where communication, or the deciphering and transmitting of emotions, is hindered by a tendency for uncontrolled emotions”. Roberts and Webster (2022) shed light into the discussion of educating children with autism in mainstream schools, by stating that “research has found that school staff often lack knowledge about the specific characteristics and needs of students with

autism and the practices that effectively support these students in inclusive education settings”.

Generally, individuals with Autism Spectrum Disorder (ASD) “are unable to tell the world what autism feels like and how it affects their lives. Even those who are high functioning, verbal, and intelligent often are unable to analyse their differences” (Allman, 2010); therefore, they tend to suffer from anxiety and stress in regular school conditions, where their needs are covered. Recent studies (Black et al., 2022) also point out the direct impact of the built environment on people with ASD, stating that the built environment (BE) is made to cover up neurotypical needs and not the ones that autistic individuals might have. Throughout a deep literature review, the researchers prove that “factors related to the interiors of buildings, including the layout of rooms, colours, smells, noises, temperature, ventilation, colour and clutter, among other things, can change the way we interact with our environment and the people around us” (Black et al., 2022, p. 3). In addition, it is also proved that “autistic individuals can have differences in processing sensory information and may find aspects of the built environment (BE) over-whelming and difficult to navigate” (Black et al., 2022, p. 3).

Moreover, according to Pellicano et al., 2014 in Haegele and Maher (2022), “the voices of autistic individuals are often unheard”, having pieces of research usually “conducted on, about, or for autistic people and their families, without the involvement of those with insider expertise” (Crane et al., 2021, p. 1802 in Haegele & Maher, 2022). Therefore, this piece of research aims to work with the own voices of children with ASD, gathering pieces of data from their real experiences and perspectives.

As stated earlier, children with Autism Spectrum Disorder (ASD) often struggle to recognise, understand and express their emotions (Misailidi & Papoudi, 2009), leading them to have difficulties in their social relationships, communication and behaviour. For individuals with high-functioning autism - although several studies prove that they are able to identify

and express basic emotions (Capps et al., 1993; McGee, Feldman, & Chernin, 1991; Ozonoff, Pennington, & Rogers, 1990; Yirmiya, Sigman, Kasari, & Mundy, 1992, as cited in Losh & Capps, 2006) - it is highly challenging to express and recognise “more complex or self-conscious emotions such as pride and embarrassment” (Losh & Capps, 2006, p. 809).

Individuals with ASD “live in a concrete world, palpable and immediate (...). It is a visual world built of images, not language. Feelings, emotions and personal relationships do not have the same value as they do for us and for other, typical children” (Szatmari, 2004, p. 3). Therefore, for neurotypical individuals, it is complex to understand their life experiences. Moreover, in general terms, it is quite common to put all autistic children in the same box, assuming they will share characteristics and perceptions - but that conception is far from reality. Seeman (2008), states that “every person with autism is unique, with a different profile of strengths and challenges. No two individuals manifest the same characteristics in the same degree of severity”. This misconception and complexity of the situation are clearly reflected in this Oliver Sacks’ statement (1996):

No two people with autism are the same; its precise form of expression is different in every case. Moreover, there may be a most intricate (and potentially creative) interaction between the autistic traits and the other qualities of the individual. So while a single glance may suffice for clinical diagnosis if we hope to understand the autistic individual, nothing less than a total biography will do. (p.250)

Therefore, as a neurotypical author, it was basic to develop a methodology that would allow me to understand the participants’ perspectives properly, not imposing my own perceptions and assumptions of their phenomena, risking the reliability and veracity of the data collection and the study itself. Thus, in order to access their life experiences from their point of view, this study uses a combination of the participants' artistic production and a non-structured interview as a methodology to collect data. Through a literature review, it was

possible to realise that most of the articles published in Brazil have the mothers of autistic children, the teachers or even the school's coordinators as the main subjects of the research (Camargo et al., 2020; Faria et al., 2018; Mayer et al., 2019; Silva et al., 2019).

