

Title: European Portuguese version of *The Responsive Adult–Child Engagement During Joint Book Reading Scale* (RACED-JBR): Translation and cultural adaptation with pilot study

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Abstract: Shared Book Reading is an interactive activity in which a child and a caregiver explore a book. Research has demonstrated that this activity supports language development in the early years, so families are encouraged to incorporate it into their daily routines.

Desjardin and colleagues' *The Responsive Adult–Child Engagement During Joint Book Reading Scale* (RACED-JBR) measures parent and child behaviors that have been shown to predict language development in populations of very young children, specifically during Shared Book Reading. This study aims to translate and culturally adapt this scale for use in European Portuguese. Procedures for the translation and cultural adaptation process were guided by the works of Ortiz-Gutiérrez and Cruz-Avelar (2018) and the International Tests Commission (ITC) Guidelines for Translating and Adapting Tests (Second edition) (2017), and informed by the results of a pilot study. This process and its procedures are described, and the European Portuguese version of the RACED-JBR, a Escala de Envolvimento Responsivo Adulto-Criança durante a Leitura Partilhada de Histórias (EERAC-LPH), is presented. This instrument is made available for use by early intervention services professionals to assess Shared Book Reading behaviors, highlight their importance, and provide guidance and support to caregivers.

Keywords: caregiver-child dyad; shared book reading; home literacy environment; early language development; early intervention

Introduction

Shared Book Reading (SBR) is an interactive experience in which a child and an adult, usually a caregiver, explore a book together. Research has demonstrated that this activity supports language development in the early years, encouraging families to incorporate it into their daily routines (Klass et al., 2024).

SBR being a high joint attentional activity, children's engagement might fluctuate during the interaction, and parents must apply different strategies to retain their child's attention. Pointing to direct the child's attention to an image on the book, positioning the child towards the book, mimicking the child's behaviors or sounds, parallel talk, offering a comment, expanding on the behavior or verbal contribution of the child, labelling, or asking closed or open-ended questions are some of the strategies that parents can use to direct and retain the child's engagement while supporting language development (DesJardin et al., 2014; Heller & Rohlfing, 2017).

Once a routine is established, children gradually show more initiative during SBR moments (Heller & Rohlfing, 2017; Lingwood et al., 2023), approximately at 15-17 months of age. Beyond supporting early interactions, various studies report that SBR elicits better quantitative and qualitative language exchanges between caregivers and children than other everyday activities that families engage in, like singing, playing with toys, personal care routines, or mealtimes (Clemens & Kegel, 2021), or TV co-viewing (Hanson et al., 2021).

Most research on SBR has been conducted in preschool and school-aged children (Salley et al., 2022). In studies with younger children, it has been harder to establish the direct impact of SBR on language development outcomes (Barone et al., 2019; Gardner-Neblett et al., 2017; Zhai et al., 2023), but it is ascertained that a routine for SBR is established very early (Heller & Rohlfing, 2017; Lingwood et al., 2023), and an enriched Home Literacy Environment (HLE) is fundamental (Sénéchal & LeFevre, 2014; Singh et al., 2023).

Early and frequent engagement in SBR has been linked to a more diverse vocabulary (Barone et al., 2019; Grolig et al., 2019; Korat et al., 2013; Lenhart et al., 2018; Singh et al., 2023; Wesseling et al., 2017), improved language comprehension (Chacko et al., 2018; Pillinger & Vardy, 2022), and better conversational and narrative abilities (Grolig et al., 2019; Morrow, 1988; Reese, 1995).

The effects of SBR seem to carry over into the school years, improving phonological and print awareness (Korat et al., 2013; Wesseling et al., 2017) and impacting early reading achievement and mathematical knowledge (Barnes & Puccioni, 2017; Bus & van IJzendoorn, 2022). Pillinger and Vardy (2022) reported an improvement in reading enjoyment and reading motivation.

The HLE, the informal (i.e., print is present but not the focus of the interaction) and formal (i.e., print is the focus of the interaction) literacy experiences provided by caregivers (Sénéchal & LeFevre, 2014), was established as an essential factor in language development, permeable to intervention (McKean et al., 2015). The McKean and colleagues (2015) prospective observational longitudinal study identified the frequency of SBR from eight months to four years as a modifiable

factor that impacted language growth between the ages of four and seven years old.

Multiple intervention programs are based on SBR to educate parents and other caregivers on how to support their children's language development more effectively. The evidence that these interventions have a positive impact on modifying parents' behavior during SBR and the family's HLE is vast (Aarts et al., 2016; Barone et al., 2019; Kumar et al., 2016; Lorio et al., 2022; Noble et al., 2020). For example, caregivers who benefited from SBR-based interventions were more likely to read with their child more frequently, employ strategies to support language development, and offer a more effective language model while responding to the child's initiatives at their level of language development.

Although the literature on the benefits of SBR for language development, literacy, and parental involvement is extensive (Barone et al., 2019; Lorio et al., 2022), tools for assessing SBR behaviors, especially for dyads with young children, and their outcomes are scarce.

To deepen our understanding of the impact of SBR on language acquisition and development, as well as its role in early intervention, it is necessary to have tools tailored to the target population and context. This study aims i) to translate and culturally adapt the Responsive Adult–Child Engagement During Joint Book Reading Scale (RACED-JBR) (DesJardin et al., 2014) for European Portuguese, so it can be used to assess SBR behaviors, and also ii) to provide a structured way for professionals specializing in early intervention to guide parents in promoting child language development through SBR.

