

Relationship between psych distress and delay in language acquisition in the first two years of life

Relação entre sofrimento psíquico e atraso na aquisição da linguagem nos dois primeiros anos de vida

Relación entre sufrimiento psíquico y retraso en la adquisición del lenguaje en los dos primeros años de vida

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Abstract

Objective: To analyze the relationship between psychic distress and language acquisition delay. **Method:** a sample of 101 babies, followed from three to 24 months of age through videotaping of interactions with their mothers, were evaluated by psychic protocols (PREAUT signs, IRDI and MCHAT script) and by the enunciative signs of language acquisition (SEAL). Data were analyzed using the STATISTICA 9.0 software. **Results:** There was a greater correlation between the IRDI script and the PREAUT signs in the first semester of life. In the second, third and fourth semester of life, the psychic risk and the delay in language acquisition coincide, but there are cases of delay in the acquisition of language without psychic risk. **Conclusion:** There was a significant relationship between the presence of psychic distress and language acquisition delay.

Keywords: Risk factors; Psychological distress; Language development; Language development disorder; Autism spectrum disorder.

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Authors' contributions:

LDO: Research design, data collect, text writing.

ABM: statistical analysis.

SFN: Bayley III collection.

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Resumo

Objetivo: Analisar relação entre sofrimento psíquico e atraso na aquisição da linguagem. **Método:** uma amostra de 101 bebês, acompanhados dos três aos 24 meses por meio de filmagens das interações com suas mães, foram avaliados por protocolos de avaliação do psiquismo (Sinais PREAUT, roteiro IRDI e MCHAT) e pelos sinais enunciativos de aquisição da linguagem (SEAL). Os dados foram analisados estatisticamente por meio do teste de correlação de Pearson. **Resultados:** Observou-se maior correlação entre o roteiro IRDI, os Sinais PREAUT no primeiro semestre de vida. No segundo, terceiro e quarto semestre de vida dos bebês, o risco psíquico e o atraso na aquisição da linguagem coincidem, mas também há casos de atraso na aquisição da linguagem sem risco psíquico. **Conclusão:** Houve relação significativa entre presença de sofrimento psíquico e atraso na aquisição da linguagem.

Palavras-chave: Fatores de risco; Sofrimento psicológico; Desenvolvimento da linguagem; Transtorno do desenvolvimento da linguagem; Transtorno do espectro autista

Resumen

Objetivo: Analizar la relación entre sufrimiento psíquico y retraso en la adquisición del lenguaje. **Método:** una muestra de 101 bebés, seguidos desde los 3 a los 24 meses de edad mediante videograbación de interacciones con sus madres, fueron evaluados mediante protocolos de riesgo psíquico (signos PREAUT, guión IRDI y MCHAT) y mediante los signos enunciativos de adquisición del lenguaje (SEAL). Los datos se analizaron con el software STATISTICA 9.0. **Resultados:** Hubo una mayor correlación entre el guión IRDI y los signos PREAUT en el primer semestre de vida. En el segundo, tercer y cuarto semestre de vida, el riesgo psíquico y el retraso en la adquisición del lenguaje coinciden, pero existen casos de retraso en la adquisición del lenguaje sin riesgo psíquico. **Conclusión:** hubo una relación significativa entre la presencia de sufrimiento psíquico y el retraso en la adquisición del lenguaje.

Palabras clave: Factores de riesgo; Distrés psicológico; Desarrollo del lenguaje; Transtornos del desarrollo del lenguaje; Transtorno del espectro autista

Introduction

In the 2010 Brazilian census¹, the population under one year of age was 2,713,244 and the population between 1 and 4 years of age was 11,082,915, and in *Rio Grande do Sul*, there were about 127,934 under one year of age and 516,028 between 1 and 4 years of age. Regardless of the population reference chosen, there is no doubt of the importance of the issue of childcare, considering the dimensions of this country.

Childcare can ensure adequate physical, social and emotional growth and development, which demands a broad understanding of the child in its family and social environment, as well as its socio-economic, political and cultural context².

