

Some contributions to the study of childhood stuttering therapeutic process: considerations based on a case

Algumas contribuições para o estudo do processo terapêutico da gagueira infantil: considerações a partir de um caso

Algunas contribuciones al estudio del proceso terapéutico de la tartamudez infantil: consideraciones a partir de un caso

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Abstract

Introduction: Stuttering is characterized by interruptions in the flow of speech, such as blockages, prolongations, and/or repetitions of sounds, syllables, words, or phrases, commonly identified as atypical disfluencies, often accompanied by other manifestations, such as stuttering anticipatory gestures, negative self-image, tics and/or other bodily manifestations. **Objective:** to identify the main characteristics that marked the speech of a child who stuttered, reflecting on the moments of fluency and disfluency in the speech therapies, aiming at the study of the therapeutic process. **Method:** This is a case study with a qualitative approach, based on audio recordings of seven speech-language therapy sessions of a 6-year-old female child (PG), who had stuttered disfluencies and was being treated at a Primary Care Unit. The recordings were transcribed, analyzed and discussed based on the literature. **Results:** The repetitions were more prevalent; blockages occurred predominantly in plosive phonemes and prolongations, in vowels. Generally, stuttering was intensified when PG was placed in the author's position and decreased when she did not focus on her speech or her way of speaking, directing her attention to another activity

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Authors' contributions:

GOP: study conceptualization; data collection, analysis and interpretation; article writing and revising the final version.

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or discursive topic. PG showed a negative relationship with her own speech. The amount of stuttering manifestations decreased throughout the therapeutic sessions. **Conclusion:** The role of the therapist in the process when dealing with the construction of fluency, self-assurance and the deconstruction of the child's self-image of a bad speaker expresses the importance of speech therapy in children's stuttering.

Keywords: Stuttering; Child language; Speech therapy.

Resumo

Introdução: A gagueira é caracterizada por interrupções no fluxo da fala, tais como bloqueios, prolongamentos e/ou repetições de sons, sílabas, palavras ou frases, comumente identificadas como disfluências atípicas, sendo frequentemente acompanhada por outras manifestações, como gestos de antecipação da gagueira, autoimagem negativa, tiques e/ou outras manifestações corporais. **Objetivo:** identificar as principais características manifestas na fala de uma criança que gaguejava, refletindo sobre os momentos de fluências e disfluências nas terapias fonoaudiológicas, visando o estudo do processo terapêutico. **Método:** Este é um estudo de caso com abordagem qualitativa, baseado em gravações em áudio de sete sessões fonoaudiológicas de uma criança (PG) de 6 anos, sexo feminino, que apresentava manifestações gegas e encontrava-se em atendimento em Unidade Básica de Saúde. As gravações foram transcritas, analisadas e discutidas com base na literatura. **Resultados:** As repetições foram mais prevalentes; os bloqueios ocorreram predominantemente em fonemas oclusivos e os prolongamentos, em vogais. Geralmente, a gagueira intensificava-se quando PG colocava-se na posição de autora e diminuía nos momentos em que ela não focalizava sua fala ou seu modo de falar, dirigindo sua atenção para outra atividade ou tópico discursivo. PG demonstrava relação negativa com sua própria fala. A quantidade de manifestações gegas diminuiu ao longo do processo terapêutico. **Conclusão:** O papel do terapeuta no processo terapêutico ao lidar com a construção da fluência, da autoconfiança e a desconstrução da autoimagem de mau falante da criança expressa a importância da atuação fonoaudiológica na gagueira infantil.

Palavras-chave: Gagueira; Linguagem infantil; Fonoterapia.

Resumen

Introducción: La tartamudez se caracteriza por interrupciones en el flujo del habla, como bloqueos, prolongaciones y/o repeticiones de sonidos, sílabas, palabras o frases, comúnmente identificadas como difluencias atípicas, frecuentemente acompañada de otras manifestaciones, como gestos de anticipación de tartamudez, autoimagen negativa, tics y/o otras manifestaciones corporales. **Objetivo:** identificar las principales características manifestadas en el habla de un niño que tartamudea, reflexionando sobre los momentos de fluidez y difluencia en logopedia, para estudiar el proceso terapéutico. **Método:** Este es un estudio de caso con abordaje cualitativo, basado en grabaciones de audio de siete sesiones logopédicas de una niña (PG) de 6 años que presentaba manifestaciones de tartamudez y estaba siendo tratada en una Unidad Básica de Salud. Las grabaciones fueron transcritas, analizadas y discutidas con base en la literatura. **Resultados:** Las repeticiones fueron más prevalentes; los bloqueos ocurrieron predominantemente en fonemas oclusivos y las prolongaciones en vocales. Generalmente, la tartamudez se intensificaba cuando PG se colocaba en la posición de autora y disminuía cuando no se concentraba en su habla o en su manera de hablar, dirigiendo su atención a otra actividad o tema discursivo. PG mostró relación negativa con su propia habla. La cantidad de manifestaciones de tartamudez disminuyó con el proceso terapéutico. **Conclusión:** El papel del terapeuta en el proceso terapéutico cuando se trata de la construcción de la fluidez, la confianza en sí mismo y la desconstrucción de la autoimagen del niño como mal orador expresa la importancia de la terapia del habla en la tartamudez infantil.

Palabras clave: Tartamudeo; Lenguaje infantil; Logopedia.



