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Experience Report

Therapy based on sensory integration in a case of Autism Spectrum Disorder with food selectivity

Terapia com base em integração sensorial em um caso de Transtorno do Espectro Autista com seletividade alimentar

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Abstract

Objective: To analyze the relationship between food selectivity and sensory processing dysfunction in children with Autism Spectrum Disorder (ASD) as well as monitor their evolution with a therapeutic approach to sensory intervention. **Method:** This is a qualitative research based on a case study, with a convenience sample of a five-year-old boy diagnosed with ASD and food selectivity, who was followed for one year and five months. In this case study, the Sensory Profile Protocol – Questionnaire for Parents – 3 to 10 years and the script on nutrition was used. **Results:** A significant change in the Sensory Profile was identified, especially in systems that are related to food, confirming the sensory difficulties of children with ASD and its interface with food selectivity. The occupational therapy treatment with a sensory integration approach obtained favorable results in terms of food acceptance and decreased selectivity. **Conclusion:** Changes in the sensory profile were related to eating difficulties, showing that the selectivity in the case studied had sensory origin, which was overcome with sensory integration therapy.

Keywords: Food, Autism, Sensory, Occupational Therapy.

Resumo

Objetivo: Analisar a relação entre seletividade alimentar e a disfunção do processamento sensorial em criança com Transtorno do Espectro Autista (TEA) e acompanhar sua evolução com abordagem terapêutica de intervenção sensorial. **Método:** Trata-se de uma pesquisa qualitativa a partir de um estudo de caso, com amostra de conveniência de um menino de cinco anos com diagnóstico de TEA e seletividade alimentar, acompanhado durante um ano e cinco meses. Foi utilizado neste estudo de caso o Protocolo Perfil Sensorial – Questionário para os Pais – 3 a 10

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anos e o roteiro sobre a alimentação. **Resultados:** Foi identificada alteração significativa no Perfil Sensorial, principalmente nos sistemas que estão relacionados com a alimentação, confirmando as dificuldades sensoriais de crianças com TEA e sua interface com seletividade alimentar. O tratamento de terapia ocupacional com abordagem de integração sensorial obteve resultados favoráveis na aceitação dos alimentos e diminuição da seletividade. **Conclusão:** Alterações no perfil sensorial estiveram relacionadas com a dificuldade alimentar, evidenciando que a seletividade no caso estudado tinha origem sensorial superada com terapia de integração sensorial.

Palavras-chave: Alimentação, Autismo, Sensorial, Terapia Ocupacional.

Introduction

The Autistic Spectrum Disorder (ASD) is one of the best known among the Pervasive Developmental Disorders, characterized by important difficulties in social interaction and communication, restricted, repetitive and stereotyped activities (Muratori, 2014). The multifactorial etiology encompasses neurobiological, genetic and environmental changes. Trevarthen & Dealfield-Butt (2013) believe that there are congenital brain changes that generate compensatory functioning, which impair the balanced processing of sensory flows and the subjects' adaptive responses (Case-Smith & O'Brien, 2010).

According to Ayres (1979) and Dunn (2001), sensory integration is defined as a neurophysiological process, which identifies the role of the central nervous system in organizing, interpreting, processing and modulating information arising from sensory systems. The Sensory systems are visual, olfactory, gustatory, tactile, auditory, vestibular, and proprioceptive, all associated with learning and previous memories stored in the brain. From the integration of these systems, we are able to respond adequately to daily stimuli and situations; however, when this sensory processing does not take place properly, the condition is named Sensory Processing Dysfunction (SPD) (Ayres, 1979).

SPD is present in about 69 to 90% of children with ASD with alterations centered on modulation, evidencing responses that can be characterized by hyper or hypo-responsiveness. These children with ASD and SPD have difficulty in regulating responses to sensory input, and may use self-stimulation to compensate for their neurological threshold or to avoid such stimulus. This deficiency in sensory integration creates difficulties for the child to inhabit their own body (Bullinger, 2006) and can impair the child's ability to participate satisfactorily in activities of daily living such as eating (Nadon et al., 2011; Baraneck et al., 2006; Dunn & Tomchek, 2007).

