MedCrave
Step into the World of Research
Journal of Microbiology & Experimentation

Clinical Case

Open Access CrossMark

Clinical case-Autism spectrum disorder

Abstract

This article focuses on the analysis of a clinical case. After an investigation of the most pertinent aspects of the case, through a structured model of clinical history and with reference to specific assessments, intervention strategies are outlined resorting to theoretical support and, finally, their evolution is monitored. I. began monitoring at APPDA-V with the aim of promoting emotional regulation, increasing social skills and reducing disruptive behaviours. Among her characteristics, an excessive dependence on routines stands out, and, when changes occur, I. demonstrates her displeasure through disruptive behaviours, manifesting it in self- and hetero aggression, shouting, biting herself or the objects around her.

Volume 11 Issue 5 - 2023

Daniela Vieira
Faculty of Psychology and Educational Sciences of the University of Coimbra, Coimbra, Portugal

Correspondence: Daniela Vieira, Faculty of Psychology and Educational Sciences of the University of Coimbra, Coimbra, Portugal, Email danii_vieir@live.com.pt

Received: December 20, 2023 | **Published:** December 29, 2023

Introduction

The subject of this case study (referred to as I.) is a six-year-old child, attending the 1st year of basic education. She is an only child of divorced parents, and she mostly shares her residence with her mother, a 43-year-old teacher. I. began intervention at APPDA-V in June 2019, with a weekly Psychology session, with a duration of 45 minutes. The child was referred to APPDA-V by her school, for intervention with the objective of behavioural regulation and training in social skills. Initially, the request made by the school and the parent focuses on screening for ADHD (Attention deficit hyperactivity disorder), to provide adapted academic strategies. The descriptions that are given during the clinical interview procedure raise the hypothesis of ASD (autism spectrum disorder), a diagnosis that will be posteriorly explored. Over the course of the consultations, a request for help for individual intervention with the aim of behavioural and emotional regulation, as well as for an outline of strategies for the family context, is expressed. In various contexts of a child's life, episodes of disruptive behaviour are mentioned, the vast majority resulting from antecedent stimuli linked to changes in her routine and/or expectations. On the other hand, her restricted interests (for example, rigidity when playing) and her lack of understanding of others, often not interpreting the cognitive or emotional state of those around her, result in difficulties in social interaction. Excessive contemplation of very specific details ends up compromising the smooth running of everyday life, promoting delays and, consequently, new situations of inappropriate behaviour. Finally, issues related to hyperactivity arise, as she presents a constant need for movement. This study did not involve any molecular aspects. She cannot sit for long periods of time and, when walking outside, her mother mentions that "I almost need a leash so as not to lose her." Associated with this motor agitation, she easily loses the focus of attention. Considering the aforementioned description, Clinical Psychology seems to be the most reliable area of activity to follow, through methods and techniques that allow one to understand the mental and behavioural reality of the child and with a methodized intervention, it is possible to promote behavioural changes, with the ultimate goal of promoting the mental health and well-being of both the child and those around her. For this same reason, we are moving forward with the assessment and intervention in this case.

Description of the case

Patient I. was referred to APPDA-V by the school she attends, with complaints of "self-and hetero-aggressive behaviours, she screams and runs away whenever she is called out or hides under tables, she'll not let anyone touch her. During recess is when this behaviour is most noticeable, she is rarely with her classmates, preferring to sit on the school stairs." Regarding the family context, the complaints are similar: intense crying accompanied by self- and hetero-aggression when contradicted or when a situation does not proceed in the customary way. One of the mother's examples was, "when she goes to swimming class, we always have to go the same way – otherwise, she'll make a scene - and, when we leave, you have to pick up some pebbles on the way to the car. The last time I didn't let her do it, she dropped to the floor and practically had to be dragged." Another major concern for the mother is the quality of the relationships developed by I.: "she has no friends. She cries because she says no one plays with her at school." For the resolution of any clinical case, there must be a firm theoretical basis. For this reason, various books, articles and documents about hypothetical issues that, in addition to helping correctly diagnose the problem, can help with intervention in it, were analysed. Next, a literature review that supports the entire analysis of this case study is presented (Table 1).