Introduction

According to the guide for International Classification of Diseases and Related Health Problems – CID 11¹ proposed by the World Health Organization in January 2022, stuttering is recognized as a “Speech Fluency Development Disorder”, characterized by interruptions in the speech flow, prolongations and/or repetitions of sounds, syllables, words or sentences, commonly identified as atypical or stuttering disfluencies². Sometimes they are accompanied by avoidance or substitution of words in sentences¹. These breaks are uncontrollable, persistent and/or frequent¹. Stuttering can cause relevant impacts on social, family, educational, occupational and/or other important areas of a person’s life¹.

In CID-11¹, this disorder is described in axis 6 named “Neurodevelopmental disorders”, in sub-axis “Disorders of speech or language development”. When speech is developed and stuttering starts, countless factors set a relationship with each other which may interfere in the construction of a person’s fluency, such as family history, social environment and the subject’s linguistic and cognitive capabilities³.

In addition to disfluencies, it is essential to recognize that stuttering is also often accompanied by manifestations not related only to the subject’s speech. That is, other aspects may be involved, such as the anticipation of stuttering, avoidance (or attempt) of certain speech situations, as well as the construction of a negative self-image by the speaker and other bodily manifestations (such as muscle tension, head and/or limb movements, blinking of an eye, among others)^{1,2}.

Curti⁴ discusses linguistic issues related to stuttering speech. “The event of speech, even if stuttering, is the instance in which the mix of relations that produces units takes place, revealing that the speech is subject to the laws of internal composition of speech”^{4:104}. Moreover, Curti points out that sometimes speech therapy reduces the dimension of this phenomenon by focusing solely on the descriptions of manifestations in the subject’s speech in search of regularities⁴. According to the author⁴, the strangeness caused by stuttering speech is due to the perception of the subject’s speaking difficulty, which causes the units of speech to be undone and redone, and also because there are times when this same person does not stutter. This

completely breaks any theories that the speaker cannot produce certain sounds or words due to an articulatory dysfunction.

Considering that on the basis of the different definitions of stuttering the aspect that is always emphasized is a possible “deviation” from fluency, it would also be essential to reflect on which characteristics would define a person considered “fluent” and what would differ “common disfluencies from atypical/stuttering disfluencies”⁵. It must be noted that many authors use the term disfluency as a synonym of stuttering, although the presence of disfluency does not necessarily indicate a speech disorder⁵.

According to Friedman⁶, society has an idealized view that fluent speech, that is, speech with no discontinuities, ruptures and/or repetitions is a pattern (which is not true), so that breaking this pattern can lead to stigmatization, when it is broken by disfluencies. Moreover, other scholars^{2,5} point out that fluency is dynamic and it is gradually acquired during the use of speech in real circumstances of interaction. Therefore, fluency can be affected by several reasons, which, in the opinion of these authors^{2,5}, may involve the mastery of rules of languages, orofacial motricity, discursive skills and the pragmatic environment.

The fact is that speakers considered fluent also display common disfluencies in speech due to the unpredictability of linguistic functioning, linguistic uncertainties regarding the pronunciation of a word or construction of a sentence, familiarity with the topic in question and even emotional conditions, such as nervousness, sadness or anxiety, which may be affecting these speakers³. Thus, several factors can account for the occurrence of the typical disfluency of human speech and even so the speakers will not be considered stutterers³.

As it is well known, typical disfluencies are also common in the process of language acquisition. The interactionist proposal, in which interaction is the necessary condition to acquire speech (seen as a process of linguistic and subjective change), affirms that children move through three positions in their path to become speaking subjects⁷. We observe that, in the first position, the child’s speech seems to be submitted to the speech of other people⁷. In the second position, mistakes appear in greater quantity in the child’s speech, showing a change in the child’s position, particularly in relation to speech, in addition to

impermeability to corrections made by adults.⁷ The third position is marked by reformulations, hesitations and self-corrections made by the child itself in its speech. Thus, the time disfluencies appear, which can be considered typical, corresponds to the characteristics of the third position of the child in the process of speech acquisition. However, the proposal of the three positions of the child in the acquisition process does not follow a specific chronology and, in fact, presents itself as an alternative proposal to the notion of development.

In the view of Schiefer and Arcuri², the disfluencies that develop naturally in the process of speech acquisition, take place around the age of three and are related to linguistic immaturity and to the phase of cognitive development. However, the authors² do not analyze them in the light of theories of speech acquisition.

The fact is that disfluencies can increase as the child becomes aware of its difficulty in fluency¹. Friedman's researches^{6,8} show that, before displaying any stuttering disfluencies, the child has probably undergone negative interventions relating to common speech disfluencies, or else the child has been inserted in a communication environment in which the conditions were not favorable for the child to express in a comfortable way. Taking this into consideration, these disfluencies that are considered common in speech development, such as difficulties in formulating a sentence, repetitions or hesitations when speaking, can become a suffering stuttering.^{6,8} In short, the child internalizes that it is not a good speaker and, as a consequence, cultivates stress to face the need to "speak well" and anticipates that it will stutter even before speaking^{6,8}. This way, the stutterer is in constant conflict among speaking and exposing his/her failure, or keeping quiet and dealing with the subsequent frustration of not expressing what he/she wishes⁹.

Another important point that must be emphasized and recognized is that the interlocutors (parents, teachers, friends, family) can be one of the triggers of the process of suffering in the child's speech⁶. In a certain way, this justifies the work of the speech therapist to instruct caregivers and other people involved in the child's context. Practices adopted by interlocutors, such as looking away and avoiding eye contact or not respecting the change of shifts in the dialogue, interrupting and completing the person's speech before he/she finishes it, can lead the child to abandon its place

in the dialogue and negatively impact the development of the child's self-confidence as a speaker and, consequently, its psychic constitution, which can lead the child to suffering³.