Silence is a usual trait regarding ASD - for both natural and imposed reasons. Nowadays, it is estimated that around 25-35% of children with Autism are non-verbal (Rose et al., 2016) - this is not a relevant factor in this chapter since the objects of study are high-functioning and, therefore, able to use spoken language. The majority of individuals with Autism are able to express themselves verbally; nonetheless, their voices are silenced. Bogdashina (2006) sheds light on this issue, justifying the silence in their cases - yes, they are able to use the language and express themselves, but the other part of the conversational element lacks the ability to understand them since the codes they use are different from the ones we use (as neurotypical individuals):

Verbal autistic children often do not use language in the same way we do. If they see our sincere desire to understand them, they do cooperate and try to express themselves more clearly. Paradoxically, they often try to teach us how to teach them. It is not their fault that we do not see very subtle clues they give us (p.8).

Individuals with Autism struggle to express and recognise emotions, and some lack the concrete vocabulary to express themselves, their feelings and their perceptions of their realities; this is the reason why some educators and researchers have started using art as a tool to enhance the communication skills and emotion control in children with autism (Martin, 2009; Osborne, 2003; Petrescu & Dorin Mihai, 2013)

Several studies have proved the positive impact of drawing with children - not only those with ASD -easing the process of emotional expression as well as creating a comfortable space for them. Drake and Winner (2013) studied how children used drawing to regulate their

emotions, and the findings were clear: Abstract drawing improves mood in the short term. Moreover, the authors pinpointed that “for the child, drawing may be a way to initiate a dialogue and make sense of the trauma” (Drake & Winner, 2013, p. 519). In another study done by Gross and Haye (1998), it was reported how drawing helped children to talk about their own past experiences - incrementing the quantity of information they reported. Moreover, the authors, after carrying the study with neurotypical children, stated that “drawing may reduce the perceived social demands of the interview (...) children asked to draw may simply feel more comfortable than children merely asked to tell; this increased comfort level, thus, may facilitate children's ability to talk about the target event” (pp.174). Wesson and Salmon (2001) also used drawing to interview children and, as in the previous studies, the data retrieved using this tool was richer and more relevant than the one retrieved only verbally “Children given the opportunity to draw while talking about emotionally laden events reported twice as much information as did children interviewed with a verbal interview only” (Wesson & Salmon, 2001, p. 316).

It is relevant to mention that the previous papers studied neurotypical children, and the findings were clear about the positive social impact of using drawings in the interviews, helping them to express their emotions in a richer and more comfortable manner. With that known, the author decided to implement drawings in their data collection to ease the process of getting to know the life experiences of children with high functioning autism at school.

This research interest arises from the need to hear the own voices and experiences of children with ASD and their feeling of belongingness in the spaces where they are educated. As stated previously, there is a current global tendency for inclusion in order to achieve education for all in mainstream schools. A myriad of studies have proven the benefits of inclusion (Hehir et al., 2016; Kefallinou et al., 2020; Mag et al., 2017); nonetheless, it has also been proven that regarding students with ASD, the processes of inclusion in mainstream

schools is more challenging (Roberts & Webster, 2022). Teachers and schools lack resources in order to cover their needs; moreover, individuals with ASD are more sensitive to built environments being designed for neurotypical students (Black et al., 2022). Furthermore, individuals with ASD struggle to detect, express and control certain emotions (Allman, 2010), affecting the “normal” or accepted social interaction between individuals and their own regulation of emotions. Nonetheless, as stated earlier, there is a positive impact of artistic expression in the improvement of communication and emotional awareness of individuals with ASD.

The sense of belonging is defined by Goodenow and Grady (1993) as “the extent to which students feel personally accepted, respected, included, and supported in the school social environment”. This factor is key to the proper development of the learning process; Maslow (1962) pinpointed that “the need of belonging has to be satisfied before other needs can be fulfilled” (Ma, 2003, p. 340). Combs (1982) also highlighted the fact that the feeling of belonging or being cared for is one of the four variables that successful learning depends on. Thus, in order for children to enjoy an enriching and significant learning process, this need to feel belonging to their class needs to be fulfilled. The sense of belonging is not a new element in the educational discussion, given its vital importance in the learning and educational processes of students “sense of belonging to school appears essential to many educational processes and schooling outcomes” (Ma, 2003, p. 341).

Beck and Malley (2003) define the vital role of belongingness at school with this reflection:

Can children succeed in a school in which they do not feel they belong? Most children fail in school not because they lack the necessary cognitive skills, but because they feel detached, alienated, and isolated from others and from the educational process.