Mental state examination

- Overall appearance: child with clothing appropriate to her socioeconomic level, age and context;
- Appropriate behaviour, but revealing restlessness;
- Restless posture;
- Conscious, auto- and allo-psychically oriented, in space and time;
- With congruent speech, with tendency for topics of interest;
- No delusional activity or changes in perception;
- With loss of concentration;

Development history

Personal background

Pregnancy, childbirth, nutrition, psychomotor development and morbidity

Although it is not yet possible to identify a cause for these psychopathologies, either for research reasons or for differential diagnosis reasons, the patient's life history since her mother's pregnancy is analyzed.

After a clinical interview with the mother, it was concluded that she is an only child, from a planned and desired pregnancy, which took place without problems until birth. It was a normal, full-term birth, at nine months. Psychomotor development was normal (the

©2023 Vieira. This is an open access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and build upon your work non-commercially.

psychomotor level of difficulties in fine and gross motor skills are strong indicators of ASD (for example, walking on tiptoe or difficulty in making a pinching movement with the fingers)) .However, there was a delay in speech, as she started speaking at the age of three and at four years old, she started receiving speech therapy, which she continues to this day. It is also referred by her mother that I. "is always with her head in the clouds and spends her life jumping around, she doesn't calm down for a minute, then, of course, she can't complete her work."

Author	Date	Name	Description
APA[1]	2013	Diagnostic and Statistical Manual of Mental Disorders.	This manual covers the various mental disorders present in human diversity. It is a crucial element for any diagnosis, as well as for differential diagnosis.
Bosa C & Callias M[7]	2000	Autism: a brief review of different approaches	In this article we look at various approaches to explaining ASD.
			For this case study, the theory of executive functions and central coherence stands out, which make many of I.'s disruptive behaviours understandable, namely, with regard to alterations to routine.
Braga-Kenyon P[2]	2005	Análise	Applied
MS Shawn E		Comportamental	behavioural
Kenyon MA		Aplicada (ABA) – Um modelo para a educação especial.	analysis (ABA) is the science with the most scientific evidence in the intervention for ASD.
DGE.	2018	Inclusão e Necessidades Educativas Especiais: Um guia para educadores e professores	After the amendment to the decree-law, regarding special education in schools, DGE developed a manual to support the implementation of the new measures. It is essential to analyse it so that it is possible to adapt the evaluation methods for a child with difficulties to their needs, facilitating the adaptation of intervention on a case-by-case basis.
Filipe CN.	2015	Crescer e viver diferente. (1ªed.).	In the book "Crescer e viver diferente", Dr. Carlos Nunes, psychiatrist and clinical director of Cadin, refers to the entire set of difficulties inherent to the problem of ASD, as well as ways to intervene in them.
Fuentes, Bakare J, Munir M, Aguayo K, Gaddour P, Öner N, Ö & Mercadante M[3]	2012	Autism spectrum disorders. In Rey J. M. (coord.), IACAPAP e-Textbook of Child and Adolescent Mental Health (pp: 1–27).	In this article, the various intervention methodologies in ASD are analysed. The importance and scientific evidence of ABA interventions is highlighted, due to its effectiveness, taking into account its principles of error-free learning and preparing subjects to generalize appropriate behaviours in all their spheres.
Kearney AB[4]	2009	Compreender a Análise Aplicada do Comportamento: uma introdução à ACC para pais, professores e outros profissionais.	The ABA science- based approach consists of analysing and adapting responses to ensure continuous learning. This depends on the application of different reinforcement systems.
Lima CB	2012	Perturbações do Espectro do Autismo: Manual prático de intervenção.	This manual reflects the various approaches and concomitant clinical practices in ASD intervention. It also highlights the importance of multidisciplinary and online interventions.