Considering the great relevance of the topic and seeking to contribute to the study of the speech therapy process, this article aims to identify the key characteristics of the speech of a child who stuttered, reflecting on the child's times of fluency and disfluency.

Methods

The research carried out is qualitative, based on the clinical case of a 6-year-old girl. The patient's data was selected for the present study in view of the evolution of the case, which was assisted at a Basic Health Unit (UBS) in Campinas, a city in the state of São Paulo. The data were collected throughout the routine of appointments at the Basic Health Unit in the second Half of 2021 by a Speech Therapist graduation student from State of Campinas under supervision of the head professor.

The materials used in the study were collected between September and November 2021. In order to follow up on the therapeutic process of the case, the child's guardian signed the Term of Informed Consent (TCLE), authorizing sound, image and/or photo recordings of the assessments and/or care provided, for the purpose of case study and/or research, respecting the confidentiality and privacy of the patient.

Next, the project was submitted to the Ethics in Research Committee (CEP) due to the change in purpose of use of recordings previously made and the need to use data from the anamnesis and medical records. The study was approved by the Ethics Committee under CAEE number 59467622.4.0000.5404 on August 10, 2022. The child's guardians signed another TCLE and the patient herself signed the Term of Free Informed Agreement (TALE). Thus, the seven audio recordings of the speech therapy sessions were analyzed. They were stored in the external HD of the head researcher, where they will be kept until December 2023.

These audio recordings were transcribed literally and described in full records, which portray the situations that occurred during the sessions, such as jokes and attitudes of the participants. The transcriptions are of the broad type, that is, based

on the standard writing of the Portuguese language, of clinical scenes of speech therapy, according to conventions shown in Chart 1. Stuttering disfluen-

cies were considered prolongations, blocks and repetitions of phonemes, syllables, words and/or phrases.

Chart 1. Convention adopted in the transcriptions.

:	Prolongations of sounds (the two points can be repeated depending on the duration of the extension)
/	Repetition of segments, such as syllables, words, or phrases
bold letter underlined	Sound blockage
...	Short pauses
(...)	Indication that speech has been interrupted at a certain point.
(xxx)	Unintelligible parts
'Single quotation marks'	Informant metalanguage
"Double quotation marks"	Literal quotations from texts/direct speech Ex: he said "will you?" and I said "I will"
(Word or phrase in parentheses)	Hypothesis about what was heard/uncertainty during the transcript as to what the speaker said
((Word or phrase in double parentheses))	Descriptive comments of the transcriber
[Word or phrase in brackets]	Overlap, simultaneity of the voices of the interlocutors

Data analysis was performed considering the dialogical processes, the context of the therapy situations and the strategies used with therapeutic purposes. The discussion was built from the interpretation of the selected discursive excerpts (named episodes), and from observations considered relevant, insofar as they support and constitute the theoretical foundation of this article.

Books, theses and scientific articles that address the theme and/or provide input for the development of this study were used. The theoretical basis was obtained from a search in the PUBMED, SciELO and Google Scholar databases, with the following descriptors: stuttering; therapy and child stuttering; treatment and child stuttering; stuttering and bullying; fluency and prosody. Articles in Brazilian Portuguese and English were selected.

Presentation of the clinical case

PG, a 6-year old girl, started to display speech disfluencies at the age of 2 years and 7 months, according to data collected in the baseline interview with her father. According to the literature^{2,7}, at this age, disfluencies could still be considered typical of the child's speech development phase.

However, the manifestations remarked in PG's speech continued and increased over the months. According to data from the child's medical record, she started with one 30-minute weekly session of speech therapy in April 2019, at the age of 4. The sessions were provided by the mandatory discipline of the Speech Therapy course of the said university, which is taught at a Basic Health Unit.

PG was born at full term with no special events and suitable weight for her gestational age. Her neuropsychomotor development was typical. She started to walk at 12 months of age. She has an age-appropriate fine motor development. She likes to do manual activities such as drawing, painting, cutting and pasting.

Regarding the process of speech acquisition, according to data from the medical record, the first word PG said was "mommy", at 9 months of age. At 1 year and 6 months she would have produced "sentences" without difficulties. As described in the medical record, the child's hearing thresholds were within the normal range. According to the anamnesis, the child's father related the onset of stuttering manifestations to changes in family dynamics due to her parents' divorce. PG has three older brothers.

Due to the COVID-19 pandemic, the sessions were discontinued in March 2020. They were re-

sumed in August 2021 with a new speech therapy student, identified in this study as T. According to PG's father, her stuttering got significantly worse during the time with no speech therapy.

The purpose of the sessions was to provide spaces for spontaneous speech, to promote awareness of PG's speech capacity, working to consolidate a positive self-image and promoting the awareness that disfluency can occur in the speech of any speaker. To achieve these objectives, playful resources were used such as: drawings, construction of schemes with figures, games such as "Who

am I", "A word, a song" and creation of stories about a character who stuttered.

In July 2022, disfluencies were already rare in PG's speech, who was discharged from speech therapy in October of the same year.

Results

PG displayed atypical disfluencies such as blockage, prolongation and repetition both of syllables and words in all sessions. Table 1 shows the number of occurrences of each type in each session.

Table 1. Number of prolongations, blockages and repetitions per session and in the data set.