The Responsive Adult–Child Engagement During Joint Book Reading Scale
(RACED-JBR)

The RACED-JBR scale was designed for the *Parental Support for Language Development During Joint Book Reading for Young Children With Hearing Loss* study (DesJardin et al., 2014), aiming to measure adult and child behaviors during SBR associated with language development in young children with normal hearing. It was an adaptation of the *Adult-Child Interactive Reading Inventory* (DeBruin-Parecki, 2008), which targeted preschool-aged children, to specifically address the behaviors during SBR related to language development in a younger population.

The RACED-JBR scale has five sections for observing Adult Behaviors and Child Behaviors. Adult Behaviors includes four sections: a) Engagement (six items), b) Literacy Strategies (four items), c) Teacher Techniques (five items), and d) Interactive Reading (five items). Child Behaviors includes three sections: a) Engagement (five items), b) Interactive Reading (seven items), and c) Guided Reading (five items). Appendix A features this items on the column identified with “Original Version”.

The behaviors are scored on a Likert-type scale, ranging from 0 (*no evidence*) to 3 (*most of the time*), or 80% of the JBR interaction. The reported internal consistency indicator, measured by Cronbach's coefficients for each subscale, indicated high consistency (range = 0.88–0.91 for adult behaviors, 0.90–0.96 for child behaviors).

As for inter-rater reliability, the DesJardin and colleagues (2014) study used data from 20 dyads (12 parent-child dyads with normal hearing and eight parent-child

dyads with hearing loss; a total of 105 dyads with children ranging from 11 to 49 months of age participated on the study) to calculate the interobserver Percent Agreement (PA). The PA score showed 86% to 91% agreement for Adult Behaviors and ranged from 82% to 97% for Child Behaviors.

The decision to translate this scale was guided by the need for a specific yet practical tool to assess SBR behaviors that support language development with dyads with very young children, acquiring European Portuguese. Language assessments in early ages are challenging due to the rapid developmental changes, but they are highly valuable for early detection and intervention on potential difficulties. No such instrument has been found in Portuguese studies on SBR, and only a few are mentioned in international scientific literature.

Early Intervention Services in Portugal

In Portugal, a national system for Early Intervention (EI) was established in 2009 (Sistema de Intervenção Precoce na Infância, SNIPI), combining efforts from the Ministries of Health, Education, and Work and Social Services of the Portuguese Republic (Decree-Law no. 281/2009, 2009). There is a national coordination committee, regional sub-committees, and local intervention teams. The local intervention teams allocate and supervise professionals who work with families within their designated geographic area of operation, following nationally determined policies.

SNIPI aims to identify children at risk of serious developmental issues, aged zero to six years old, and provide intervention after an evaluation of the family's needs.

It supports families' access to available services and resources, and involves communities in providing collaborative support (Decree-Law no. 281/2009, 2009).

Professionals work with the children and their caregivers in a family-centered model and transdisciplinary philosophy, exchanging knowledge about child development and intervention strategies. In this context, professionals, families, and caregivers work collaboratively to provide learning experiences for children in their natural life settings and activities, tailoring them to their specific needs (ANIP, 2016). Families can also seek intervention provided by professionals working in the private sector in a collaborative approach with SNIPI services or as an alternative.

SBR aligns with the activities considered as good practices for early intervention according to SNIPI recommendations (ANIP, 2016), as it should be family-centered, routine-based, and implemented in natural learning settings. It is an evidence-based practice, although some professional development training might be necessary to better guide and empower families.

SBR in Portugal

In Portugal, few studies on SBR focus on very young children and family literacy (Soares de Resende, 2019). Most of these studies focus on preschool-aged children and settings, as well as parents' attitudes towards early literacy (Cruz, 2011; Leal et al., 2006; Pacheco, 2012; Peixoto et al., 2011).

The study by Soares de Resende (2019) developed an intervention program for early literacy (children aged six months to six years), aiming to teach parents

strategies and activities to foster reading with their children. This program was to be delivered by family nurses in proximity health services. However, this study does not approach an assessment tool for SBR.

Peixoto, Leal and Cadima's (2011) study is the only one found in Portuguese that presents a specific tool to assess SRB behaviors, but it is tailored for dyads with children aged three to eight years old. This instrument is a scale that focuses on adult behaviors and child behaviors concerning the socioemotional and instructional quality of the interactions during SBR. Socioemotional quality includes items such as physical proximity, positive affect, responsiveness and book sharing. As for instructional quality, researchers looked into use of language, support of comprehension, development appropriateness and references to print.

In 2019, a program to encourage parents to read with their children (ages zero to six) was authored by the Aga Khan Portugal Foundation and co-authored by Rizério Salgado, a medical doctor specializing in family medicine (Aga Khan Foundation Portugal, 2019). This program, named “Ler + dá Saúde” (meaning “Reading more is healthy”), consisted of materials to hand out to professionals and families. The professionals involved in implementing the program were family doctors and nurses. They received a booklet for professionals, which provided information about the impact of using literacy-supporting strategies with children on global development, as well as guidance on how to discuss this topic with parents and caregivers. There was some information specifically on practices related to SBR, presented as dialogic reading, which was diluted with less specific information about other activities that promote child development, such as playing, using nursery rhymes, or singing. A poster, shaped like a height

measurement ruler, is available for families as a handout, presenting information on attitudes and strategies for literacy development.