School and social life

In a school context, until now she is following the normal academic path and, sometimes, with some distinction in relation to her colleagues (namely, in the area of mathematics), however, she often gets up and, when the exercises are in Portuguese, it is necessary to make her focus on them several times. In the referral letter, the teacher mentions one of the classroom episodes: "she wants to keep up with her colleagues on exactly the same page. There was a time when she was ahead in mathematics; when she realized that she was solving a page ahead of her classmates, she erased everything she had done in order to stay on the same spot as them." The biggest difficulty is found in physical education classes: she often doesn't follow the teacher's orders, is always jumping and running, and if a classmate touches her, she thinks they are hurting her, immediately starting to cry. Lunch time is another aspect mentioned by the head teacher, I. explains that she doesn't like the noise from the boys and that's why she hides under the tables. During the break, the moments in which she is observed with her colleagues are rare and, when they do occur, they are fleeting, making it impossible to carry out a game to the end. I. never showed great interest in her peers, both in kindergarten and in other activities (swimming, dancing and catechism classes), she prefers to play alone. When playing with peers, the game must be led by I., otherwise she will start a "tantrum". However, she cries several times, saying that she can't play with the boys and that they don't like her. At home she spends several hours in her room, she plays mostly with her favourite dolls, which she always has lined up. When she plays with other toys, she doesn't leave the room until everything is exactly in the starting position.

Family background/Family environment:

On a socio-family level, she is the daughter of divorced parents, this situation being relatively recent. The level of stress has consequences for the mental level, however, to date, research has not clarified the relationship between this factor and these psychopathologies. I. is under shared custody, alternating residence between her mother and father throughout the week. The closest attachment figure appears to be her mother, who she spends most of her time with, and who also accompanies her to appointments. The mother assumes a passive role, trying to talk to I. whenever disruptive behaviour occurs or holding her when she cries intensely. According to the mother, the father believes that "it's all bad manners, he doesn't accept that there is a bigger problem associated. When he witnesses situations of inappropriate behaviour, he screams and leaves her grounded for hours."

History of the problem

When asked about the beginning of these difficulties, the mother states that she always remembers having some behavioural problems at home (referring to problems that are identified as psychological.), but that these have been getting worse with the entry into primary school. In addition to behavioural issues I. has always demonstrated different interests from her peers, for example, at the age of three she only played with animals, spending hours ordering them, not wanting any more toys. When she entered kindergarten, this discrepancy became more visible: despite having broadened her range of interests, she continued to play excessively with the same objects. Her mother states that these are stages. "She starts enjoying other things, but there is always a preference for some she'll spends hours with: the last one was Pinipons, he had to have everything; now it's LOL's". The entry into the 1st year of school is referred to as the peak of the situation, the increase in academic demands made her disruptive behaviours more visible and intense. This period is also congruent with the parents' divorce.

Diagnostic hypothesis

The hypothesis of ADHD, put forward by the school, seems to be plausible accounting the clinical interview carried out with the child's mother. According to the DSM-5 on Attention Deficit Hyperactivity Disorder 314.01 (F90.2), of moderate severity, it is expected that a child will manifest their distraction through behaviours of "difficulty sustaining attention in tasks, lack of persistence."[1] Hyperactivity is congruent with restless children, who have exaggerated motor activity even at inappropriate times. However, this diagnosis appears not to be sufficient due to the descriptions presented, leading to the suspicion of comorbidity with ASD. According to DSM-5, 299.0 (F84.0), from Autism Spectrum Disorder is expected "persistent deficits in reciprocal social communication and social interaction (Criterion A) and restricted and repetitive patterns of behaviour, interest, or activity (Criterion B). These symptoms are present from early childhood and limit or compromise day-to-day functioning (Criterion C and D)"[1] Now, this description reflects that of the patient's mother during the clinical interview. Some of her ritualized behaviours could lead to a suspicion of Obsessive Compulsive Disorder (OCD). However, according to DSM-5 on OCD 300.3 (F42) obsessions "are not pleasant or experienced as voluntary: they are intrusive and unwanted and cause discomfort or anxiety (…)".[1] In the case of I., both thoughts and repetitive behaviours give her a feeling of comfort and pleasure, putting this hypothesis to rest. Taking the above into account, the hypothesis of the following clinical picture was evaluated: Autism Spectrum Disorder, level I (requires support) and Hyperactivity Disorder and Attention Deficit Disorder with combined presentation.