SESSÃO	PROL.		BLOQ.		REP.		TOTAL	
	n	%	n	%	n	n	%	
1	7	15,9	6	13,6	31	70,4	44	
2	14	38,9	2	5,5	20	55,5	36	
3	36	35,3	17	16,7	49	48,0	102	
4	20	46,5	8	18,6	15	34,9	43	
5	17	37,8	11	24,4	17	37,8	45	
6	1	7,7	6	46,1	6	46,1	13	
7	5	31,2	7	43,7	4	25,0	16	
TOTAL	100	33,4	57	19,0	142	47,5	299	

Legends: (PROL.) Prolongations; (BLOCK.) Blockages; (REP.) Repetitions; (n) quantity in Arabic numerals.

From the quantification and analysis of stuttering disfluencies, it was possible to verify that: repetitions have higher prevalence, blockages occur predominantly in occlusive phonemes and

prolongations occur predominantly in vowels. In addition, the amount of stuttering manifestations in PG speech decreased over the course of the sessions.

Table 2. Number of prolongations per mode of articulation of phonemes.

SESSION	Prolongations					
	Vowels	Occlusives	Fricatives	Nasals	Vibrants	Lateral
1	5	0	2	0	0	0
2	9	0	4	0	1	0
3	29	0	7	0	0	0
4	18	0	2	0	0	0
5	13	0	4	0	0	0
6	1	0	0	0	0	0
7	5	0	0	0	0	0
Total	80	0	19	0	1	0

Table 3. Number of blockages per mode of articulation of phonemes.

SESSION	Blockages					
	Vowels	Occlusives	Fricatives	Nasals	Vibrants	Lateral
1	2	3	1	0	0	0
2	0	2	0	0	0	0
3	7	9	0	1	0	0
4	2	4	0	2	0	0
5	6	4	0	1	0	0
6	1	4	0	0	0	1
7	1	5	0	1	0	0
Total	19	31	1	5	0	1

Table 4. Number of repetitions per phonemes, syllables, words and sentences.

SESSION	Repetitions			Total
	Phonemes or Syllables	Words or Phrases		
1	25	6		31
2	18	2		20
3	43	6		49
4	14	1		15
5	16	1		17
6	5	1		6
7	4	0		4
Total	125	17		142

When analyzing the activities performed in each session from Chart 2, we can notice that stuttering is not related only to specific topics or themes.

Chart 2. Length of each audio recording of the speech therapy sessions and description of the activities performed.

SESSION	LENGTH	ACTIVITIES PERFORMED
1	13:04:00	Construction of a game about PG's qualities and defects using figures
2	27:51:00	Continuation of the previous game, but with issues more focused on aspects of communication, and game "Who am I"
3	34:42:00	Game "who am I" describing characteristics of different characters
4	36:54:00	Development of a made-up story about a character who stutters
5	30:23:00	Continuation of the previous story
6	26:17:00	Game "One word, one song"
7	14:39:00	Paper folding to be given to families as a year-end gift

Next, there are transcripts of speech excerpts taken from dialogues between the child and T to illustrate the analysis, demonstrating the relationship of the child with her own speech, the discursive positions that it occupies at times of greater fluency and of greater stuttering manifestations along the seven sessions of speech therapy, as well as the evolution of the therapy.

In session 1, which is the third therapy session after the interruption due to the pandemic, the building of a game was proposed, named “mental map” using a sheet of paper to illustrate the child’s favorite activities, her qualities and defects. Along the activity, PG had times of fluent speech and also manifestations of stuttering. PG’s speech was fluent when uttering short sentences. However, she stuttered many times along the entire session when she spoke about herself (episode 1) and expressed her wishes (episode 2). Moreover, it is noticeable that the child has difficulty to recognize and describe her qualities.

Episode 1. Session 1: presence of blockages, repetitions and prolongations when speaking about herself.

PG: Because I I am am bored to to study.

T: Bored? Oh, my God!

PG: And my hand and and and **hurts** to keep writing my name ... stiff.

Episode 2. Session 1: presence of blockages, repetitions and prolongations to express her wills.

PG: What I what I what I want is: to **do**:/do it, ok

T: What do you want to do?

PG: give me, give me

PG: You will see

The stuttering increased when PG told an episode in which she fell down in the ballet lesson (episode 3). She had all types of disfluencies in one single sentence.

Episode 3. Session 1: presence of blockages, repetitions and prolongations when telling a negative episode that took place in the ballet lessons.

T: What are you not good at? You didn’t tell me.

PG: I’m.. I’m terrible at ballet.

T: Ballet? Do you do ballet?

PG: I I tri/tri/ried, I ha I/ I/ I/ I had a course in/ in/in my s:::chool and I/ I fell down.

In sessions 2 and 3, the game “Who am I” was used with different characters, aiming at the

description of the characteristics of these subjects. PG performed the proposed activity with great enthusiasm, even though she had episodes of stuttering disfluencies throughout the session while describing the characters. Again, she was more fluent in producing short sentences while drawing the character of the game and when she introduced variations in prosody (episode 4), modulating her voice to a higher pitch. This was a spontaneous resource identified in the child’s speech at various times while performing the activities.

Episode 4. Session 2: PG modulating her voice to a higher pitch with variation in the speech melody.

PG: I make it hard. Look at the size of the sun! look here the size of the sun! ((prosodic variation: voice modulation for a higher pitch))

T: Are you going to draw even the sun? You must draw the character.

PG: but, why, the sun is prettier! ((prosodic variation: voice modulation for a higher pitch))

[...]