The National Reading Plan (Plano Nacional de Leitura 2027; PNL), the Portuguese Directorate-General of Health, the Nursing School of Lisbon, and the Portuguese Association of General Practice/Family Medicine promoted the “Ler + dá Saúde” program. Unfortunately, no data is available regarding the implementation of this program.

PNL also has a program named “Ler em Família” (meaning “Read as a family”), conducted in collaboration with municipalities. PNL is a national entity promoted by the Portuguese Ministries of Education, Culture, Science, Technology, and Higher Education, as well as the Ministry of Territorial Cohesion. It aims to develop and implement public policies for reading and training of readers, through the establishment of strategic partnerships with national, international, and regional institutions (Council of Ministers Resolution No. 48-D/2017, 2017).

The “Ler em Família” program worked with librarians from schools and municipalities. They received professional training to develop and/or implement local programs to promote family literacy. These programs included children from preschool years to the end of the formal mandatory education level (ages three to 18) (Plano Nacional de Leitura, 2024). Although part of the implementation did not explicitly consider younger children, the materials produced included information for them, such as a pamphlet with information for parents on the importance of early literacy and how to use some SBR strategies (Plano Nacional de Leitura, 2024).

The librarians who received training from the “Ler em Família” program reported that mobilizing families was very challenging, but once they joined the activities, they became very motivated (Plano Nacional de Leitura, 2024)

There seems to be an institutional recognition of the importance of literacy, using SBR strategies, for younger children. Yet some limitations are evident, such as an inefficient approach to families and the difficulty in measuring outcomes of the programs, mainly because their scope of intervention is too broad. Tools for assessing SBR behaviors in younger children, which can be integrated into existing intervention settings, may be a valuable contribution to overcoming these hurdles.

Methods

The translation and cultural adaptation process of this scale was guided by the works of Ortiz-Gutiérrez and Cruz-Avelar (2018) and the ITC Guidelines for Translating and Adapting Tests (2nd edition) (2017) and informed by the results of a pilot study. Figure 1 resumes the steps of the process.

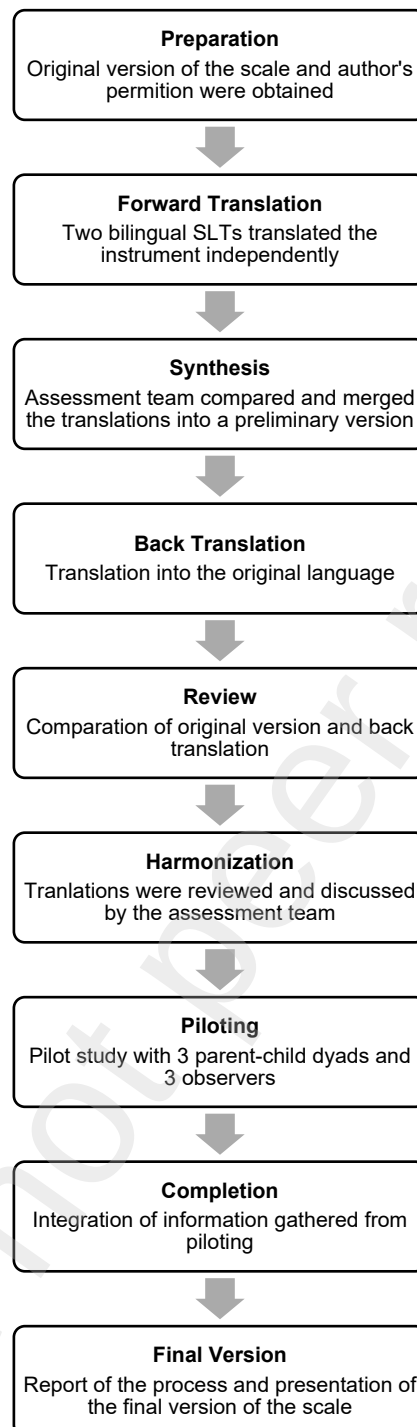


Figure 1 - Workflow of the translation and cultural adaptation process of the Responsive Adult-Child Engagement During Joint Book Reading Scale (EERAC-LPH)

The original version of *The Responsive Adult-Child Engagement During Joint Book Reading Scale* (RACED-JBR) was retrieved from a scientific paper by

DesJardin and colleagues (2014), which aimed to investigate language development and parent-child interactions during SBR. The principal author of RACED-JBR authorized and granted the translation into European Portuguese.

The scale was transcribed into a Word document, and two researchers translated it into European Portuguese. Both were Portuguese speech and language therapists (SLT) for more than fifteen years, knowledgeable about child development and parent-child interactions, fluent in English, and with experience working with bilingual families. One of these translators is herself bilingual, having grown up in a bilingual household and in an area of Portugal with American/Canadian influence, due to a strong culture of emigration.

In the next step, another SLT and a linguist compared both translations. They synthesized the information to ensure it was equivalent to the original version in terms of language and concepts.

Then, a translator back-translated it. This translator uses English daily and is certified by Cambridge University Press and Assessment with B2 level equivalence on the Common European Framework of Reference for Languages (CEFR) (Europe, 2020) as having “language skills to live and work independently in an English-speaking country or study on courses taught in English”. This translator lacked background knowledge in child development and was unaware of the translation’s ultimate purpose.