Evaluations

To carry out the cognitive assessment, the Intelligence Scale of Wescheler III (WISC-III). Regarding the analysis of the ADHD hypothesis, we used the Conners Scale – Revised Version – Complete form for Parents and Teachers (translation and adaptation: Rodrigues, 2000). The Autism Diagnostic Interview Scale (ADI-R) and the Autism Diagnostic Observation Scale (ADOS-2). The choice of these instruments is mainly due to what was mentioned in the clinical interview with the mother, the descriptions provided by the school and the observation of the child's behaviour, which together led to the elaboration of a clinical picture of psychopathology. Due to the length of the evaluation, it had to be divided into three moments, trying to minimize the time between them as much as possible. She was cooperative during the assessment; at the end of the first day, she showed some tiredness, ending up carrying out some tasks randomly.

Psychodiagnosis

WISC-III

The results obtained through the WISC-III instrument point to the presence of a homogeneous cognitive profile. The indicator that aims to estimate I.'s global intellectual functioning, the Full Scale IQ (QIEC), presents a value considered Average (QIEC= 102) when compared to children of the same age in the population. I.'s reasoning and verbal fluency skills are at a Medium level (IVQ= 99) as well as in the Achievement Scale (QIR= 108).

Conners scale – revised version

This instrument assesses typical behaviours and symptoms of inattention and hyperactivity, as well as other behaviours and symptoms generally associated with this disorder. Values above the 65th percentile are considered clinically significant. In the mother's record, clinically significant values were identified in the scales of: E- Perfectionistic Behaviour. In the father's record, clinically significant values were identified in the scales: C (Excessive motor activity); E (Perfectionistic Behaviour); F (Social Relationship Difficulties); M (DSM Symptoms - IV – Excessive Motor Activity/Impulsivity); with values located in the borderline range on the scales: I - Conner's Global Index; N - DSM Symptoms - IV – Global. In the teacher's record, the clinically significant values are on the scale: E - Perfectionism Behaviours and values located in the borderline range on the scales of: D - Anxiety behaviour; F - Difficulties in Social Relationships.

ADI-R.

The results obtained in the interview indicate values above the cutoff point on the scales of *Social Interaction* (result: 15, cutoff point: 10), *Communication* (result: 12, cutoff point: 8), *Behaviours and Interests* (result: 3, cutoff point: 3) and *Developmental changes* (result: 5, cutoff point: 1). The retrospective analysis of I.'s behaviour generally reveals difficulties in terms of quality in creating interpersonal relationships, communication, behaviour and emotional regulation. These data acquire special value in the complementary analysis to ADOS-2.

ADOS-2

The assessment carried out took place through Module 3 of the ADOS-2, which is aimed at children from the end of preschool age to adolescents up to 15 years of age, who have fluent language. In the Socio-Affective parameter, she obtained a result of 9 and 1 in Restrictive and Repetitive Behaviours, giving a total of 10 points, with a cut-off point equal to or greater than 7. According to the results, there are significant changes in the area of Social Interaction and Communication that are above the clinically significant threshold for an Autism Spectrum Disorder, reflecting gaps that interfere with impact in these areas of functioning.