PG: It is getting very pretty ((prosodic variation: voice modulation for a higher pitch))

PG: It is getting cool (xxx) ((prosodic variation: voice modulation for higher pitch))

[...]

PG: I want a black pencil, wait((prosodic variation: voice modulation for higher pitch))

Stuttering manifestations were observed at the beginning of the sessions, usually When T greeted the child and asked how she was, how she was doing at school (episode 5) and if there was anything new that she wished to tell (episode 6), that is, When a discursive topic was introduced whose reference was the girl herself and her feelings.

Episode 5 session 2: presence of repetition na prolongations When asked about her school.

PG: (xxx) Eh th:::e children were there and I I sta:y home

T: I see. What good things have you been doing at school? What are you learning?

PG: I I I learned what a sy:ltable is

T: Wow!

PG: A bit of a word

T: Very well. Soon you will be learning how to write. How nice!

Episode 6. Session 3: presence of blockages, repetitions and prolongations when telling she was going to the beach.

PG: j:::the :::other day I :::I am am going to the beach

the other day
 T: Really? Wow, how wonderful! Are you going on the holiday to spend the weekend?
 PG: I I don't know, right
 T: That's good! Wow I miss going to the beach. Have you been to the beach already? Or will it be your first time?
 PG: Eh ::: I have been **to eh to** the beach **with before the pandemic**
 T: Ah, but that was long ago, right? Wow, I can't even remember how the beach is because it's been I long time I haven't been to the beach
 PG: Eh eh eh my godmother wen went to the beach

Still in session 3, PG was asked to make a drawing that represented what the role of the therapist would be and the reason that made her come to the sessions (episode 7). In this episode, PG demonstrated shwa was aware of her stuttering was uncomfortable with her way of speaking, showing the impact of the people around her noticing her disfluencies.

Episode 7. Session 3: presence of blockages, repetitions and prolongations when speaking about her speech therapist and the reason that makes her come to the sessions.

T: I'd like to know what you know about your speech therapist [...] what do you think she does?
 PG: Eh eh the therapist he:lps eh eh stop stuttering
 T: Is that why you come to the therapist?
 PG: Yes
 [...]
 T: And would you like to stop stuttering, PG?
 PG: Huhum
 T: Is it something that bothers you or you don't care?
 PG: eh eh I **know +that** my friends sa/sa/ sa::y that I stutter a lot
 T: Well, but not always [...]
 PG: No, it's eve::ry day that I stutter.

Sessions 4, 5 and 6 were dedicated to creating a comic book about a stuttering whale. In this situation, PG showed fluency in her speech in much of the dialogue, especially when she was enthusiastic commenting on the characters and while painting the pictures of the story (episode 8).

Episode 8. Session 5: PG's speech is fluent when performing the painting activity.

PG: Look, and the hair is looking good
 [...]
 PG: and she will also have shadow
 T: Shadow?
 PG: Yes, on her eyes

T: Wow, and lipstick?
 PG: She will have lipstick too
 PG: Look, it is perfect already, look
 [...]
 T: It will be purple and green eyes
 PG: Green? Strange to be green.
 T: Haven't you ever seen someone with green eyes?
 PG: No, never.
 PG: The lipstick is red!
 T: Wow!
 PG: A detail is missing.
 T: What teacher is this that goes to school with red lipstick on? (laughter)
 PG: Look here! And this should be the cover.
 T: Make-up tutorial!
 PG: This should be the cover!
 T: Should she be the main character?
 PG: Look here how it would be. Pretty.
 T: And the little shell? What color will you paint the detail?
 PG: Wait. You should have skin color, but you don't. Ah, yes, you do! You have ski color!
 T: That is salmon color.
 PG: So, it is skin color.
 T: No, skin color includes several skin colors.
 PG: Than I'll paint it salmon color.
 T: (laughter)
 PG: It will look nice, won't it?

When T said that the whale of the story stuttered, PG did not react (she seemed not to be affected by the fact). She just continued painting the characters and subsequently seemed to stray away from the subject (episode 9). During the whole construction of the story, PG did not talk about this topic. After finishing the story, T read the final text, and PG also made no comments on the stuttering, nor on the moral (or meaning) of the story (episode 10).

Episode 9. Session 4: T points out that the character of the story stutters and PG avoids the subject.

T: Oh, there's one thing I didn't tell you about this whale.
 PG: What?
 T: About the whale's story
 PG: Tell me
 T: This whale...she stutters
 PG: (wow) (xxx) ((at that moment PG was painting a drawing, it is not possible to deduce what she means by that expression.))
 T: And we'll tell the story based on that.
 Contextual data: time of silence.
 PG: Hummm, I made a mistake ((speaking about the drawing))

Episode 10. Session 6: PG also made no comments on the stuttering or the moral of the story of the stuttering character.

T: And then comes the pretty whale, all sad, poor thing, saying “I feel terrible when people do not understand me and laugh at me and at my speech. I don’t stutter on purpose.” Then the whale says “I’m lucky that my family and friends love me and respect me. I feel very happy when I can manage and they listen to me and understand me”

PG: Wow, **what** long nails you have, huh?

T: Cutting nails, right? ...

T: And to end it all, “for children that stutter like I do: it is no problem to stutter. Don’t give up speaking and don’t give up your dreams. You can be what you want to be!!” and that’s it.

PG: And is there is there anything else to do?

T: : Yes, I’ve brought more things for us to do!

PG: Then go ahead, get them!