The principal researcher of this paper conducted a review of the back translation and the original version. This review was followed by a revision of all the steps up to this point in the translation and cultural adaptation process by the principal researcher and the assessment team, as used in the “Synthesis” step. A cover

sheet was added to explain the use of the RACED-JBR in simple terms, providing a place to register collected data during SBR moments (a single take or several in subsequent observations).

To assess the feasibility, clarity, and reliability of the ultimate translated version of the RACED-JBR, a pilot study was conducted. This step involves the application of the instrument in a small sample of dyads by observers who work in early intervention settings.

Three parent-child dyads were selected by convenience to provide a video sample of a SBR moment, reading with their child as they typically do (using a book of their choice, in a familiar setting, and for the usual amount of time). The parents signed a declaration of informed consent, allowing them to participate. They completed some information by filling out a questionnaire on demographics and home literacy environment. Figure 2 presents the demographic information about these dyads.

Dyad BB1	Dyad BB2	Dyad BB3
 22 months female, 3 rd child	 5 months, male, only child	 17 months, male, only child
 Mother, PhD	 Mother, Postgrad	 Father, Bachelor's
 3min 8sec	 5min 58sec	 3min 24sec

Figure 2 – Characterization of parent-child dyads participating in the pilot study

Three professionals working in early intervention from different training backgrounds were recruited, again by convenience, to serve as observers of the SBR moments. Table 1 presents information about these observers.

Table 1 - Information about the observers participating in the piloting step

Observer	Training background	Years of experience in Early Intervention settings	Intervention Settings in which the observer has worked
OB1	Speech and Language Therapist	23	• Private practice • Private Institution of Social Solidarity • Public School
OB2	Preschool Teacher	32	• Private Institution of Social Solidarity • Public School
OB3	Special Education and Rehabilitation Technician/ Psychomotrician	26	• Private Institution of Social Solidarity • Private practice

Each observer viewed the three recorded videos of SBR moments, accompanied by the principal researcher of this paper, on a computer. They scored the piloting version of the translation of the RACED-JBR into European Portuguese in a single sitting and completed an evaluation form regarding the use of the scale and its adequacy for their intervention settings.

The principal researcher of this paper gathered this data to analyze the observers' input in two perspectives: 1) insert possible adjustments in the phrasing of some items of the scale and adjust the cover sheet; 2) provide information on inter-observer reliability for this scale in this pilot study to compare with the original version.

Different metrics were used to analyze the inter-observer reliability. In line with the data provided by the developers of the original scale, the Percentage

Agreement (PA) calculation is based on the score of each item. The observers' scores were paired as follows: OB1.OB2, OB1.OB3, OB2.OB3. The number of items scored in agreement for each pair of observers was counted, divided by the total number of items, and converted into a percentage.

In addition, Cohen's Kappa was used with the Statistical Package for the Social Sciences (SPSS), grouping the three observers into identical pairs, to obtain a more robust indicator of agreement. The Intraclass Correlation Coefficient (ICC) was calculated to assess the overall consistency among observers in scoring the totals of sections of the scales, as well as the totals for Adult Behaviors and Child Behaviors.

During the Completion step of the process, the necessary adjustments that arose from the information gathered during the piloting were integrated. The developers of the original version were consulted to obtain their approval, and their suggestions were integrated as well. This led to the Final Version of the *Escala de Envolvimento Responsivo Adulto-Criança durante a Leitura Partilhada de Histórias (EERAC-LPH)*, the European Portuguese version of the RACED-JBR. Further information on these last steps is clarified in the Results section of this paper.

Results

Appendix A details the information gathered and prepared during the steps of the translation and cultural adaptation process from the forward translations to the review/harmonization. This appendix includes observations regarding the

choices made to address discrepancies in phrasing, terminology, or syntactic structure that arose.

The harmonized version of the scale in European Portuguese, presented in the last column of Appendix A, “Review/Harmonization”, was the one given to the observers for scoring during the piloting step of the translation and cultural adaptation process.

Feedback from the three observers highlighted both converging and diverging perspectives regarding the use of the scale. OB1 and OB3 indicated that the information was objective and sufficient, presented in a logical sequence, and allowed for sustained observation of behaviors during shared book reading. OB1 additionally suggested that scoring information should be included on the cover sheet, while OB3 commented that some items seemed not to be applicable for younger children.

In contrast, OB2 reported that the scoring related to time was confusing, expressing uncertainty about whether scoring should reflect the total duration of the SBR moment or the frequency of opportunities to exhibit the expected behaviors. This observer also indicated that the information provided on the cover sheet was insufficient and that scoring instructions should be presented at the beginning of the instrument.

Although OB2 considered the RACED-JBR easy to use, she noted that video recording would be necessary to support scoring and that real-time observation might not be feasible, emphasizing that “observations for both the caregiver and the child guide and help to understand how these behaviors can influence one another”.

Although the information from the evaluation forms made clear that the cover sheet should be revised and reorganized, the observers indicated that scale sections were adequate. The cover sheet was then revised using the comments from the observers: 1) the instructions and scoring details were brought to the first page; and 2) it was clarified that the scoring should reflect the frequency of behaviors during the full duration of the SBR moment. The developers of the original scale were then asked, via email, for their approval of the translation and cultural adaptation of the scale and for suggestions for improving the cover sheet if there were any they considered necessary. They indicated their approval and offered no notes on the cover sheet information.