When children feel rejected by others, they either internalize the rejection and learn to hate themselves or externalize the rejection and learn to hate others. (p.1)

Baumeister and Leary (1995) “support the notion of belonging as a basic psychological need” (Myles et al., 2019, p. 6); this conception had already been implemented by Maslow (1954) and Thoits (1982). Moreover, Kestenberga and Kestenberga (1988) in Hagerty and Patusky (1995) stated that the sense of belonging is a basic factor in the construction of identity. Therefore, the sense of belonging does not only have a vital role in the scholarly context but also in the general one, supporting and influencing the own development of individuals.

As shown in this retrieval of literature, the sense of belonging is not a recent topic of study - it has been widely researched during the past decades -; thus, innovation in this paper does not come from the topic of study but from the combination of the methodology and the subject of study, gathering the voices of a silenced group of society. As stated, the sense of belonging is a vital factor in the development and learning processes of individuals, as well as for those who suffer from social and emotional struggles - such as individuals with high-functioning autism - therefore, the author found a strong need for studying whether children with high-functioning autism felt belonging to their classroom, by listening directly to their voices and experiences.

Before heading to the methodological aspect of this paper, the analysis of results and further discussions, it is essential to mention the position of the researcher within this study. There are some complex aspects regarding the author that define the approach to this piece of research: She is a neurotypical white 23-year-old woman, born and raised in Catalonia, with a bachelor's in Primary Education, currently studying her Master's in Special Needs Education in Oslo.

As a neurotypical individual, it is complex to understand the experiences of individuals with ADS properly, as well as not to impose their own' perception of reality while analysing the voices of individuals with high-function autism. Moreover, the cultural background and the social and racial privileges of the author play great importance in this piece of research since the data collection was done in Salvador da Bahia (Brazil), characterised by its strong and diverse culture (different from the Catalan and Norwegian one), its social and economic differences within the population and racial issues (being the city with the highest amount of black population outside of Africa, but with high levels of racism).

Those are aspects that will indisputably define the approach to the study, being extremely cautious as a researcher nor imposing analysis based on her own context, not personal points of view, as a neurotypical westernised white woman. The role of the researcher in a study has many interpretations and tensions within the academy; for this reason, the author has decided to clarify her position and role and leave the rest for further discussion.

Methods

Research design

This study is part of the Research Tandem project, gathering teachers and students from the University of Oslo (UiO), the Federal University of Bahia (UFBA) and the East China Normal University (ECNU), which has allowed the author - a student of UiO - to collect the data in Salvador da Bahia (Brazil). As previously mentioned, this study analyses the sense of belonging of students with high-functioning autism educated in public schools in Salvador da Bahia (Brazil). This is a qualitative study that uses semi-structured interviews - guided by an artistic production made by the participants - to listen to the voices of children with high-functioning autism directly.

Although the data collection was done in Brazil, this is a study conducted with the support of the University of Oslo, and the author is a student of the same university; therefore, it has gotten the ethical approval of the Norwegian Agency for Shared Services in Education and Research (SIKT).

Participants

The participants of the study were chosen with the following criteria:

- With a formal diagnosis of High-function autism - therefore, being able to express themselves verbally and follow an oral conversation.
- Educated in public schools in Salvador de Bahia.
- Aged 7 to 10 years old.

This qualitative study had a total of 6 participants: students aged 7 to 9 educated in public schools in Salvador da Bahia (Brazil) and diagnosed with high-function autism. This age range was chosen according to the theory of Piaget's stages: sensorimotor (0-2 years old),

preoperational (2-7 years old), concrete operational (7-11 years old) and formal operational (11 years old through adulthood). Considering that the Ensino Fundamental I (Elementary School) in Brazil works with children between 6 to 10 years old, the interviews were taken with kids who are in the concrete operational stage, being able to form an idea of time, space, speed, order and causality according to Goulart (2005), but they are also, according to Piaget (2003) starting the process of reflection, i.e. thinking before acting (Moreira de Souza & Muglia Wechsler, 2014).

A total of fifteen public schools in Salvador de Bahia were contacted through email with a presentation of the study; three of them replied, and two agreed to participate in the study (one composed of 333 students aged 6 to 11- 3 of which are diagnosed with high functioning autism -, and another composed of 139 students aged 6 to 11 - 3 of which are also diagnosed with high functioning autism). In order to be able to differentiate both schools and keep their anonymity, they are going to be referred to as “big” and “small” schools.