Still in reference to the construction of the story, PG stutters when she puts herself in the position of another person, that is, when she assumes the voice of a character, using direct discourse, to simulate the speeches of the characters (episode 11). In addition, during the sessions, it is noted that it is not possible to claim that the manifestations of stuttering increased during all the episodes in which PG narrated the story or exposed what she wanted, because there were times of fluency also in these circumstances, although less frequent (episode 12).

Episode 11. Session 5: PG stutters when she speaks as if she were a character in the story, assuming its voice and place in the dialogue.

T: And now, what are the whale’s parents going to say?

PG: Wait, she will say “Hi, eh I/I I love my daughter very much **and** I hope I won’t die to see her.”

[...]

T: What is she going to say?

PG: “Hello, friend, how are you?” **and** she she says ‘fine’, **and** she asks “can you **stay**: at my home for the night? “I going to talk to my mother “

Episode 12. Session 5: time of fluency when PG exposes her wish to T.

PG: And the mermaid will stay here, look, and this will be the page of the shark, OK?

In addition to the playful activities, offering positive feedback to the patient about her evolution through a conversation and a card with a message was also a way used to reinforce self-confidence and motivate the continuity of the sessions (episode

13). In such a situation, PG remained silent while listening to the compliments and only agreed at the end that she was making progress.

Episode 13. Session 6: positive feedback provided to PG by T.

T: I brought something to give you, which I made myself, because you have not missed a phono session since we started and you are evolving very well! [...]

T: I wrote “Congratulations!” to you

PG: Oh my kitten! ((prosodic variation: modulation of the voice to a higher pitch))

T: I put a kitten because I remembered you have a kitten! Then I wrote “You attended all the sessions, performed all the activities proposed and are evolving a lot.” [...]

T: I wanted to talk to you about it, how are you feeling outside of here? Do you think you’re getting better or do you think you’re the same?

PG: I think I’m improving.

T: For me you are super well! Super well, super well! [...] So, I want you to know that you need to remain confident that you speak very well. Here we talk, I understand everything you say and there is no problem if we stutter! I stutter too from time to time. Everyone stutters! [...] And that’s normal! No problem! We shouldn’t stop talking just because of that.

T: All right? Is everything OK? Is there anything you want to tell me? Anything that is bothering you or making you sad?

PG: ((shakes her head meaning no))

Later on, still in session 6, the game called “One word, one song” was used. The goal of this game was to sing a song from a chosen word. On this occasion, PG did not stutter while singing the songs (episode 14). As seen in several other sessions, PG did not stutter while humming not even when she was inventing the lyrics and melody (episode 15).

Episode 14. Session 6: PG and T sing during the game “One, word, one song”

PG: the frog woman must be inside making things for the wedding ((humming))

[...]

T: Very well and now I’m going to think of a song with s frog different from yours.

T: The frog does not wash his feet, does not wash because he does not want to, he lives there in the pond, he does not wash his feet because he does not want to. What cheesy smell!! ((humming))

PG: [his feet, he does not wash them because he doesn’t want to, he lives in the pond, he does not

wash his feet because he doesn't wat to. What cheesy smell!] ((humming))

Episode 15. Session 5: PG improvising a song during the game "One word, one song"

PG: get off my finger, off, off, off, thing off my finger, off, off.

PG: Let's paste, let's paste, let's paste, let's paste, let's paste, it fell, my friend, fell, my friend, fell my friend ((humming))

PG: It fell my friend, fell, fell, fell, fell, my friend ((humming))

In the seventh and last recorded session, PG maintained her fluent speech for most of the session (episode 16) while performing a manual folding activity.

Episode 16. Session 7: PG's speech was fluent during most of the session.

PG: Will you cut this for me? It's too much

PG: What are we making? A dog?

Discussion

The purpose of this study was to identify the key characteristics that marked the speech of a child who stuttered, reflecting on the times of fluency and disfluency during speech therapy.

For the clinical assessment of stuttering, there are quantitative and qualitative classifications of disfluencies, which can be considered as parameters for some authors. The most commonly used measures to diagnose and characterize stuttering severity are: mapping the typology of disfluencies and the frequency with which atypical disfluencies (blockages, repetitions and prolongations) occur in the person's speech; this is named the speech discontinuity index².

According to Andrade¹⁰, blockage takes place when the phonoarticulatory organs are positioned to produce a certain sound; however, the production takes time to happen and, when it happens, it includes great muscular effort that the listener can notice. According to Vischi¹¹, this phenomenon occurs predominantly in words that start by occlusive consonants or vowels. As shown in table 3³, this was also verified in the present study. In occlusive phonemes, the muscular strength is even more evident considering that, to produce these consonants, the articulators momentarily obstruct the air passage for the explosion generated in the

release of the occlusion. On the other hand, during the seven sessions, the prolongations are usually noticed in vowels and fricatives and at no time in occlusives. As it is well known, fricative phonemes are characterized by the constriction of the passage of continuous air flow through the vocal tract, thus facilitating their prolongation.

On the other hand, the repetitions observed in PG's speech are not related to phoneme classes, since they occurred as reproductions of segments identified as phonemes, syllables, words and even part of sentences. The results of this study (table 4) showed that repetitions of phonemes and syllables were more frequent in stuttering and, in general, occurred more than once, with more than one repetition, such as, for example, "sp/sp/a::peak", as also found in the works of Juste and Andrade¹² and Meçon and Nemr¹³. When a more pondered position about linguistic studies adopted in this research, we understand, same as Lemos^{7,14}, Saussure¹² and Other interactionist authors (such as Madonade^{16,17}), that any unit of speech of any extension, may take a place in the syntactic chain in speech. This way, it is considered that the separation of levels of linguistic analysis is only an illusory, or didactic, division. When we speak, all levels of linguistic analysis are mobilized at the same time. It is essential to highlight that it is a consensus in the literature that only the characterization of the type of disfluency is not sufficient to determine whether or not the subject runs the risk of developing stuttering. It is also necessary to analyze the effect produced by stuttering speech on the subjects themselves, on the speech and on other people².