Food, as a way of exploring and experiencing the world, is a complex skill that encompasses numerous factors such as parental relationships, personal preferences, stage of life, family eating habits, health conditions, sociocultural context, level of development, orofacial aspects and sensory processing (Davis et al., 2013; Bellefeuille, 2014). Among the challenges of sensory processing during eating is processing the many sensations arising from the texture of the food, the taste, the smell, the vision and the hearing of food noises. These challenges create difficulties for children with ASD and SPD to support the adequate amount of food, tolerate textures, consistency and temperature of food. As a defense, many refuse to remain seated during a meal and its

pleasurable and social character may be lost, in addition to child nutrition being at risk (Nadon et al., 2011).

Thus, this study aims to provide an opportunity for reflection based on a case study on food selectivity and sensory processing dysfunction in children with ASD, aiming to analyze the effectiveness of the Sensory Integration approach in the treatment carried out by an occupational therapist.

Case Presentation

Procedures and instruments of assessment and therapy

The study of this case is part of a research project approved by the Research Ethics Committee of the educational institution under opinion number 3.027.952 and entitled "Sensory processing and eating problems in children with typical development and autistic spectrum disorder in the age group of 3 to 10 years old''.

The evaluation was carried out in five meetings, two of which were with the parents and consisted of an interview and application of the Sensory Profile Protocol (Dunn, 1999) - Questionnaire for Parents - 3 to 10 years and a Food Guide, prepared by the first author. In meetings with the child, aspects of child development and sensory integration were evaluated. In the fifth appointment, the results of the assessment and the therapeutic plan were presented to the parents. The therapy reported here lasted 17 months, with periodicity of attendance being twice a week.

It should be noted that the Sensory Profile Protocol (Dunn, 1999) - Questionnaire for Parents - 3 to 10 years was not designed to assess and reasses the child, but can be used in each age transition, as its score differs from 3 to 10 years. Therefore, the reassessment in Sensory Integration is carried out based on the short and medium term goals established in the therapeutic plan. Regarding the Food Guide, it can be reapplied throughout the treatment, and it is possible to see the evolutions related to the increase in the food repertoire and its sensory aspects, such as texture, consistency, flavor, temperature, among others. In the national and international literature consulted, case studies similar to this one were not found, but the application of the profile in quantitative group analyses is already present in some national studies such as the one by Beltrame et al. (2018).

The Food Guide consisted of a diary, including: an inventory of all foods eaten by the child and objects he put in his mouth; list of favorite foods, preference related to texture, consistency, flavor and temperature; the feeding process from birth; table of types of food, quantity ingested, the child's attitude towards the food and the duration of the meal; respiratory, digestive, nutritional problems, oral motor competence; general sensory, tactile, olfactory, gustatory, visual, psychic component and food autonomy. Finally, parents should suggest which food they would like the child to accept.

The Sensory Profile (Dunn, 1999), a questionnaire consisting of 125 items in its main version and organized into three areas (sensory processing, modulation and behavior and emotional responses), was applied by the researcher in an interview with parents. They answered the frequency of each behavior (always, often, occasionally, rarely, never – corresponding likert scale from 1 to 5 points in the profile). After filling in the factor grids and adding up the items, the therapist identified the total gross score

and the summary obtained by the child considering their age group. The therapist performed the same process for all factors: Sensory search; Emotionally reactive; Low Strength/Tone; Oral Sensory Sensitivity; Inattention/Distractability; Bad record-taking; Sensory Sensitivity; Sedentary lifestyle and Perception/Fine Motor coordination. The therapist also analyzed the data per session of sensory processing, modulation, and behavioral and emotional responses. After analyzing all the elements, it was possible to obtain data on factors and specific sessions of the sensory items.

In addition to these assessments carried out with the parents, family and in-session footage, especially scenarios of eating at home, were used to analyze the case.

The intervention supported symbolic play, giving new meaning to the everyday food scenario, through characters and real and non-real foods. At this time, tactile stimuli were also offered through grains of rice, beans, corn, lentils, various types of raw pasta, among others. From the construction of the bond in playing, Sensory Integration therapy was introduced, which aimed to promote sensory experiences and modulation of sensory information, generating a better organization and adaptation of responses to sensory stimuli. This intervention was carried out in a specific room for sensory integration with suspended equipment, which enabled different directions of movement, such as balance, platform swing, hammock and Lycra; as non-suspended equipment, the roller (mobile tunnel), skateboard and cushions were used, providing opportunities for the integration of the vestibular and proprioceptive system. To stimulate the tactile system, resources with different textures such as foam, colored sand, gel balls, various flours, amoeba, textured clay, etc. were used in conjunction with the aforementioned equipment. It is noteworthy that both the equipment and the tactile resources were chosen by the child, respecting their limits, as the objective was to integrate the systems and not to desensitize. Tactile, vestibular and proprioceptive sensory systems were worked on in all sessions, due to their centrality in sensory integration.