Therapeutic process

Considering the confirmation of the diagnosis of ASD, the intervention most effective and supported by scientific evidence is the ABA[2] Behavioural Intervention – *Applied Behaviour Analysis*,[3] which consists of an "approach to modifying socially relevant behaviours based on scientifically proven learning principles",[4] which is why this was the proposal presented to the family. This intervention is based on the ABC model, "taken" from Skinner's theory in which: **A** means antecedent, the stimulus that occurs before the behaviour; **B** means behaviour, everything the individual does after the antecedent; **C** means consequence, what happens after the behaviour. The antecedents are detected by the senses and can be neutral or might

indicate reinforcement or punishment. Behaviour is what you want to change, whether increasing or decreasing. The consequence is immediate to the behaviour, if it is regularly occurring, it has an effect on the frequency of occurrence.[5] In the case of I., to carry out behavioural modification, it is also necessary to promote her social skills. **Social Skills Training** must include: **Behavioural Training** – combination between the rehearsal of social behaviours to display and the desired consequences. Various situations and the desired consequences can be trained; **Transfer Training** – as one manages to achieve expected social behaviours, it is important to apply them in a more natural context; and **Relaxation Training** – through learning relaxation strategies, because, as in all anxiogenic situations, the heart rate becomes irregular (e.g. *progressive muscle relaxation or PMR*). This technique is used for people to calm down in situations of anxiety or frustration.[4] On the other hand, and taking into account the context in which I. is inserted, it is necessary to include a support plan aimed at the family and the school environment, through psychoeducation and in order to promote the implementation of strategies that facilitate the generalization of skills. In the first phase of the intervention, a Functional Analysis of Disruptive Behaviour, ABC Model,[6] was carried out by completing behavioural recording tables. After prioritizing the behaviours on the part of I.'s mother and teacher, they were monitored in the ABC model record for the different contexts in which the child is inserted. Stemming from the identification of the antecedents and consequences that reinforced the signalled behaviours, strategies were adapted to reduce disruptive behaviours and increase appropriate behaviours. In individual sessions, concrete problem-solving situations were worked on (through psychotherapeutic games and role play). Using social stories, it was possible to predict some everyday events and develop ways of adapting behaviour to what is typically expected. This intervention, using various materials which complemented the aforementioned tasks, focuses on the training of social skills, allowing the promotion of social and communication competence, in order to increase the effectiveness of I. as a conversation partner, through understanding basic social rules of coexistence, empathy, respect, emotional control, among others. On the other hand, there were some moments of frustration when putting previously learned self-regulation techniques into practice. Alongside the intervention with I., parental monitoring sessions were held for the mother, where strategies to apply at home were outlined. A *Token System* was introduced, in order to adjust behaviour in tasks where she presents some difficulty (tantrums, controlling time for lunch, household chores and carrying out academic work). A meeting was also held with the head teacher of I.'s class, with the special education teacher and with the operational assistants who, for the most part, accompany her during the break. Together, with the multidisciplinary team, preventive strategies and reactive strategies were outlined that can be applied when disruptive behaviours occur.

Discussion

I.'s family (mother, father, maternal grandmother and I.) comes to the Psychology appointment sent by the school, due to suspicion of ADHD. After a clinical interview, the suspicion of ASD arises, which is confirmed through assessment instruments. Concluding a diagnosis of level I ASD, with comorbidity of moderately severe ADHD. I. has demonstrated a great effort to complete the proposed tasks, with a visible reduction in disruptive behaviours, such as resistance to doing homework or changing tasks that were previously defined. In the school context, she benefits from universal and selective measures, according to Decree-Law number 54/2018, of July 6th, amended by Law number 116/2019, of September 13th, as well as adaptations in the evaluation process (Article 28 , Decree-Law). During this monitoring, several particularities were identified in terms of communication and social interaction that could contribute to possible difficulties in her psychosocial functioning. In fact, the rigidity of thought, characteristic of ASD, may lead I. to demonstrate resistance to engaging in tasks that do not interest her or which she recognises as difficult, and these behaviours may evolve into impulsive responses of avoidance/escape or emotional/behavioural dysregulation. This response can be exacerbated by the presence of restricted or repetitive interests, hypersensitivities or ritualized behaviours which, when not identified in a timely manner by the reference adults, may precipitate events of emotional and behavioural dysregulation. This can also lead to a lack of ability to interpret information about other people's cognitive and emotional states, even when they give clues such as facial expression, body language, humour and irony, making it very difficult to recognize and understand thoughts and feelings of others, and leading to the inability to predict what can be expected from others as well as what others expect from her, as referred to in the Central Coherence Theory (Baron-Cohen, Leslie & Frith, in Bosa & Callias.[7] Group situations were developed in order to understand I.'s reaction with peers. It was found that in a controlled context and with prior training, she was able to establish appropriate interactions and maintain self-control, even when her behaviour was provoked. An afternoon was also held at a friend's house; however, the result was not as expected. I. continued to play with the dolls she brought and the interactions she had with her partner were always encouraged by her mother. From a clinical point of view, taking into account the context in which I. is inserted, it is important to maintain triad work between APPDA-V, home and school. It is suggested that a support plan aimed at the family and the school environment, through psychoeducation and to promote the implementation of strategies that facilitate the generalization of skills, be elaborated. I believe that the therapeutic space was important and contributed positively to I.'s evolution, as well as to my enrichment as a psychologist. In order to promote the application of the strategies worked on in session, and to facilitate their generalization, my articulation with all the participants involved in their therapeutic process was crucial, always from a psychosocial aspect, in addition to all the theoretical enrichment from which I benefited. Last but not least, I also benefited from training in specific assessment instruments, such as the ADI-R and ADOS-2,[9] so that I could better diagnose this case.[10–12]