The inter-observer reliability information for scoring this scale in the pilot study is presented below. The global PA determined for all items in the scale by all the observers and dyads is shown in Figure 3.

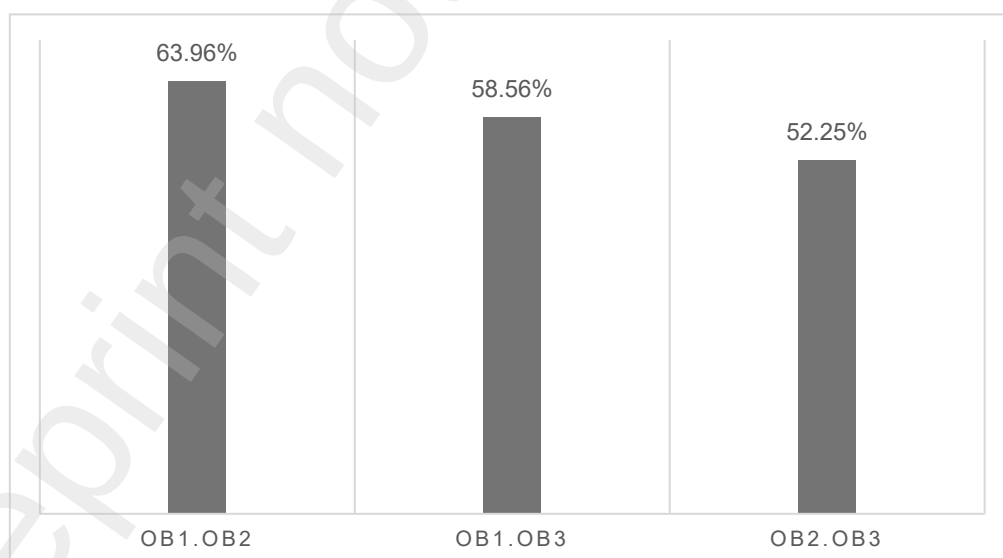


Figure 3 - Global inter-observer Percentage of Agreement (PA) for all scale items across the three observers

To obtain more detailed information, the PA was calculated by considering the scoring of all items on the scale for each dyad, for both Adult Behaviors and Child Behaviors. The data is shown in Table 2.

Table 2 - Percentage of Agreement (PA) for each dyad and total items, for Adult Behaviors and Child Behaviors

		OB1.OB2		OB1.OB3		OB2.OB3	
BB1	Adult	55%	□	30%	△	30%	△
	Child	53%	□	65%	○	59%	□
	Adult+Child	54%	□	46%	△	43%	△
BB2	Adult	55%	□	60%	○	45%	△
	Child	94%	◇	88%	◇	94%	◇
	Adult+Child	73%	◇	73%	◇	68%	○
BB3	Adult	60%	○	45%	△	25%	△
	Child	71%	◇	71%	◇	71%	◇
	Adult+Child	65%	○	57%	□	46%	△
BB1+BB2+BB3	Adult	57%	□	45%	△	33%	△
	Child	73%	◇	75%	◇	75%	◇
	Adult+Child	64%	○	59%	□	52%	□

Shape Code: △ <50% (Low) | □ 50-59% (Fair) | ○ 60-69% (Moderate) | ◇ ≥70% (Good)

Cohen's Kappa results are summarized in Table 3. Considering the scoring of all items on the scale for each dyad, as was done for the PA analysis for Adult Behaviors and Child Behaviors.

Table 3 - Cohen's Kappa for each dyad and total items, for Adult Behaviors and Child Behaviors

		OB1.OB2		OB1.OB3		OB2.OB3	
BB1	Adult	0,410	○	0,110	△	0,067	△
	Child	0,343	□	0,495	○	0,452	○
	Adult+Child	0,370	□	0,298	□	0,221	□
BB2	Adult	0,368	□	0,378	○	0,239	□
	Child	0,876	◇	0,746	◇	0,866	◇
	Adult+Child	0,566	○	0,581	○	0,464	○
BB3	Adult	0,450	○	0,228	□	0,107	△
	Child	0,553	○	0,548	○	0,509	○
	Adult+Child	0,497	○	0,386	□	0,260	□
BB1+BB2+BB3	Adult	0,409	□	0,247	□	0,141	△
	Child	0,568	○	0,589	○	0,576	○
	Adult+Child	0,480	○	0,418	○	0,312	□

Shape Code: △ <0.20 (Slight) | □ 0.21-0.40 (Fair) | ○ 0.41-0.60 (Moderate) |

◇ 0.61-0.80 (Substantial)

The ICC was calculated for scoring totals of the Adult Behaviors' global score and its four sections' scores, as well as the Child Behaviors' global score and its three sections' scores. The results are displayed in Table 4.

Table 4 - Intraclass Correlation Coefficient (ICC) for total scores between observer pairs

	ICC Value	Reliability Level
OB1 vs OB2	0.923	Excellent
OB1 vs OB3	0.921	Excellent
OB2 vs OB3	0.788	Good

ICC interpretation: <0.50 Poor | 0.50-0.75 Moderate | 0.75-0.90 Good | >0.90 Excellent

The Final Version of the *Escala de Envolvimento Responsivo Adulto-Criança durante a Leitura Partilhada de Histórias (EERAC-LPH)*, the European Portuguese version of the RACED-JBR, is available in Appendix B.