The food scenario was also set up in therapy with individual food preparation and cooking groups.

Data analysis was performed by comparing responses to the sensory profile before and after the intervention; by the changes in the responses to the guide created by the therapist, in addition to the observations made possible by the analysis of eating scenarios and the different responses during the sessions.

Case history and initial evaluation

M., a five-year-old boy, was brought to the occupational therapy clinic with a Sensory Integration approach in June 2016 by his parents, who complained of food selectivity, because he refused most foods and no longer was able to sit at the table together with the family because he could not bear to see food.

Regarding the gestational history, M.'s mother stated that the pregnancy was planned, with full-term birth, with cesarean delivery. The parents say that they were afraid of having a child with ASD due to other cases in the family and that they underwent genetic tests that attested to a low possibility, which allowed them to decide to become pregnant. The pregnancy was peaceful, but M.'s first years of life were tumultuous, as the boy could not sleep all night, cried a lot and already had difficulty in interacting with parents and family.

According to the assessments carried out by the Sensory Profile Protocol – Questionnaire for parents – 3 to 10 years and the clinical assessment of sensory integration, it was possible to see what is described in Table 1.

Table 1. Results sensory profile-pre-therapy.

Summary by section	Classification
Sensory processing	
Auditory 29/40	Probable difference
Visual 25/45	Definite difference
Vestibular 43/55	Definite difference
Tactile 45/90	Definite difference
Multisensory 27/35	Typical performance
Gustatory 39/60	Definite difference
Modulation	
Sensory processing related to tonus and resistance 35/45	Definite difference
Modulation related to the position of the body in space 33/50	Definite difference
Modulation of movement affecting activity level 23/35	Typical performance
Modulation of sensory input affecting emotional responses 12/20	Definite difference
Modulation of visual input affecting emotional responses 11/20	Definite difference
Behavioral and emotional responses	
Emotional/social responses 46/85	Definite difference
Behavioral results of sensory processing 15/30	Definite difference
Items that indicate response threshold 11/15	Probable difference
Factor summary	
Sensory search 61/85	Probable difference
Emotionally reactive 41/80	Definite difference
Low strenght/tone 35/45	Definite difference
Oral Sensory sensitivity 24/45	Definite difference
Inattention/Distractibility 22/35	Probable difference
Bad record-taking 34/40	Typical performance
Sensory sensitivity 10/20	Definite difference
Sedentary lifestyle 19/20	Typical performance
Perception/Fine motor coordination 04/15	Definite difference

According to the results of the Sensory Profile, it was possible to see that M. had increased sensory responses (hypersensitivity), discomfort when washing and cutting his hair, could not stand the sounds of appliances as well as unexpected and loud sounds, had difficulty concentrating and staying in the same position during an activity and showed great irritation in activities that could get him dirty, not accepting textures of various foods.

From these results, it was possible to carry out an analysis of the items that directly influenced the diet, namely: the visual, vestibular, proprioceptive, tactile, oral (olfactory and gustatory) system and the sensory sensitivity and oral sensory sensitivity quadrants.

M. showed alterations in the visual system, including hypersensitivity, with alterations in modulation to the point of making him agitated and affecting his emotions, as well as verbal reactions like saying "yuck" and requesting to save food. This

agitation was reinforced by alterations in the vestibular system, which ended up reducing the level of alertness and concentration. M.'s parents claimed that he sought all kinds of movement and, in addition to food, other daily routines were affected.

Another altered system was the tactile system, as M. had difficulties in touching different textures and felt irritated with hygiene and daily activities, such as washing his face, cutting his nails and hair, brushing his teeth and going to the dentist. This tactile hypersensitivity was also present in the olfactory and gustatory avoidance of some flavors and odors. The changes in these systems were responsible, together with the others mentioned, for the limitation in M.'s feeding, with a decrease in experiences with food colors, textures, temperature and consistencies, which was evidenced in the Food Guide applied by the therapist.