The possibilities of this care, which includes aspects such as monitoring physical, neuropsychomotor, and intellectual development, disease prevention, and promotion of physical and mental hygiene, among others², have been greatly expanded by recent psychoanalytically-oriented research

in the field of mental health. These studies have validated evaluation scripts that make it possible to identify psychic suffering early^{3,4}.

The study by Kupfer et al.³ was commissioned by the Ministry of Health, and created the clinical indicators of risk/reference to child development (IRDI). It had a sample of 726 children and showed that 18 indicators out of the 31 validated showed the ability to predict psychological risk.

The study by Olliac et al.⁴ PREAUT Signs (Programme Recherche Evaluation Autism), whose aim was to identify early risk for autism, were validated from a sample of 12,179 children assessed in routine French maternal and child programs. The results showed that signs were able to identify psychic risk for autism and for developmental delay with symptoms such as delay in language acquisition and learning. The great contribution of these signals is the possibility to identify and intervene already in the first year of life with babies and their families to reverse the psychic risk, be it the risk for autism or for another psychopathology^{5,6,7}.

Whatever the modality of intervention, one notices the incorporation of the idea that parents, the extended family and the school of early childhood education, especially the nursery, can constitute the field of the Other for the baby and, therefore, work for the maintenance of the maternal function, without, however, exercising it. This idea can be extended to all those who care for the baby, including those responsible for childcare, who can sustain some mothering to babies in order to facilitate their psychic constitution.

These studies alert to the importance of broadening the view of child health in relation to aspects that are not yet usual in the training of doctors and nurses, the main agents of childcare, but that have already been, for a decade, at the center of the research of psi professionals and therapeutic professions that study child development, since it is known that the prognosis of any intervention in childhood is more positive the earlier the risk is detected. The authors differentiate among psychopathologies the risk for autism, which is anchored in congenital difficulties of the baby, from the risk for psychosis, which is related to difficulties in the bond established in the family environment, especially in the operation of maternal and paternal functions⁸, because the singularity of the opportune intervention will take into consideration the direction of the baby's psychic structuring and the bond established with his family. It is worth mentioning that both the group related to the IRDI³ methodology and to PREAUT⁴ share the same theoretical approach in psychoanalysis, the Lacanian theory, which allows them to think about the psychic constitution and its relation with other aspects of child development such as psychomotor, language, cognition, daily life, feeding, among others. With different theoretical approaches from psychoanalysis, there are authors who point out the importance of early detection and intervention through programs directed to parents, often with simple strategies such as instructional videos, such as the study by Roia et al.⁹ who concluded that audiovisual materials can be a good complementary support to parents of the first child. However, most studies still focus on the second year of life, a time when it is easier to identify cognitive demands and other aspects of development for intervention^{10,11}.

Therefore, the concern of the French-Brazilian psychoanalysts^{3,4} acquires special value for being focused on the psychic constitution of the mother-

baby dyad and its surroundings (field of the Other) in the first year of life, considering the possible compensations and modifications in the field of the Other that can be made to change the course of the installation of a psychopathology.

In the field of language, there are few studies that consider the mother-baby dyad as the focus of analysis of language acquisition and the risk to this acquisition in the first two years of life¹²⁻¹⁵. In general, the studies focus on children's productions and consider the prematurity variable¹⁶. Therefore, the construction of enunciative signs of language acquisition, based on the same indicative paradigm used in the IRDI script, is relevant for thinking not only about the baby's linguistic abilities to occupy its place of enunciation, but also about how the adult supports it in this place¹⁶.

Considering this lack of quantitative studies that focus on the relationship between the mother-infant dyad in both psychism and language, this article analyzes the relationship between psychic risk and delayed language acquisition.