Acknowledgments

In work of this type, I inevitably had the support and encouragement of several people and entities. Therefore, this space is intended to thank everyone who made this achievement possible.

I am grateful to APPDA-V for giving me the opportunity to intervene throughout this entire process.

I am grateful to my supervisor, Nicole Dias, who advised and guided me throughout this period, always demonstrating great professionalism and showing openness to all the ideas discussed.

I am grateful to I.'s family for allowing me to share this child's journey and being the example of this case.

Conflicts of interest

Authors declare that there is no conflict of interest.

References

1. APA. *Diagnostic and Statistical Manual of Mental Disorders*. 5th Ed. Washington: APA; 2013.

2. Braga-Kenyon PMS, Shawn E, Kenyon MA. Análise Comportamental Aplicada (ABA) – Um modelo para a educação especial. In Camargos Jr, Water, et al. *Transtornos Invasivos do Desenvolvimento*: 3o Milênio. Brasília: CORDE; 2005.
3. Fuentes J, Bakare M, Munir K, et al. Autism spectrum disorders. In Rey J M. (coord.) IACAPAP e-Textbook of Child and Adolescent Mental Health. Geneva: International association for child and adolescent psychiatry and allied professions; 2012. 1–27 p.
4. Kearney AB. *Compreender a Análise Aplicada do Comportamento: uma introdução à ACC para pais, professores e outros profissionais.* Porto: Porto Editora; 2009.
5. Hartley D, Glenno J S J. A pioneer of research and instructional technology / The individual in teaching. Learning Process; 2013.
6. Ellis A. *Reason and emotion in psychotherapy*. New York: Lyle Stuart; 1962.
7. Bosa C, Callias M. Autism: a brief review of different approaches. *Psicologia Reflexão Crítica.* 2000;1(13):167−177.
8. Caballo V. Los componentes de la conducta asertiva. *Revista de Psicologia Geral y Aplicada.* 1987;37(7):473−486.
9. Lord C, Rutter M, DiLavore PC, et al. *Autism diagnostic observation schedule*. 2nd ed. (ADOS-2). Manual: Module 3. Torrane, CA: Western Psychological Services; 2012.
10. Ringdahl JE, Kopelman T, Falcomata TS. *Applied Behavior Analysis and its Applicatication to Autism and Autism Related Disorders*. In Matson JL. *Applied Behavior Analysis for Children With Autism Spectrum Disorders*. USA: Springer; 2009.
11. Rutter M, LeCouteur MA, Lord C. Autism diagnostic interview – revised. *J Autism Dev Disord.* 1994;24(5):659−685.
12. Wechsler D. *WISC-III: Escala de Inteligência Wechsler para Crianças: Manual. (3aed.).* São Paulo: Casa do Psicólogo; 2002.