In order to keep the anonymity of the participants, at the end of the interview, they were able to choose the pseudonym they wanted to be referred to. Thus, the names shown in Table 1 and used during this paper are not their real names but the pseudonyms they chose to be called as.

Table 1. *Participants' information*

Pseudonym	Age	Gender	School
Peu	7	M	Big
Isa	7	M	Small
Eduardo	8	M	Big
Ana Clara	9	F	Big
Alex	7	M	Small
Sasha	7	M	Small

Semi-structured interviews

The data collection method consisted of a combination of children's artistic productions and a semi-structured interview guided and mediated by the drawing; thus, the participants were asked to explain their artistic production. Moreover, the data collection process was conducted in their school, considering that it is a known space for them so that they would be more comfortable and relaxed than in a completely new situation. The whole process - artistic production and interview - took about one hour, so it did not interfere with their school schedules.

Participants were asked to draw a representation of how they felt in the classroom with no further instructions; they could draw objects, themselves, other individuals, abstract concepts, natural elements, etc. When the participants finished their artistic productions, the author and her research tandem partner (a Brazilian student from UFBA) asked them to talk about the drawing and started a semi-structured interview, which was presented to the children as an informal dialogue with the researchers about their drawing.

Making the children explain and describe certain elements of their artistic expressions and asking concrete questions about their production instead of developing a formal interview with them created a safer emotional space for the participants, easing the process of talking about their feelings and conceptions of themselves and the surrounding area. Several studies have proved the positive impact of drawing with children - not only those with ASD -easing the process of emotional expression as well as creating a comfortable space for them. Drake & Winner (2013), for instance, studied how children used drawing to regulate their emotions, and the findings were clear: abstract drawing improves mood in the short term. Moreover, the authors described how drawing could be used as a way to start a dialogue about their trauma, making sense of it (Drake and Winner, 2013, p. 519).

In another study done by Gross and Haye (1998), it was reported how drawing helped children to talk about their own past experiences - incrementing the quantity of information they reported. Moreover, the authors, after carrying the study with neurotypical children, stated that drawing could help to deal with the social demands of an interview, showing how children who were required to draw during the interview felt more comfortable than children that were just required to speak, increasing their level of comfort and facilitating their ability to talk about the event in question (p.174). Wesson and Salmon (2001) also used drawing to interview children, and, as in the previous studies, the data retrieved using this tool was richer and more relevant than the one retrieved only verbally. Children who were able to draw while talking gave twice as much detailed and emotionally related information as did children who were only interviewed verbally (Wesson & Salmon, 2001, p. 316).

The semi-structured interview was carried out right after the children had finished creating their artistic piece of expression - taking breaks if necessary- so the reliability of the data was higher. Children might forget what they want to express during a certain period of time, so it was best that the semi-structured interview was going to be developed right after they had expressed themselves artistically and with the production in front of them.

The interview was recorded through the Nettskjema Dictaphone app and stored in UiO's Nettskjema, as well as a copy of the children's productions since they were able to keep the original one. There was not any personal information about the children in the study; they will always be referred to under a pseudonym, and the data retrieved is restricted (yellow code in the UiO's data classification). There is no information that enables the recognition of the participants - excluding the researcher.

Procedure and materials

The researcher and her Research-tandem partner (native speaker of Portuguese), after the first contact with the schools, met with the principals of both schools for face-to-face meetings, presenting the study again and providing them with the consent forms that the parents were required to sign before starting the data collection process. The researchers did not meet the parents of the students (in order to minimise the personal data collected), so the teachers and principals contacted the parents. The principals handed a printed version of the consent form (in Portuguese) to the parents of the participants, and once they had it signed, the principals contacted the author to start with the data collection process.

As mentioned, the semi-structured individual interviews were conducted in a classroom in the participants' schools during their regular school day. The whole data collection process (production of the drawing + semi-structured interview) did not take longer than one hour. In the classroom, the participants would find a desk with blank papers, a children-adapted consent form, a laptop and a mobile phone facing the researchers, more than twenty coloured pencils, markers, a pen, pencils, rubbers and a sharpener.

Once the participants entered the room, they were greeted by the researchers and introduced themselves as well as the activity they were going to develop. They read out loud the consent form and informed the participants that they could stop their participation in the study at any moment. Also, the participants were informed that their voices would be recorded through the laptop and phone but that the interview would be anonymous. Then, they were asked to draw how they felt in their classroom, and once they were finished, the researchers asked the participants to explain their drawing and started a semi-structured interview which felt like an informal dialogue about the drawing and their feelings with the participants. Once the interview was over, they got the opportunity to choose their pseudonym and got handed their drawing back.