Material and method

This is a quantitative, cohort, longitudinal and prospective study, approved by the Research Ethics Committee of an educational institution in a medium-sized city in Rio Grande do Sul, under CAAE number: 28586914.0.0000.5346. This study respects the regulatory norms and guidelines for research with human beings that are in Resolution 466/12 of the National Health Council, providing for the confidentiality of data, ensuring secrecy and privacy of the identity of the subjects, through the signature of the Confidentiality Agreement and clarification of the objectives and procedures to the families who signed the Informed Consent Form after agreeing to participate in the research.

The initial research sample that performed all stages of the Enunciative Signs of Language Acquisition (ESLA) collection from 3 to 24 months was 101 infants (37 preterm infants, with gestational age less than 37 weeks; and 64 infants born at term with gestational age 37 weeks or more. The same number of infants completed the analysis of infant development risk indicators (IRDI). In the PREAUT Signs collection the number of infants who had this data were 99 in the first age group (3 months and 1 day to 4 months and 29 days) and 95 in the age group 8 months and 1 day to 9 months

and 29 days. In the collection of the M-CHAT instrument there was a loss of 21 infants, which gave a final sample at 24 months of 80 infants.

Assessment procedures and instruments

The research was conducted in the follow-up of preterm infants of a University Hospital and in the Guthrie test sector of a Basic Health Unit of the city where the collection was carried out. Data collection for this research began between July and August 2014, when the first babies captured entered their third month of life (chronological or corrected age). To collect the babies' initial data for establishing inclusion criteria, initial and continued interviews were conducted based on an adaptation of the interview about the experience of motherhood¹⁷, which addresses psychosocial, obstetric, and sociodemographic data, by means of simple questions presented to the mother and/or whoever performs the maternal role, in case of her absence, which dealt with the baby's general health, obstetric history, and sociodemographic and psychosocial data.

For this study, the results of the psychiatric assessment instruments (IRDI, PREAUT, and MCHAT) and that of language were considered, whose evaluations were performed in six assessments of the infants, listed below:

- 3 months and 1 day to 4 months and 29 days
- 6 months and 1 day to 7 months and 29 days
- 8 months and 1 day to 9 months and 29 days
- 11 months and 1 day to 12 months and 29 days
- 17 months and 1 day to 18 months and 29 days
- 23 months and 1 day to 24 months and 29 days

Analysis of Signs of Psychic Distress

To analyze the psychic constitution and possible suffering, considering the risk of evolution to autism, besides the possibility of detecting other risks to the psychic constitution and also to the language development of the baby, the PREAUT⁴ signs were used, which are based on the analysis of the closure of the pulsional circuit, that is, the transit between auto-eroticism to become the object of desire of the other, both in the body and in the voice.

The signal was investigated in the interaction between researcher and baby, as well as between mother and baby. In general, there was no need to instruct the mother, as the signal emerges naturally in the dyad as long as the mother talks or looks at the baby. When necessary, the researcher instructed the mother to talk to him/her naturally as she does at home. For each response to questions a value is assigned. When the total sum is 15 the baby is not at risk, when between 5 and 15 there is intermediate risk¹⁸, and when it is less than 5 there is high risk of developing autism.

The PREAUT⁴ signs were evaluated in the first age group of the research (3 months and 1 day to 4 months and 29 days) and in the third (8 months and 1 day to 9 months and 29 days).

Another instrument used in this study to detect psychological and developmental distress was the Infant Developmental Referral/Risk Indicators (IRDI)³. This analysis was done by monitoring the babies since the first months of age, in the age groups 0 to 4, 4 to 8, 8 to 12, and 12 to 18 months, with adaptation to the age groups foreseen in this research. The reduced version of 18 indicators of the IRDI was used in this research as shown in Table 1.