Discussion

The importance of SBR for language development is well-documented. However, there is a lack of research with dyads with very young children, namely, before three years old. In Portugal, research on SBR and language development has been concentrated in the preschool and early school years, with the aim of using this practice to support formal literacy.

An assessment instrument, such as the RACED-JBR, was only found in Portuguese SBR scientific literature for children aged three to eight years old (Peixoto et al., 2011). The Portuguese version of the RACED-JBR constitutes a critical addition to the tools available for early intervention professionals to guide their delivery of family-centered and routine-based interventions with SBR, in a country that provides a vast network of early intervention services by law.

The PA inter-observer reliability values of the original version of the RACED-JBR were above 80% agreement, which is considered acceptable (McHugh, M. L., 2012). The pilot study conducted for the Portuguese version yielded considerably lower results, which may indicate that observers need practice and/or training to improve the agreement in their observations. The observers in the original version of RACED-JBR (DesJardin et al., 2014) were clearly more experienced than the observers in this pilot study for the Portuguese version, which studied and used the scale on only a single occasion, emphasizing that the use of this scale

requires prior reading about its implementation and practice in observation and use.

When the PA inter-observer reliability was calculated for each dyad and for Adult and Child Behaviors, it became clear that observers concurred more frequently in the observation of Child Behaviors. In observation of the younger child, the PA was in line with the original version, which appears to have occurred because more behaviors were absent and were efficiently coded for this reason. This highlights the need for more practice in using the scale.

Even though the study of the original version of the scale only included children from 11 months of age, and a routine for SBR is established around 15 to 17 months of age (Heller & Rohlfing, 2017), the scale allows the documentation of emerging adult and child SBR behaviors in dyads with younger children. Using the scale items to discuss SBR with caregivers from an early stage may encourage the frequency of this activity and facilitate the establishment of an SBR routine.

Cohen's Kappa was calculated to complement the Percentage of Agreement, as PA does not distinguish between true agreement and agreement that may occur by chance (McHugh, M. L., 2012). Although no reference values are available from the original version of the scale, Kappa provides additional information on inter-observer reliability in this pilot study. Overall, most Kappa values were above 0.20, indicating fair agreement (Landis & Koch, 1977). Lower values were primarily observed in Adult Behaviors, which is consistent with the lower PA values obtained for this domain. Taken together, these results suggest that agreement was more difficult to achieve for Adult Behaviors, reinforcing the need

for prior training and calibration when the scale is used by observers with different professional backgrounds

Analyzing Cohen's Kappa for the Adult and Child Behaviors for the three dyads, it is observed that there is a fair (0.21–0.40) to moderate (0.41–0.60) agreement (Landis & Koch, 1977).

Using the total scores of each section of the scale, the ICC was calculated to evaluate inter-observer global consistency. The values obtained indicate a good to excellent reliability (Koo, T. K. & Li, 2016). It seems that the reported high internal consistency indicator of the Adult Behaviors and Child Behaviors sections of the original version is protective of the inter-observer reliability of the global scale. As such, professionals with less experience on the scale should incorporate guidance for parents from sections of the scale, rather than relying solely on individual items

Considering the suggestion of one of the observers in the pilot study, SBR moments can be videotaped with the family's permission, which can facilitate scoring of the scale. The video can also be used as a training tool for parents.

Some limitations of this study, considering the indications of Ortiz-Gutiérrez and Cruz-Avelar (2018) and The ITC Guidelines for Translating and Adapting Tests (Second edition) (2017), include the small amount of dyads, observers' low knowledge about the instrument prior to its use, and the fact that the original developers were only consulted on the final version step of the translation and cultural adaptation process.

In conclusion, the Portuguese version of the RACED-JBR, the *Escala de Envolvimento Responsivo Adulto-Criança durante a Leitura Partilhada de*

Histórias (EERAC-LPH), is a specific tool to guide the observation and assessment of SBR behaviors that support language development in dyads with very young children. It fills a gap in SBR research in Portugal and can be used for scientific purposes and/or to inform intervention in the field. Training and practice are necessary to improve inter-observer reliability; therefore, professionals are encouraged to discuss its use within their team. This can be considered an opportunity for professional training within Early Intervention professional teams.

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Appendix A - Detailed description of the steps of the translation and cultural adaptation process for the RACED-JBR from forwards translations up to the review/harmonization