Data Analysis

Since the semi-structured interviews were carried out in Portuguese, firstly were transcribed and translated into English. Then, using the Nvivo tool, the transcriptions and drawings were coded. The transcriptions were coded in the first place - separated from the drawings - then the drawings were coded separately, and then, the coded semi-structured interviews and coded drawings were analysed together, looking for similarities.

The codes were also supported by a theoretical background since, during the past decades, some researchers have tried to establish some measuring factors to analyse the sense of belonging (Hagerty & Patusky, 1995; Mahar et al., 2013; St-Amand et al., 2017) pinpointing vital aspects such as “valued involvement”, to “fit”, “loneliness”, “social support”, “reciprocity”, (Hagerty & Patusky, 1995), “subjectivity”, “groundedness”, “self-determination” (Mahar et al., 2013), “attachment”, “feeling of usefulness”, “support”, “valorisation” (St-Amand et al., 2017). Those studies helped the author to establish and support the coding process.

Moreover, regarding the artistic productions of the participants, the codes have also been supported by a theoretical framework. Given the fact that drawing and its impact and connection in the analysis of understanding children's development as well as their emotional state are widely studied topics, there is a broad sum of literature about children's drawing analysis, establishing measurements and connections between artistic representations of reality and the emotional, developmental and personal state of the children producing the drawings (Farokhi & Hashemi, 2011; Nedelcu, 2013; Piaget & Inhelder, 1978; Shi et al., 2021).

Results

The main research question of this qualitative study is: How do children with high-functioning autism educated in public schools in Salvador da Bahia perceive their feeling of belonging within their classroom and school context? Thus, the data collected in this study aims to start a discussion of whether children with high-functioning autism feel belonging to their scholarly context.

Individuals, regardless of their conditions, experience the exact same situations in opposite manners, as each one of us has different personalities, learning processes and socioemotional conditions. Therefore, generalisation should be avoided. The participants are in the same age range, live in the same city, have similar socioeconomic conditions, half of them go to the same school, and all share the same diagnosis; nonetheless, they perceive their roles in their classroom in different manners. It might seem obvious, but there is a popular misconception that individuals with ASD share the same perspectives and views of reality.

The data of this study came directly from the voices of six children with high-functioning autism educated in two public schools in Salvador da Bahia, Brazil. Given the methodology used - a combination of drawings produced by the participants and a semi-structured interview mediated by their drawings -the participants felt comfortable sharing their personal experiences and perceptions at school, providing the study with quantity, quality and emotional-related data.

As stated previously, the sense of belonging is a complex topic to analyse and measure; nonetheless, there are some key factors that are basic in order to understand how the participants perceive their feeling of belonging within their classroom and school. The participants had different experiences and perceived similar stimuli in different manners, stating it verbally and also making it clear in their artistic representations.

Sense of inclusion

All participants are physically included in mainstream classrooms in public schools; nonetheless, the fact of being physically included does not mean there is an academic or social inclusion. The participants reported different experiences at school; also, they had different manners of experiencing the feeling of inclusion.

Peu did not feel included in his classroom not in his school, feeling tired and bored at school: “I am waiting for the class to end, but I do not know what time it is” (he does not know how to read a clock yet), “I am bored and sleepy”. *Eduardo* feels sad in class; nonetheless, he would like to work and collaborate with his classmates, although he barely talks with them. “I cannot stand some of my classmates, they are loud, and they scream”. Therefore, he does not feel included, but he would like to, although he is aware that sometimes he is unable to obey and control himself, so maybe that is stopping him from creating a bond with his peers.

On the other hand, *Sasha* stated that he feels very happy at school - although his artistic representation of his feeling in the classroom, through our neurotypical eyes, would state the opposite. Nonetheless, although he states he likes everyone and he feels very happy if he had the chance, he would change his classmates to the ones in 5th grade (he is in 2nd grade). So he might have developed a strong feeling of inclusion within the school and his classroom, but for him, bonding with his classmates might not be as important.