M. had severe food selectivity, eating less than 15 foods alltogether, as he only ate carrot cake from a specific bakery, Kinder egg chocolate, milk lipstick, potato chips, McDonald's french fries, carton orange and grape juice and strawberry yogurt. The yogurt was consumed a lot until the brand changed the packaging label. Chocolate and potato chips were not offered daily. The other foods were interspersed in the morning, afternoon and night. When analyzing the preference in terms of texture, consistency and temperature, M. showed a strong preference for crunches, mild temperatures and sweet taste.

When analysing the dietary history, the parents stated that the boy was breastfed for up to three months, had a good food transition to pasty, accepting various baby foods, both fruit and salty vegetables, potatoes, beans, etc. When approaching one year of age, the transition to solids, rice, beans, meat began and the parents report that acceptance of these foods occurred at the beginning. M demonstrated refusal of these foods at 1 year and 3 months, accepting to eat only at the day care center; after 1 year and 6 months, he presented total refusal, both at home and at the day care center. Reflecting on what might have happened at this critical moment of food refusal, the parents stated that it coincided with a period when M. had behavioral therapy (ABA method) at home, in which a special educator forced M. to carry out all the orders in the sitting position, including eating even when he did not want to, which accentuated his refusal to eat.

M. had a good attitude in eating if he could only eat the foods mentioned, eating in variable amounts, asking for food when he wanted more, in a time that ranged from 5 to 10 minutes. M. ate these foods while walking or sitting on the couch, watching television or on the cellphone, and ate with his hands, as these foods did not require the use of cutlery. In relation to other foods, M. had a completely negative attitude, did not try to taste or get close and did not sit at the table to eat, making an expression of disgust and increasing agitation. The parents stated that they would like M. to eat meat.

Regarding playing, M. presented a very exploratory way of playing, performing more manipulation of objects, but without symbolic construction. At times, with the therapist's initiative, the boy presented pre-symbolic constructions, imitating everyday actions, such as giving food, bathing, putting dolls to sleep. These actions, according to Vendruscolo & Souza (2015), are the first pre-symbolic manifestations, in which the child experiences basic care with their body and starts performing with a third party, using dolls, characters, animals, etc. In addition, M. still needed to have the concrete/real object in playing, not being able to perform make-believe.

In home care, when the therapist summoned M. to play bathing the doll, emphasizing washing her hair, an action with which M. had difficulty, preventing the parents from doing it with him, M. took the doll and began to perform the scene at the sink, clearly showing in

his speech how much it bothered him and caused him pain to wash his hair. When M. mentioned that he needed to wash the doll's clothes, he refused to use any other object to as a washing machine, needing to use the machine at home and turn it on.

Therapeutic intervention

In view of these assessments, a Therapeutic Plan was structured with the parents and it aimed to encourage symbolic play, give new meaning to the food scenario and carry out sensory integration therapy to minimize the effects of DPS. The therapy took place in two weekly sessions, according to activities summarized in Table 2.

Table 2. Synthesis of the main sensory integration activities.

Activity	Description	Systems worked
Thematic playing	With miniatures in hygiene and food scenarios	Tactile and visual
Storytelling with drawings	Food themed, with miniatures, puppets, drawings and real food	Olfactory, tactile and visual
Body massage	Digital massage with deep pressure on the feet and hands, combining music with and without aroma	Auditory, proprioceptive and tactile
	With textures and vibration in the feet and hands with textured balls, sponges, vibrator with tips, accompanied by music	
Animal race	In position or in prone or cat decubitus, making a route while imitating an animal, sometimes with sandbags on its back	Vestibular, proprioceptive, planning and motor organization of behavior
Diving in the ball pool	Searching for objects after diving in the ball pool, getting engulfed in the ball pool by the therapist, falling into the upper poll and use of Bobath ball.	Vestibular, proprioceptive, planning and motor organization of behavior
Swinging, swinging	Sitting or prone on the platform swing in a straight and uniform movement with music, textured basin, rings, activity with theraband rope, among other playful strategies	Vestibular, proprioceptive, tactile, visual, motor planning and execution, behavioral change,
Swinging, swinging tightly	Various positions within the lycra with graduations of movement, intensity and direction, ropes and theraband, different weights and balls of different sizes; with motor activities and foam as a tactile resource.	Vestibular, proprioceptive, visual and tactile; motor planning and organization
Swinging, swinging, little fish	In the suspended hammock, the child was lying down and sitting, playing with different balls of different textures and weights, with foam and feet on the mat (when seated)	Vestibular, proprioceptive, auditory, visual and tactile.
Spinning, spinning, spin	In rolls, motor activities are performed such as rings, bowling and looking for food, and taking it to animals; with foam texture (after acceptance), used inside the roller and in contact with the whole body when moving with the foam.	Proprioceptive, vestibular, tactile and visual and favor planning and motor execution, regulating behavior.
Time to ride the car	Skateboarding in a prone position on a course with varied textures.	Vestibular, proprioceptive, visual, tactile, motor planning and organization
Magic dust	With warm water in the basin, explore aromas of teas and make bubbles with straws.	Olfactory, tactile and oral proprioceptive
What is that smell?	Eyes closed, several pots were offered with different aromas, such as salt, sugar, coffee, teas, mint, etc. He would smell them, and, blindfolded, identify the aroma, and try it out.	Olfactory, tactile and gustatory
Little cook	Cooking activity individually or in pairs with another child	Tactile, visual, olfactory and gustatory