Table 1. Child Development Reference/Risk Indicators (CDRI)

Phases	Signs	Theoretical axis
PHASE I 0 – 4 months incomplete	1. When the child cries or screams, the mother knows what she wants.	SA/ED
	2. The mother speaks in a style particularly directed to the child (<i>motherese</i>).	SA
	3. The child reacts to the <i>motherese</i> .	ED
	4. The mother proposes something to the child and waits for the use of the reaction.	PA
	5. There are exchanges of looks between the child and the mother.	SA/PA
PHASE II 4 – 8 months incomplete	6. The child uses different signals to express different needs.	ED
	7. The child reacts (smiles, vocalizes) when the mother or another person addresses them.	ED
	8. The child actively seeks the mother's gaze.	ED/PA

Phases	Signs	Theoretical axis
PHASE III 8 -12 months incomplete	9. The mother realizes that some requests from the child may be a way to get her attention.	ED/SA
	10. During the body care, the child actively seeks games and love plays with the mother.	ED
	11. Mother and child share a particular language.	SA/PA
	12. The child shows estrangement from unknown people.	PF
	13. The child makes cute faces.	ED
PHASE IV 12 - 18 months incomplete	14. The child accepts semi-solid, solid and varied feeding.	ED
	15. The mother alternates moments of dedication to the child with other interests.	ED/PF
	16. The child supports the mother's brief absences and responds to prolonged absences.	ED/PF
	17. The mother no longer feels obliged to satisfy everything the child asks for.	PF
	18. Parents place small rules of behavior for the child.	PF

SA: "Subject assumption"; ED: "establishment of the demand"; PA: "Presence-absence alternation "; PF: "Paternal function". Source: Kupfer (2008).

In addition to the PREAUT Signs and the IRDI script, the *Modified Checklist for Autism in Toddlers (M-CHAT)*¹⁹, was collected at 23 months and 1 day to 24 months and 29 days for this study. The Modified Checklist for Autism in Toddlers (M-CHAT) is a scientifically validated screening tool for children between 16 and 30 months of age that assesses risk for Autism Spectrum Disorder (ASD). It is a questionnaire based on DSM-IV criteria that presents 23 "yes or no" questions and can be applied to parents during pediatric visits, for example, and even in the waiting room of the doctor's office. Due to its recognized character in the literature in autism screening, it was used in this research for the latter age group.

Language Analysis

For language analysis, we filmed the interaction of the mother or whoever performed this function for the baby, which occurred in different ways in the stages of the study. The filming was done in two angles: frontal and lateral, for an average of 15 minutes, depending on the baby's age and other aspects to be analyzed.

The front angle included placing the JVC Everio GZ-MG 630 digital camcorder on an easel at 2 meters, in order to capture the baby facing the camera and the mother projected onto a mirror that is placed behind the baby both in the sitting position in a baby carrier and sitting without sup-

port. The side angle included filming with a Sony Handycam 1080p 80gb camera positioned at 1 meter, which sought to capture the face-to-face interaction between mother and baby and a full view of the baby sitting in the comfort baby and sitting on the EVA mat.

There was a standardization of postures that the child was observed in the interaction with his/her mother, varying according to his/her gestational age and possibilities according to the skills acquired in each collection phase. We identified scripts applied in each age group:

- 3-4 months and 29 days (phase 1 IRDI, first collection PREAUT signals): The baby was seated in the baby carrier (9 minutes). The mother was instructed to sing (3 minutes) (ambiance), talk (3 minutes), and offer an object to the bab: a noiseless rubber dog (3 minutes).
- 6-7months and 29 days (ESLA 1): The baby was seated in the baby carrier (9 minutes). In this position the mother was instructed to sing (3 minutes), talk (3 minutes), and offer an object to the baby: a rubber noiseless dog (3 minutes).
- 8-9 months and 29 days (second collection PREAUT signals, phase 2 of the IRDI script): With the child in the sitting position we directed the mother to sing to the baby for 3 minutes, talk for another 3 minutes, and offer an object to the baby (the rubber dog) (9 minutes total).