For *Isa*, for instance, peer bonding and relationships with his classmates are strong factors that define his feeling of inclusion at school and in his classroom. He says he is very happy at school, continuously mentioning his friends and classmates and even drawing one of them. *Alex* feels the same as *Isa*, valuing his classmates and the relationships he establishes

with them: “ I really like my classmates”. Moreover, he also mentioned and valued his teacher positively, being the first participant to do so.

Ana Clara struggled with fluid oral communication; nonetheless, she also drew one of her classmates, who is also her best friend - and is deaf but never mentioned it to the researchers - and stated that he likes going to school. She drew a conversation with her best friend, and she stated that she mostly talks with her, not communicating much with her classmates. She stated that she enjoyed learning at school, and although she had low oral communication skills, she preferred to make herself understood with written language and drawings. In her case, her feeling of inclusion might depend on her academic level and a strong relationship with her best friend.

Support system within the school

Feeling valued, listened to, taken into account and socially and emotionally supported is also a significant trait to tackle when analysing the participants’ feeling of belonging, thus how they experience the support system in their classrooms and schools.

Peu does not feel supported by the teachers nor by his classmates; he does not feel understood: “She lets us play, but I do not want to play with someone “ - imitating her: “Play something, I do not know (...) play with the toys of the class, but no, you cannot run” - “the only thing that is cool is running, and she will not let you run”.

Eduardo, although - when directly asked - said he liked his classmates and teachers and did not feel he had people of reference when needed. In cases of anger, he leaves the classroom and goes to the toilet without talking to anyone, and when he feels happy, he studies but without talking to anyone either.

Sasha feels supported by his school and peers in general but not directly by his classmates in particular since, as mentioned earlier, he would change all of his classmates for

the ones in 5th grade. Nonetheless, when he is happy, he decides to talk to his friends, and he gets “happier”, as well as when he gets sad, he decides to talk with his friends, and they help him to be happy. However, when he is angry, he talks to his mom; even though he gets angry at school, he will wait to talk with his mom. He did not mention that his friends were his classmates, just children from school. Moreover, he did not mention his teachers, and he only stated that he liked “everyone from the school”; nonetheless, he did not directly mention the role of his teachers, which should provide support in case of complex scenarios. Isa is in a similar situation as Sasha, having a good relationship with his peers and recognising them as individuals of support, but not his teachers.

Alex, oppositely, mentioned his tutorial teacher as a person of reference, someone who helps him to develop his activities in class and someone he talks to when he is feeling happy - as well as with his friends. What is important to highlight is that he talks to his teacher when he is feeling sad; therefore, he recognises his teacher as an individual of support. Moreover, he also mentions his friends and classmates, feeling supported and with positive feelings towards them.

Ana Clara's case is more complex than the other participants' ones in her case; she finds support in her best friend, building a strong bond with her. She does not find or recognise support from the rest of her classmates or teachers, but she does through her best friend.

Academic outcomes

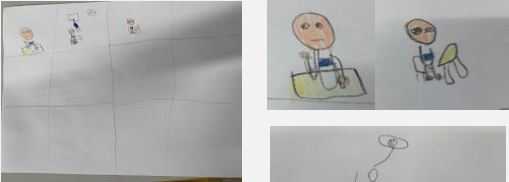

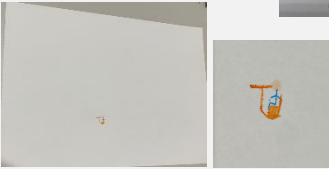



All the participants - unless *Peu* and *Eduardo* - stated their motivation and willingness to go to school; even given a chance by the researchers - in a hypothetical situation - to choose between staying at home or going to school, they chose to go to school. *Peu* and *Eduardo* stated that they feel bored, sleepy and sad at school, and they are not happy there.

Peu also stated a feeling of usefulness, as he finds the tasks given to him too easy, he finishes faster than his classmates, and then he has to wait for them to finish without being given any extra activity. He says he is losing his time in class, and he would rather be playing or at home with his mum. One of his requirements was to extend the break time, so he would have more time to eat and play by himself. *Eduardo*, although he shares the feeling of being unmotivated and dislikes school with *Peu*, he feels like he is learning at school, and he enjoys that.

One of the only points of the interviews where all participants agreed was their enjoyment towards learning; all of them stated that they liked learning. Maths, Portuguese and Physical education were the subjects that the participants enjoyed the most, although they enjoyed learning in general.