It should be noted that the work with textures covered, gradually and according to M.'s choice, foam, bubble frog, sand dough, flour, sponges, clay, paint, gel ball, colored sand. These activities sought to integrate tactile and visual systems.

At three months, the parents observed the first evolutions in playing, with M. inviting them to play and using more of the wide variety of toys he had at home. After completing six months of therapy, the parents reported that M. was more relaxed with food, sitting at the table and visually supporting the foods his parents ate. They also reported that he were more curious and interested in the foods he had refused before, thus having a more positive behavior in the food scenario.

In the tenth month of therapy, M., after playing with vestibular and proprioceptive stimuli, sat down to play with raw pasta, rice and beans and corn, in which, together with the therapist, they played at making food for the clown and giving it to him in the mouth. He decided at that point to try the raw noodles spontaneously. The therapist proposed to prepare pasta and they prepared it by adding water, oil and salt; M. followed the changes in the consistency of the noodles during cooking. The noodles were made in a harder consistency that had initially attracted M.. M. ate all the noodles with plastic fork and standing in front of the table.

From that day on, in all sessions, M. asked to prepare the noodle food and ate every portion that was made. He also set up the table, chose the plates, cutlery and cups, combining the plate with the cup (orange plate with orange cup). From this, the therapist began to encourage other aspects that were requested by the parents, such as fine motor skills from the preparation of a menu on the chalkboard, on sheets, making the list of ingredients and the final product. The food scenario was expanded with the participation of different actors in therapy and in the family environment in which M. became a cook and interested in going to the supermarket to shop.

After the first noodle cooking sessions, the therapist added another type of noodle (colorful spiral, wholemeal) and white rice. From that moment on, M. would place two dishes, one of them of pasta of various types (spaghetti, wholemeal and spiral) and one of white rice.

After a year of therapy, M. was also accepting beef and chicken. He also started to accept pasta with sauce from a specific restaurant specialized in pasta, cheese pizza and hamburger with bread and cheese made by himself. Therefore, the initial family goals were achieved and there was a greater variation in textures, flavors and odors, as well as the expansion of salty food and participation in family meals.

Sensory reassessment after therapeutic intervention

Table 3 describes the results of the evaluation of the sensory profile after the intervention.

Table 3. Sensory profile results – post-intervention.

Summary by section	Classification
Sensory processing	
Auditory 30/40	Typical performance
Visual 31/45	Probable difference
Vestibular 48/55	Typical performance
Tactile 73/90	Typical performance
Multisensory 27/35	Typical performance
Gustatory 45/60	Probable difference
Modulation	
Sensory processing related to tonus and resistance 36/45	Probable difference
Modulation related to the position of the body in space 36/50	Probable difference
Modulation of movement affecting activity level 23/35	Typical performance
Modulation of sensory input affecting emotional responses 12/20	Definite difference
Modulation of visual input affecting emotional responses 12/20	Probable difference
Behavioral and emotional responses	
Emotional/social responses 46/85	Definite difference
Behavioral results of sensory processing 19/30	Probable difference
Items that indicate response threshold 15/10	Probable difference
Factor summary	
Sensory search 61/85	Probable difference
Emotionally reactive 41/80	Definite difference
Low strength/tone 39/45	Probable difference
Oral sensory sensitivity 33/45	Typical performance
Inattention/Distractibility 25/35	Typical performance
Bad record-taking 34/40	Typical performance
Sensory sensitivity 16/20	Typical performance
Sedentary lifestyle 19/20	Typical performance
Perception/Fine motor coordination 09/15	Probable difference

The results of this evaluation show that several behaviors have changed to typical performance.