- 11-12 months and 29 days (IRDI Roadmap Phase 3, ESLA 2);
- 17-18 months and 29 days (Phase 4 IRDI roadmap, ESLA 3),
- 23-24 months and 29 days (MCHAT, ESLA 4)
- In this filming the baby was observed in free activity with the mother with a box of thematic toys (animals, a baby with a bottle, little pots, etc.) and we observed the play, psychomotricity, and linguistic exchange between the baby and the mother, with the camcorders positioned as described in the previous steps. The mother was instructed to try to leave the baby on the carpet, which would allow the capture of the images by the camcorders.

From the filming, analyses of the interaction and speech of the mothers and the babies were carried out from the enunciative perspective of language acquisition, through the Enunciative Signs of Language Acquisition¹³⁻¹⁵.

The presence/absence of enunciative signs was checked according to protocol, from 2 months to 6 months and 29 days, from 7 months to 12 months and 29 days, from 13 months to 17 months and 29 days, and from 18 months to 24 months and 29 days, according to the collection ranges provided in this study. The Enunciative Signs are summarized in Table 2.

Table 2. Enunciative Signs of Language Acquisition (ESLA)

Signs from 2 to 6 months and 29 days	Analyzed speaker
1. The child reacts to motherese through vocalizations, body movements, or gaze.	Baby
2. The child fills their interlocution place with verbal sounds such as vowels and/or consonants.	Baby
3. The child fills their interlocution place with non verbal sounds attuned with the enunciative context (smile, cry, cough, grumbling).	Baby
4. The child occupies their place in the dialogue attuned with the enunciative context with body movements and gaze.	Baby
5. The child initiates conversation or proto-conversation.	Baby
6. The child and mother (or her substitute) exchange gaze during interaction.	Baby-mother
7. The mother (or her substitute) assigns meaning to the baby's verbal and non-verbal manifestations and supports their proto-conversation when the baby initiates it.	Mother
8. The mother (or her substitute) uses motherese attuned with what is happening in the context and waits for the baby's responses.	Mother
Signs from 7 to 12 months and 29 days	
9. The child fills their utterance with verbal sounds (syllables with vowels and varied consonants - at least two places and two articulatory modes of consonants).	Baby
10. The child emulates the production of words by mirroring the mother's speech (or substitute).	Baby
11. The child emulates the production of proto-words spontaneously.	Baby
12. When the mother (or substitute) is called to enunciate by the child, she produces her utterance and waits for the child's response.	Mother
Signs from 13 to 17 months and 29 days	
13. The child spontaneously and intelligibly names objects that are absent in context to the interlocutor adult.	Baby
14. The child names spontaneously, but not intelligibly to the adult interlocutor, objects that are absent in context, seeking in prosody a way to be understood.	Baby
15. The child spontaneously and intelligibly names, to the adult interlocutor, objects, people, actions, which are present in the enunciative context.	Baby
16. The child makes gestures to try to make their understood when the adult interlocutor does not understand them.	Baby
17. The child repeats the adult interlocutor's speech as a way to organize or rearrange their utterance, for example, by improving the syntactic or phonological form, or by choosing the lexical item or even by accentuating some item prosodically.	Baby
18. The child engage in conversation with different adult interlocutors (father, mother, examiner)	Baby
19. The adult interlocutor assigns a possible meaning in tune with the child's verbal productions.	Mother



Signs from 18 to 24 months and 29 days

20. The child requests objects and / or requests clarification from the adult interlocutor, marking their position as speaker.	Baby
21. The child uses different phonemic forms to convey different meanings in their enunciation (at least two articulatory points - labial and alveolar - and two distinct consonant sound classes - at least nasal and plosive).	Baby
22. The child uses different forms (words) to convey different meanings in their enunciation.	Baby
23. The child combines words, in direct or inverse form, to convey different meanings.	Baby
24. When the child presents verbal productions distinct from adult speech, the adult interlocutor reacts by making a request for neutral repair or correctly repeating the infant speech.	Mother

Source: Crestani et al. (2017;2020); Fattore et al. (2022) In bold predictive signs in factor analysis

Identification of at-risk cases in ESLA took as a reference the average number of signs in cases whose language outcome was assessed by the Bayley Scale III language sub-item as having delay that was 18 or more for children without delay and less than 18 for children with delay ¹⁷.