Figure 1 is a summary that tries to give an answer to the research question, representing through a visual manner how participants experience their sense of belonging within their classroom and school contexts. The drawings shown, are the ones made by the participants during the data collection processes.

Table 2. Table with the participants' sense of belonging and images of their artistic productions.

Pseudonym	Sense of inclusion		Support system within the school		Academic outcomes			Artistic productions
	Classroom	School	Peer support	Teacher support	Motivation	Learning	Enjoy learning	
Peu	✗	✗	✗	✗	✗	✗	✓	
Eduardo	✗	✗	✗	✗	✗	✓	✓	
Sasha	✗	✓	✓	✗	✓	✓	✓	
Isa	✓	✓	✓	✗	✓	✓	✓	
Alex	✓	✓	✓	✓	✓	✓	✓	
Ana Clara	✓	✓	✓	✗	✓	✓	✓	

Discussion

This paper was started with the aim of analysing the sense of belonging of children with high-function autism within their classroom and school context by listening to their own voices. Given the condition of the participants - children aged 7 to 9 diagnosed with high-functioning autism - it was basic to develop a methodology that would facilitate the data-collection process, ensuring a comfortable situation for the participants that would allow them to share their perspectives in a natural manner. The combination between a semi-structured interview and the artistic production of children allowed the author to gather relevant pieces of data since the participants felt the data-collection process was a natural conversation about their drawings, which led them to express their emotions and experiences more openly than in regular interviews or conversations.

As expected, it was found that children - despite sharing the same diagnosis - experience similar situations in a myriad of opposite ways. Generalisation is a big issue within the educational context - given the complexity of individualisation and personalisation; nonetheless, in order to create further discussions, innovate and go further into the research, it is basic to listen directly to the voices of those who are involved in the educational process. More necessary for those who struggle to keep up with regular education systems and need extra support. Research is often focused on methodologies, practices, teachers, diagnoses and results; thus, the voices of some part of the affected population are silenced (Haegele & Maher, 2022). When tackling Special Educational Needs in the scholarly context, the complexity of analysing the cases directly from children with SEN's own perspectives increases. Hence, research is done in big groups, stating that each child has their own characteristics and perspectives, but ending up with a general overview.

One of the questions arising at the beginning of this piece of research was whether children with high-functioning autism would feel belonging in their mainstream classes and

schools. Children with high-functioning autism may struggle to establish social interactions and might have problematic communicative encounters led by difficulty in controlling, recognising and expressing certain emotions (Allman, 2010). Moreover, as stated by Black et al. (2022), children with ASD might be affected by the built environment (BE) - which is made to tackle neurotypical needs, and not the ones children with ASD might have - being sensitive to sensory information, such as loud noises, colours, smells, the intensity of the lights, etc. In mainstream classes, there are around 17 children; therefore, there is a need to establish plenty of social interactions during the day; it is also quite noisy, the lights are intense, and the spaces are quite reduced. Therefore, the author wondered if it would be possible for children with high-functioning autism to feel belonging to their mainstream classes in regular schools.

The study has clear findings; although each student experiences a sense of belonging in different manners, there are some common traits that define whether they have developed a feeling of belonging or not: the feeling of inclusion (feeling taken into account, accepted and valued), the support systems (recognising and accepting social bonding and support from peers and/or teachers) and the academic outcomes (such as motivation, the willingness of learning, enjoyment in the school). After having conducted the study, clearly, three out of the six participants of the study had developed a sense of belonging since they felt included and happy at school, they recognised and accepted social support, were motivated to go to school, and enjoyed learning and bonding with their peers.

In one case, although the participant stated that she was happy at school, she accepted and took social support from one of her classmates, and she felt motivated to go to school, but the fact that she only took one person as her support and connection within the social context, is a complex topic to discuss. Does she feel belonging to the school and her class or to her friend? If her friend was not there, would she still enjoy the scholar experience? Would she find

social support in someone else? Can a sense of belonging be developed if there is just a bond with one person? Those are questions left for further research; in this case, this special circumstance will be held as an “in-between”; she is not considered as having a strong feeling of belonging, nor not having none.

The two other participants proved that they do not have any sense of belonging within their school or classroom. For them coming to school is a tedious experience; they do not feel included, do not recognise nor accept any kind of support and are not motivated to go to school. In both cases, it was obvious. Therefore, it has been proved that children with high-functioning autism can develop a sense of belonging in mainstream classrooms and schools.