Carneiro and Scarpa¹⁸ point out two important characteristics of stuttering speech: heterogeneity and unpredictability, that is, any manifestation in the speech of each individual is unique and there is no way to control this. These characteristics are related to the dynamic relationship of the subject with his own speech, with the language and with the other people. Therefore, we have an individual who, when speaking, is faced with phenomena such as hesitations, repetitions, pauses, blockages, insertions of sounds foreign to the language – which can happen in speech at any time, without the person being able to control, generating stress in the body of the speaker and the listener¹⁸.

During the analysis of the excerpts of dialogues between the child and T, we observed the existence

of discursive positions that have the potential to increase either fluency or stuttering¹⁹. This way, it was possible to observe a significant reduction in stuttering at times when the child spoke while paying attention to another activity whose focus was not on dialogue. See example in episode 8: the child's focus was not directed to her speech or to her way of speaking. This fact may be related to fewer attempts to avoid stuttering, which consequently result in a decrease in muscle stress and manifestations of stuttering²⁰.

According to Costa et al.²¹, a mechanism that can also help improve fluency is to make changes in the motor patterns of speech production. In order to compare the fluency performance of stutters and fluent speakers in different speech tasks, the authors²¹ conducted a comparative study between the performances of both groups in three different tasks: monologue, automatic speech and singing. The tasks without self-expressive components, that is, the singing task and the automatic speech task differed from the monologue task, in both groups. The greatest speech fluency occurred when the content was already previously defined and the rhythm of the speech was melodically marked²¹. This research showed that PG had times of fluent speech during automatic speech tasks, such as counting numbers from 1 to 20, and also while singing, regardless of whether it was a well-known song (episode 14) or an improvised song (episode 15).

Still in connection to the topic, Costa et al.²¹ point out that the improvement in fluency during the utterance of a pre-established sequence of speech, such as the months of the year, days of the week or counting of numbers, is due to the reduction of the linguistic and motor demand for oral production, allowing better brain organization of linguistic and motor functions of the stutterer. As to singing, the literature suggests that the articulation speed is decreased, the phonation interval is increased and the rhythm of the music provides clues to the time of each syllable, favoring greater fluency²¹.

For some authors^{21,22}, another factor that enables the improvement of speech fluency is prosody, a suprasegmental component of speech which enables the individual to express paralinguistic information, such as intention and emotional state. Prosody occurs by pitch, length, speed, accentuation and especially by intonation. All of them are used as cues by the speech motor control system, assisting in fluent speech^{21,22}. In the present study,

the modulation of this suprasegmental component was also identified several times in PG's spontaneous speech. When the child used a modulated voice for a higher pitch with melodic variations and vowel prolongation, fluency was facilitated, as observed in episode⁴.

As Silva pointed out²³, the place that the subject occupies and the conditions of production are determinant to characterize the subject's 'discourse'. When we survey the discursive positions that increase stuttering, we see the episodes in which the focus is on dialogue, when the child talks about itself, about its feelings and speech (episodes 1, 2, 3, 5, 6 and 7). So, would the main problem of stuttering lie in the fact that the child assumes the position of author of its own speech? According to the therapeutic process on which we focus here and the literature, it is considered that placing one in the position of author of one's speech can be a painful task for the stutterer, considering that he/she anticipates difficulty and mistakes¹⁹. Curti⁴ agrees that in episodes in which the speaker finds himself in the need to assume the position of author, his body gets fixed in the position of a stutterer and the speech fails.

However, it is not possible to affirm that the manifestations of stuttering will decrease only when the child is concentrated in the performance of another activity that would occur at the same time as the speech. After all, some of the characteristics pointed out in the descriptions of stuttering and identified in these subjects are precisely the intermittency¹, that is, the variation of fluency in different times and situations, heterogeneity and unpredictability¹⁸. Thus, even if there are situations in which the child is usually more fluent, it is not totally sure that this can always occur, because disfluencies can also appear when the child is concentrated in another activity, even if less frequently.

As seen in episodes 2 and 5 and during all speech therapy sessions with PG, there are times of co-occurrence of stuttering speech episodes and non-stuttering episodes in the same dialogue. If we consider that fluency is the result of the coexistence between flow and disfluency, within the individual and singular patterns of each speaker¹⁹, the conclusion is that even speakers considered fluent are susceptible to display disfluencies in speech.

Talking about stuttering can be a hard task for the stutterer, particularly in the case of children. Throughout the construction of the story of the

character (whale) who stuttered, PG made no comments nor expressed reactions about the stuttering whale, and even avoided the topic a few times. She was also succinct in expressing an opinion about her own therapeutic evolution and remained silent when T asked if there was anything PG would like to tell: “T: *Is anything bothering you or making you sad?*” (episode 13); PG just shook her head to deny.

In stuttering, silence can be used as a method of self-protection. The stuttering child often has something to say and wants to express it, but it guards itself in silence so as not to touch such a complex subject that impacts life so much out of shame and/or by facing the other person as someone who is there to analyze its speech^{19,23}. In addition, sometimes the anticipation of stuttering makes the subject predict that he can or will stutter and he chooses to avoid speaking freely²³.