Statistical Analysis

After collecting the evaluations, a database was created in the Excel computer program. The results obtained in the psychic and language tests were organized from ordinal (score) and nominal (absence and presence of signs/risk) data. The variables analyzed were presence or absence of psychic risk and presence or absence of Enunciative Signs. The results were analyzed using STATISTICA 9.0 software. Pearson’s correlation coefficient was used to analyze the correlation between language acquisition (ESLA) and psychic risk (IRDI, PREAUT signs, MCHAT), as well as

the correlation between the number of signs present in the ESLA and the PREAUT and IRDI signs in the different age groups.

Some babies and mothers did not attend some collections, so there is a smaller number in the analysis of some protocols, which will be identified in the results tables.

Results

Table 3 shows descriptively the number of babies with and without psychological risk in each protocol compared to the number of babies with (56) and without risk (55) in the ESLA evaluation. It is noteworthy that for the IRDI analysis, the final assessment carried out at 18 months was considered, in which it is possible to indicate more accurately cases of risk by the reduced version of the script, since it does not have a predicted score per age group.

Table 3. Language acquisition delay and Psych distress Babies’ condition

ESLA Risk n=101	CDRI Risk 18m n=101		PREAUT Risk 4m N=95		PREAUT Risk 9m n=95		MCHAT Risk 24m n=90	
	Yes	No	Yes	No	Yes	No	Yes	No
Yes =56	26	30	31	25	6	45	4	34
No =55	18	27	17	26	2	42	1	41
TOTAL	44	57	48	51	8	87	5	75

ESLA = Enunciative Signs of Language Acquisition; N= number of subjects of the sample
CDRI= Child Development Reference/Risk Indicators ; m=months

It is possible to observe that the number of babies at risk in the ESLA and IRDI at 18 months and in the ESLA and PREAUT at 4 months is closer. In PREAUT at 9 months and MCHAT at 24 months, the psychological risk for autism is much lower than the risk for language acquisition, showing the greater sensitivity of the PREAUT signs at 4 months and its greater specificity at 9 months. On the other hand, the risk for language persists over time. Another relevant fact is that there are babies only in psychological distress, only with risk for language, or simultaneously in both categories. Among the group of babies in psychological distress, there are always more babies with simultaneous risk for language, especially among those evaluated by the IRDI script. Therefore, this announces that babies in psychological distress may come to speech pathologists with complaints of delayed language acquisition.

Table 4 presents data obtained with the correlation between the total number of IRDI indicators at eighteen months, the PREAUT sign score at four and nine months, and the number of positive items (that do not indicate risk) in the MCHAT at twenty-four months and the total number of signs present in all phases of the ESLA. In this analysis, carried out by means of Pearson's correlation, no statistical significance was observed between the scores of the total ESLA and the PREAUT Signs at nine months. Therefore, there was no increase in the number of enunciative signs correlated to the increase in the PREAUT signs score. When analyzed the statistical correction between total ESLA and total indicator scores on the IRDI script at eighteen months and with the score of positive developmental items on the MCHAT at twenty-four months, it was observed as significant ($p < 0.05$).

Table 4. ESLA versus PREAUT Signs, CDRI and M-CHAT Correlation

Tests	N	Pearson	p-value
ESLA total versus PREAUT 9 m	95	0.176	0.087
ESLA total versus CDRI total 18 m	101	0.265	0.007*
ESLA total versus M-CHAT 24 m	80	0.366	0.001*

M=months * Significant by Pearson's Test; N= number of subjects in the sample.

In Table 5, it was found that the higher the ESLA score in the first phase (2 months to 6 months and 29 days), the higher the PREAUT Signs score at four months. At nine months, in the second phase of ESLA analysis (7 months to 12 months and 29 days), there was no significant correlation between ESLA scores and PREAUT Signs. Also, in table

2, there was a moderate statistical correlation between ESLA phase 1 scores and IRDI phase 1 and IRDI phase 2. There was no statistically significant correlation between the other phases of IRDI and ESLA (Table 5) although there was full correlation between scores on IRDI at 18 months and ESLA at the same age (Table 4).