Original Version		Forward Translation 1	Forward Translation 2	Synthesis	Back Translation	Observations	Review/ Harmonization
Title	The Responsive Adult-Child Engagement During JBR (RACED-JBR) Scale	Escala de envolvimento responsivo adulto-criança durante Leitura Conjunta de Livros (RACED-JBR)	Escala de Envolvimento Responsivo Adulto-Criança durante a Leitura Partilhada de Histórias (EERAC-LPH)	Escala de Envolvimento Responsivo Adulto-Criança durante a Leitura Partilhada de Histórias (EERAC-LPH)	Adult-Child Responsive Engagement during Shared Story Reading Scale (EERAC-LPH)	- "Leitura Partilhada de Histórias" translation for Shared Book Reading chosen after investigating Portuguese scientific writings on the subject - Back translation indicates only word order is different and meaning is maintained	Escala de Envolvimento Responsivo Adulto-Criança durante a Leitura Partilhada de Histórias (EERAC-LPH)
Header Adult Behaviors	Parent/Caregiver Behaviors	Comportamentos dos pais/cuidadores	Comportamentos parentais/do cuidador	Comportamentos parentais/do cuidador	Parental/caregiver behaviours	- "Parentais" (parental) was considered more comprehensive than "dos pais" (can be read as "of the fathers")	Comportamentos parentais/do cuidador
Section A. Title	A. Engagement	A. Envolvimento	A. Envolvimento	A. Envolvimento	A. Involvement	- Equivalent term on the back translation	A. Envolvimento
	1. Sustains interest and attention through nonverbal behaviors (e.g., eye contact, facial expressions, laughing, touch).	1. Mantém interesse e atenção através de comportamentos não verbais (p.e. contacto ocular, expressões faciais, riso, toque).	1. Mantém interesse e atenção através de comportamentos não verbais (p.e. contacto ocular, expressões faciais, riso, toque).	1. Mantém interesse e atenção através de comportamentos não verbais (ex.: contacto ocular, expressões faciais, riso, toque).	1. Maintains interest and attention through nonverbal behaviours (e.g., eye contact, facial expressions, laughter, touch).	- Change of "p.e." for "ex." because it might be more recognizable for the general public - Equivalent terms on the back translation	1. Mantém interesse e atenção através de comportamentos não verbais (ex.: contacto ocular, expressões faciais, riso, toque).
	2. Provides positive verbal feedback (e.g., "Good job!" "You did it!" "You're right!").	2. Providencia feedback verbal positivo (p.e. "Bom trabalho!" "Conseguiste!" "Estás certo!").	2. Fornece reforço positivo verbalmente (p.e. "Boa!", "Conseguiste!", "É isso mesmo!").	2. Fornece reforço positivo verbalmente (ex.: "Boa!", "Conseguiste!", "É isso mesmo!").	2. Provide positive reinforcement verbally (e.g., "Good!", "You did it!", "That's right!").	- Having equivalent meaning, the verb "Fornecer" was chosen over "providenciar" because it was considered more colloquial	2. Fornece reforço positivo verbalmente (ex.: "Boa!", "Conseguiste!", "É isso mesmo!").
	3. Utilizes emotional language and intonation for child (e.g., "There's Spot - Hi Spot!").	3. Utiliza linguagem emocional e entoação para criança (p.e. "Aqui está o Spot - Olá Spot!").	3. Dirige linguagem emocional e entoação à criança (p.e. "Olha o gatinho - Olá gatinho!").	3. Dirige linguagem emocional e entoação à criança (ex.: "Olha o gatinho! - Olá gatinho!").	3. Direct emotional language and intonation to the child (e.g., "Look at the kitty! - Hello, kitty!").	- The verb "Dirigir" was considered more demonstrative of the intention of the phrasing	3. Dirige linguagem emocional e entoação à criança (ex.: "Olha o gatinho! - Olá gatinho!").

					- Reference to a specific book character was generalized - Back translation indicates that the meaning is maintained	
4. Makes continued efforts to engage child in story/interaction if initial attempt does not work.	4. Faz um esforço contínuo para envolver a criança na história/interação se a tentativa inicial não funcionar.	4. Faz várias tentativas para envolver a criança na história/interação se a tentativa inicial não funciona.	4. Faz várias tentativas para envolver a criança na história/interação se a tentativa inicial não funcionar.	4. If the initial attempt is unsuccessful, several attempts should be made to engage the child in the story/interaction.	- The phrasing “Faz várias tentativas” (Tries several times) was chosen instead of “Faz um esforço” because this last phrasing can be read as struggling - Back translation indicates that the meaning is maintained	4. Faz várias tentativas para envolver a criança na história/interação se a tentativa inicial não funcionar.
5. Attempts to promote and maintain close proximity to child (e.g., child on lap, child close by, parent attempts to move toward the child).	5. Tenta promover e manter proximidade física com a criança (p.e. criança no colo, criança por perto, progenitores tentam mover-se ao encontro da criança).	5. Tenta promover e manter proximidade física com a criança (p.e. criança no colo, criança junto a si, adulto move-se para junto da criança).	5. Tenta promover e manter proximidade física com a criança (ex.: criança no colo, criança junto a si, adulto move-se para junto da criança).	5. Try to promote and maintain physical proximity with the child (e.g., child on lap, child by your side, adult approach the child).	- Equivalent terms phrasing “por perto/junto a si” and “ao encontro/para junto” - Term “adulto” (adult) considered more comprehensive than “progenitores” (“responsibles for birthing” in literal translation) - Back translation indicates that the meaning is maintained	5. Tenta promover e manter proximidade física com a criança (ex.: criança no colo, criança junto a si, adulto move-se para junto da criança).
6. Monitors child's comprehension by looking at child's behaviors (e.g., facial expressions, child movements) and modifying interaction accordingly (e.g., repeating words, re-	6. Monitoriza a compreensão da criança pela observação dos comportamentos desta (p.e. expressões faciais, movimentos da criança) e modifica a interação de acordo com o observado (p.e.	6. Monitoriza a compreensão da criança estando atento aos comportamentos dela (p. e. expressões faciais, movimentos da criança) e ajusta a interação (p.e. repetindo palavras,	6. Monitoriza a compreensão da criança estando atento aos comportamentos desta (ex.: expressões faciais, movimentos da criança) e ajusta a interação (ex.: repete palavras, procurando a atenção da criança).	6. Monitors the child's understanding by paying attention to the child's behaviours (e.g., facial expressions, child's movements) and adjusts the interaction (e.g., repeats words, seeking the child's attention).	- Equivalent terms phrasing “pela observação/estando atento” but the language is more direct in translation 2 - Back translation indicates that the meaning is maintained	6. Monitoriza a compreensão da criança estando atento aos comportamentos desta (p. ex.: expressões faciais, movimentos da criança) e ajusta a interação (ex.: repete palavras,