Discussion

Considering the work carried out with M., it can be seen that the success of the therapy was due to the care in the gradual presentation of activities that allowed the evolution of the affected sensory systems: visual, tactile, proprioceptive, vestibular, auditory, olfactory and gustatory. We highlight the greater initial work with the visual and tactile systems, which allowed to reduce hypersensitivity and agitation towards food; first, at the representational level with toys, and then introduced into real foods.

Nadon et al. (2011) affirm the complexity of feeding through multiple sensory information. It is believed that the work of gradually integrating and modulating these systems allowed M to progress. In addition to the tactile and visual systems, the work

also reached odors and, later, flavors, creating curiosity in M. to spontaneously taste the dough raw.

Another fundamental factor was the integration between the vestibular and proprioceptive systems, which allowed to reduce M.'s motor agitation and, also, to increase his concentration, planning and motor coordination. The activities involving body swings and movements, integrated with touch and vision, were fundamental for him to be able to acquire the possibility of sitting at the table with his parents.

Finally, the auditory system was also worked on through the music, and the initial use of plastic cutlery was used to reduce his auditory sensitivity and make him accept the household appliance, which allowed M. to have a more varied diet in terms of texture, flavors and visual stimuli (Cermak et al., 2010).

This varied and gradually more complex combination of sensory systems during activities allowed M's progress. He lacked the capacity for sensory integration. This was explained by classical authors such as Ayres (1979) and Dunn (2001), who defined it as a neurological function with the potential to organize, interpret and modulate information coming from sensory systems and M. could have a more varied diet in terms of texture, flavors and visual stimuli (Cermak et al., 2010). This evolution allowed M. to change the course of his diet, which was mostly junk food, and to reduce food selectivity (Bellefeuille, 2014; Schreck & Williams, 2006) and restrictions on texture, temperature and food brand, among other typical sensory changes of children with ASD (Nadon et al., 2011; Leekam et al., 2007; Williams et al., 2000; Ahearn et al., 2001), as well as the restriction in the number of foods (Cornish, 1998), which often results from sensory defensiveness, especially tactile (Bandini et al., 2010)

M. showed difficulty in the transition from pasty to semi-solids and solids, evidencing the difficulty with food texture due to oral hypersensitivity, something predicted by Dunn & Tomchek (2007) and Dunn (1997). In M.'s case, there was hyperresponsiveness, with oral, tactile and visual defensiveness, which generated his severe food selectivity and resistance to oral hygiene as predicted by some authors (Cermak et al., 2010; Gabriels & Hill, 2007).

Sensory Integration therapy focused on food selectivity allowed the modulation of sensory systems, allowing the child to expand their tactile experience so that it would later be possible to visualize the effects on the oral tactile experience. Olfactory was also worked on before gustatory, as a way to prepare M. for new foods.

Finally, it is worth highlighting the contextualization of experiences in symbolic games that allowed M. to also evolve cognitively, expanding the game's repertoire in order to achieve symbolism and make-believe.

Conclusion

There was an evident relation between sensory alterations and food selectivity in the case studied, making it essential to understand the functioning of sensory systems and their interference in the eating process, as well as to outline a unique intervention plan to overcome bodily sensory limitations.

In addition, the analysis of the interaction that the child presented with food was essential in the case studied, because, for the child to allow himself to consume new food, it is necessary to carry out several steps such as interacting with the food, looking,

smelling, touching, tasting and eating it. The child needed to reframe the moment of feeding to feel safe.

Therefore, in this study, from the sensory integration intervention, it was possible to allow the child's sensorimotor evolution and this produced important effects on the feeding process.

The need to build an interdisciplinary diet protocol, as a suggestion for future studies, is highlighted, as it would allow the detection of sensory issues, oromotor skills, nutrition, among other important issues in cases of food selectivity.

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Author's Contributions

Pâmela Lima de Oliveira: conception of the study, data collection, analysis, interpretation and writing of the article. Ana Paula Ramos de Souza: participated in the idealization of the research and its orientation, writing and review of the article. Both authors approved the final version of the article.

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