Table 5. Correlation between ESLA, PREAUT Signs and CDRI

TESTS	N	Pearson	p_valor
ESLA 1 versus PREAUT SIGNS 4 m	99	0.546	0.001*
ESLA2 versus PREAUT SIGNS 9 m	95	0.185	0.71
ESLA 1 versus CDRI Phase 1	101	0.63	0.00*
ESLA 1 versus CDRI Phase 2	101	0.29	0.00*
ESLA 2 versus CDRI Phase 3	101	0.07	0.465
ESLA 3 versus CDR Phase 4	101	0.10	0.343

*Significant by Pearson's test

Discussion

The correlation found between risk of language acquisition and psychological distress shows that the enunciative perspective present in ESLA¹³⁻¹⁵ is epistemologically compatible with the psychoanalytic perspective of studies on early detection of psychological distress^{3,4}. This is because in the first months of life it is inevitable that psychoanalytic analysis resembles enunciative language analysis, since the initial proto-conversation is the usual way of observing the mother-baby relationship.

The analysis of the initial protoconversation allows one to observe the place of enunciation held by the adult to the baby, if and how the baby occupies this place, and the crossing of the difficulties of the baby and the parents in this process. In the work by Krueger et al.²⁰, it was evident that the analysis of the initial protoconversation and its evolution during the first year of life may show difficulties in establishing the mother-baby bond. This difficulty was evident both in the relationship with the IRDI³ script and in the relationship with the PREAUT⁴ signs up to four months in the sample studied here.

Although the PREAUT signs are more specific for detecting risk of developing autism, previous studies have shown that PREAUT, in its intermediate score, allows the identification of risk for other psychopathologies.¹⁸ This aspect shows that any of the three protocols will be sensitive to detect risk for development, either in the psychism or in language. There are, however, distinctions in the information they can bring about the direction of intervention, since they can be used to capture whether the problem is in the baby's initiative or response (clearly observed in the PREAUT signs), or whether it is in the support offered by the mother and the baby's occupation of a place of enunciation (visualizable in the IRDI and ESLA). This combination of scripts may bring some complementary information between the PREAUT Signs and the IRDI¹⁸ script in the evaluation of the psychism, with the ESLA¹³⁻¹⁵ in looking at its effects on language.

Regarding the lack of correlation in the other phases, it is worth noting that in the second half of life, the process of constitution of the psychism and the acquisition of language are more differentiable in the development and in the scripts. The results obtained with the IRDI script, the PREAUT Signs, and the ESLA are more differentiable in the second phase and can more accurately capture their specific

objectives of analyzing psychic distress in general (IRDI script), risk for autism (PREAUT Signs), and risk for language acquisition (ESLA). Therefore, the hypothesis is that cases are eventually distinguished and subdivided into distinct groups of language delay with or without psychic issues. Possibly, this partially explains the lack of specific correlation in phase 2 ESLA with the results of the IRDI script and PREAUT Signs.

However, it should be noted that the general correlation among children defined as cases by the IRDI script at 18 months, i.e., that children who have two or more indicators absent at the end of the application of the script significantly showed changes in the ESLA (less than 18 signs), confirming the results of the initial IRDI research that evidenced as one of the risk outcomes in this script is delayed language acquisition, something also evidenced in the study by Olliac et al.⁴ in the PREAUT research, and highlighted by Van Hoogstraten et al.¹⁸ as present in intermediate scoring infants. This provides evidence that children with significant psychological distress are generally at risk for language acquisition. It is interesting to note that this fact is proven in the correlation of ESLA with the IRDI script at 18 months. On the other hand, one can state that cases of psychological distress without risk for psychopathology, foreseen in the IRDI script analysis, may have psychomotor and language obstacles as an outcome, something that has been verified in the validation of the script³ and also in some studies^{21,22}.