Authors such as Combs (1982) and Beck and Malley (2003) suggested the link between the sense of belonging of students to their classrooms and schools and their learning processes, stating that those with a sense of belonging to their classroom and school will be able to perform better results and enjoy more their learning process, than those who have not developed a sense of belonging. In this study, this correlation has also been demonstrated, as those two who did not develop a feeling of belonging did not enjoy their learning process; for both of them, classes were boring and tedious, and they did not like going to school or to class. One of them even stated that he felt he was wasting his time in class. Nonetheless, those who had developed a sense of belonging liked going to classes, felt motivated to go to school, and, overall, enjoyed their learning processes.

Thus, this piece of research has not only analysed how children diagnosed with high-functioning autism educated in public schools in Salvador da Bahia (Brazil) experience their sense of belonging within their classroom and scholarly context, but also has developed and carried out a methodology that has allowed the researchers to listen directly to the voices of the participants. In this study, the participants have been the main characters, being able to share their perspectives, experiences, feelings and thoughts, not only to shed light on further

research, but also to claim a need within the academy, the need to listen to the voices of silenced parts of the population in order to be able to advance and innovate in research, taking into account what really matters: the voices of our students.

Limitations

The trip to Salvador da Bahia has played a basic role in this study, not only establishing a limited period of time to develop the data collection process but having to deal with a social and cultural context completely opposite to any experienced by the author before. The Brazilian context has been the soul of this study, but also one of the biggest limitations, as the trip to Brazil started on the 9th of January 2023 and ended on the 7th of April 2023. Given the kind of study - the data had to be collected at schools. Firstly, the challenge was trying to understand the Brazilian educational system, the types, functioning and organisation of Brazilian schools, and to look for suitable schools for this study. Once, thanks to the own research and the research-tandem partnership, there was a list of schools to be contacted; nonetheless, the data collection process was stopped by the context. During January, all schools were closed - due to the Summer holidays -; in February, everything stopped because of the Carnivals; therefore, the schools were not open until late February. Not only was the study limited by the specific duration of the trip, but also by the Brazilian context.

The limited time led to a small number of participants. Moreover, the researchers struggled to find children diagnosed with high-functioning in public schools, and developing the data collection in public schools was not a negotiable aspect of the study - given the teaching background of the author, she thought that it was immoral to develop the research in private schools. Inequality defines the society in Brazil; therefore, children who go to public schools - given their socioeconomic conditions - take longer to be treated and diagnosed.

The data for this piece of research was collected through an individual meeting with the participants that lasted between 45 mins and 1 hour. Nonetheless, in order to fully understand the experiences and the context of the participants, it would have been ideal to attend one of their classes or breaks, see them interacting at school and see which practices are implemented by the teachers.

Language has also been a limitation, since although there was a partnership between a Brazilian student and the author, getting implicated in the study and translating, if the author had understood and spoken Portuguese properly, she could have gone deeper and more detailed in the interviews with the participants. After analysing the transcriptions of the interviews, the author realised how, if she would have understood what the participants meant during the interviews, she could have asked more and more detailed questions.

Implications

After having the opportunity to listen directly to the voices of children with high-functioning autism, basing the research on their experiences, hopefully, will motivate fellow researchers and colleagues to start listening to the voices and experiences of their participants since they are the ones who matter. To tackle our students' needs and to try to understand them better should be our priority as educators and researchers. After this study, there are some questions left for further research, such as the case of *Ana Clara*, her relationship with her best friend and her problematic feeling of belonging. Moreover, within the discussion of real inclusion, this study has shed light on the possibility of having students with ASD fully included in their mainstream schools, developing a strong sense of belonging and enjoying their learning process.

Conclusions

The voices of children with high-functioning autism have been silenced by research for decades. Nonetheless, this piece of research has given the opportunity to some of them to share their experiences and how they experience their sense of belonging within their scholarly context - if they have developed one. Thanks to the use of drawings to mediate

semi-structured interviews, the participants have felt comfortable enough to share their perspectives and experiences in class. The findings have proved what some literature suggested that there is a correlation between the feeling of belonging and academic performance, that each child experiences similar situations in a myriad of different manners and that children with high-functioning autism can be and feel fully included at schools and develop a sense of belonging within their scholar context. This study represents a small part of population, moreover the sample is very reduced, nonetheless, it would be interesting to repeat the study in a bigger scale.

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