During the sessions, the therapist’s posture was one of attentive listening, providing space for PG to place herself as the author of the speech by means of playful strategies. Therapeutic listening is determinant and goes far beyond merely listening; it is about interpreting the singularities of each subject, showing how it should be to build the task of being a speech therapist²⁴.

In this research, PG also demonstrated a negative relationship with her own speech, a characteristic already expected according to Friedman⁸, in which the subject cultivates the idea that he speaks poorly and feels frustrated that he cannot speak otherwise. In episode 7, of session 3, even when the interlocutor, T, said that “it is not always” that PG stuttered, the child disagreed, that is, she focused only on the instances she stuttered: “PG: it is *eve::ry day that I stutter*”, besides stating that her friends say she stutters a lot. It is common for the stutterer not to believe in compliments received, even if his/her fluency is clear to the interlocutors, such is the impact of the manifestations on the life of the stutterer¹⁹.

Azevedo et al.²⁴ state that stuttering is a multidimensional phenomenon interconnected with biopsychosocial factors. Therefore, it is essential to reflect on the repercussion of the judgment of society on a stutterer and what would be the role of speech therapy intervention. To free the child from suffering should be one of the key objectives of the therapeutic process, in the author’s view²⁴.

According to Azevedo et al.²⁴, speech therapy should act on the resignification of the concepts of

fluency and disfluency together with the stutterer. Promoting awareness of disfluency as a constituent of the speech of all speakers, destroying the myth that there is a pattern of speech fluency, is a key part of this process. In the case of children, this goal should be planned in a playful way. Through play, it is possible to demonstrate that stuttering is only a time of speech, that the child is able to convey the desired message, letting go of the worry with the way the message will be conveyed²³.

Still in episode 7, when exposing the reason for attending speech therapy, PG made it clear that she recognized her stuttering as a speech difficulty and the desire to end it. Silva¹⁹ claims that this inadequate conviction that there would be an absolute fluency of speakers, which is an illusion, can lead to losses in the individual’s speech experiences and the self-image of a poor speaker would become part of the conception that the speaker has of himself as a person, which may cause the appearance of muscle stress when speaking, leading to what the author calls stuttering suffering. As the therapeutic process progressed, in session 6, episode 13, PG seemed to deal better with the compliments. In spite of being shy, she recognized her progress.

An important therapeutic resource may be to recover and reflect, together with the patient, on discursive situations that occurred during therapeutic sessions through the analysis of audio recordings²⁴. Recording part of the therapies can be methodologically fundamental, not only for scientific productions or to follow the therapeutic evolution, but rather to serve as support to provide positive feedback to the child, showing him his moments of fluency. From the point of view of psychoanalysis, the stuttering subject must listen to himself in order to re-signify his stuttering⁹.

Another way to free the child from suffering is by operating directly in educational institutions, that is, considering not only the individual, but the environment in which this person lives. Authors such as Friedman^{6,8}, Cavalcanti and Azevedo²⁵ and Nagib et al.²⁶ point out that stutterers or individuals who have other speech issues suffer since they see the rejection of their peers because of their way of speaking. They are more prone to intimidation, bullying or social exclusion. At a given time, in episode 7, PG mentions that “*my friends say say say :: that I stutter a lot*”. This data is important, since speech therapists need to be attentive to signs like these, which may indicate that the child is suffer-

ing because of negative comments. After all, quite often the therapist will be the adult to whom the child can report what is going on at school or in another environment in which the child is inserted²⁶. Negative comments, provocations or bullying can interfere with the construction of the child's self-esteem and self-confidence, leaving the child in a conflict between talking or not talking, thinking about the reaction of the others. In addition, in the long term, they can cause negative psychological, emotional and social impacts²⁷.

Therefore, the importance of including health promotion activities in the school environment and maintaining contact with the school as part of the therapeutic process is evident. The purpose is to improve the negative attitudes of colleagues towards children who stutter, to encourage positive interactions between them and instruct teachers about stuttering²⁷. The intervention must be informative, dynamic, and playful. It should not expose the subject to other people. The child's parents or caregivers can and should also be an important bridge for intervention at school, in addition to being an indispensable part of the therapeutic process, acting as multipliers of information and guidance²⁶.

Finally, the therapeutic process of stuttering can be long and should not aim to control the disfluencies of the subject, but rather enable the subject to re-signify his fluency, considering his history and uniqueness. Regarding the completion of the therapy, Azevedo et al.²⁴ state that this should not happen at the time the subject no longer displays stuttering manifestations observable in speech. After all, stuttering is more than the mere existence of disfluencies in the speech; it is about considering the multidimensionality and biopsychosocial factors involved in this phenomenon. Therefore, the discharge from speech therapy should never be defined by the therapist alone, but mainly by the therapist-patient-family triad. The process only ends when the individual feels ready to disengage from therapy, free from the suffering associated with stuttering, satisfied with his speech and position as a fluent subject²⁴, with the family also recognizing this position.

Final considerations

Thus, studying about the therapeutic process of child stuttering, understanding the peculiarities related to the process of speech acquisition, under-

standing the duality that allows fluency and disfluency in speech and seeking not to reduce the manifestations of stuttering only to the child's speech, all of these represent knowledge that can bring great differential into the therapeutic intervention in child stuttering. However, despite the great relevance of the topic, we observe that is not easy to find studies that portray the therapeutic process itself, strategies or resources aimed at child stuttering in the national literature. Certainly, scientific publications with this focus can contribute to improve speech therapy for children with this complaint.

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