This fact is also evident in the analysis of ESLA with MCHAT, a script with another epistemological basis, but which shows that children at risk for psychism, specifically for autism, are at risk for language. This can be seen in the sample studied retrospectively already in the first semester of life by both the ESLA and the IRDI script and the PREAUT signs. Even though some cases may have been false positives as stated by Van Hoogstraten et al.¹⁸ in their research, the alert that it allows for health care teams is fundamental.

The descriptive data show that the group of babies at risk for a possible evolution to autism at nine months by the PREAUT signs (8 babies) and at 24 months by the MCHAT (5 babies) is smaller than the group of babies in psychological distress by the IRDI script at 18 months (44 babies) and risk to language assessed by ESLA (56 babies). This calls into question the profusion of diagnoses

of autism spectrum disorder observed in clinical reality, based on the exclusive use of nosography based on DSM 523. This study points out the importance of observing the psychic and linguistic constitution with specific protocols, and the presence of the Speech Therapist in the monitoring of primary care teams.

The results reinforce, therefore, an important sensitivity of the ESLA, of possible use by speech and hearing therapists, and of the IRDI script and the PREAUT signs more directed to the mental health field, as forms of early detection of psychic suffering and language risk. Although such risks may be undifferentiated and undefined at first, early detection, supported by a system of continuous care for the mother-baby dyad that can intervene in time to prevent psychopathological symptoms from crystallizing or even language disorders from emerging, could be a powerful strategy in childcare in order to reduce overcrowding in the Childhood Psychosocial Care Centers and other mental health and child health facilities, such as speech-language and hearing clinics in the SUS.

The relationship between psychic suffering and language risk in the third and fourth semesters of a baby's life demonstrated that the assumption of a subject and the paternal function, important in the analysis of alienation and separation processes³, may be at the root of impediments to the emergence of a place of enunciation for babies, which may result in a delay in language acquisition. The mother needs to assume a subject in the baby to meet her demands and address her signifiers. She must also recognize the baby's manifestations in order to sustain a place of enunciation for him/her. With time and the development of the baby's communicative skills, she also needs to perceive him/her separately from her in order to recognize him/her as a speaker in the making. However, the fact that there is a group of babies with a clear risk of delayed language acquisition with no history of psychological distress at 24 months of age highlights the need for specific protocols to evaluate language acquisition in childcare.

Many of the aspects analyzed in the ESLA and the IRDI can be observed in the child's current booklet; however, perhaps there is little time for observation and/or proper filling out of it, since the babies in this study did not have this information listed in their booklets, and the referrals for timely

intervention were made by the research team after early detection.

Finally, it is important to highlight the relevance of interdisciplinary action between Speech, Language Pathology and Audiology and Psychology in childcare monitoring, since the development of babies in the bond with their families requires this look from several professionals, because it is not enough to use scripts and apply them in evaluations of babies. It is necessary to have a team that welcomes and listens to the family in its suffering, without labeling or diagnosing the baby, and that offers a timely intervention to meet the demands of each case. This care is fundamental to avoid a profusion of wrong diagnoses, because all these protocols aim to accompany the psychic and linguistic constitution, and not to offer diagnoses in a stage when pathology should not be spoken of yet. It is about making a bet on the subject and on the speaker to come to be, offering care to the baby and its relatives.

Conclusion

There is an important correlation between psychological distress and risk of delayed language acquisition in the first semester of life. In the second semester, these aspects of development are differentiated. In the third and fourth semesters of life it is evident that language alterations are present in the pictures of psychic suffering, but there are cases of risk for delayed language acquisition without psychic hindrance observed in the scripts, especially from the third semester on. These results show the importance of an interdisciplinary look between Psychology, especially in the psychoanalytic field, and Speech, Language Pathology and Audiology, in the enunciative aspect, in the follow-up of babies.

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