	engaging child as needed).	repetindo palavras, voltar a envolver a criança como necessário).	procurando a atenção da criança).			procurando a atenção da criança).	
Section B. Title	B. Literacy Strategies	B. Estratégias de Literacia	B. Estratégias de Literacia	B. Estratégias de Literacia	B. Literacy Strategies	- Full correspondence	B. Estratégias de Literacia
	1. Points to/labels pictures/objects in the book.	1. Aponta para/nomeia imagens/objetos no livro.	1. Aponta/nomeia imagens/objetos no livro.	1. Aponta/nomeia imagens/objetos no livro.	1. Points to/names images/objects in the book.	- Equivalent term on the back translation (pictures/images)	1. Aponta/nomeia imagens/objetos no livro.
	2. Poses and solicits questions about the book's content (e.g., to enhance text or expand topic).	2. Coloca e solicita questões sobre o conteúdo do livro (p.e. para realçar texto ou expandir tópico).	2. Mostra e solicita questões sobre o conteúdo do livro (p.e. para destacar o texto ou expandir o tópico).	2. Mostra e solicita questões sobre o conteúdo do livro (ex.: para destacar o texto ou expandir o tópico).	2. Displays and prompts questions about the book's content (e.g., to highlight text or expand on a topic).	- Equivalent terms phrasing "coloca/mostra" - Equivalent terms on the back translation (poses/displays, solicits/prompts, enhance/ highlight) indicate that the meaning is maintained	2. Mostra e solicita questões sobre o conteúdo do livro (ex.: para destacar o texto ou expandir o tópico).
	3. Points to words/letters/sentences while reading.	3. Aponta para palavras/letras/frases quando está a ler.	3. Aponta para palavras/letras/frases enquanto lê.	3. Aponta para palavras/letras/frases enquanto lê.	3. The parent/caregiver points to words/letters/phrases as they read.	- Equivalent terms phrasing "quando está a ler/enquanto lê" - Back translation indicates that the meaning is maintained	3. Aponta para palavras/letras/frases enquanto lê.
	4. Refers to characters or setting.	4. Refere-se a personagens ou contextos/cenários.	4. Faz referências aos personagens ou cenários.	4. Faz referências a personagens ou cenários.	4. Makes references to characters or settings.	- Equivalent verb tense use "refere-se/faz referências" - Back translation indicates that the meaning is maintained	4. Faz referências a personagens ou cenários.
Section C. Title	C. Teacher Techniques	C. Técnicas de professor	C. Técnicas de Ensino	C. Técnicas de Ensino	C. Teaching Techniques	- "Teaching" chosen over "Teacher" because it was though to be equivalent but the later more comprehensive	C. Técnicas de Ensino
	1. Relates content of book to prior experience (e.g., "Look,	1. Relaciona o conteúdo do livro com experiências anteriores (p.e. "Olha, há um cão	1. Relaciona o conteúdo do livro a experiências prévias (p.e. "Olha, é um	1. Relaciona o conteúdo do livro a experiências prévias (ex.: "Olha, é um	1. Relates the book's content to previous experiences (e.g.,	- Equivalent terms "anteriores/prévias"	1. Relaciona o conteúdo do livro a experiências prévias (ex.: "Olha, é

	there's a doggie just like our dog, Otis").	igual ao nosso cão, Otis").	cãozinho como o nosso").	cãozinho como o nosso!").	"Look, it's a puppy just like ours!").	- reference to a specific dog name was generalized - Back translation indicates that the meaning is maintained - Equivalent terms phrasing "com base/ a partir" - Back translation indicates that the meaning is maintained	um cãozinho como o nosso!").
	2. Elaborates on child ideas.	2. Elabora/complexifica com base nas ideias da criança.	2. Elabora a partir das ideias da criança.	2. Elabora a partir das ideias da criança.	2. Build on the child's ideas.	- Adjective ("novo") after noun ("vocabulário") is the more typical phrasing in Portuguese - Back translation indicates that the meaning is maintained	2. Elabora a partir das ideias da criança.
	3. Defines new vocabulary.	3. Define novo vocabulário.	3. Define vocabulário novo.	3. Define vocabulário novo.	3. Define new vocabulary.	- Equivalent terms "previsões/ antecipação" - Back translation indicates that the meaning is maintained	3. Define vocabulário novo.
	4. Solicits predictions.	4. Solicita previsões.	4. Solicita antecipação.	4. Solicita antecipação.	4. Request an advance.	- The phrasing "Faz um resumo" (summarize) was chosen over "Revê" because this last phrasing can be literally read as "see again" - Back translation indicates that the meaning is maintained	4. Solicita antecipação.
	5. Reviews beginning, middle, and end of book.	5. Revê princípio, meio e fim do livro.	5. Faz um resumo do início, meio e final do livro.	5. Faz um resumo do início, meio e final do livro.	5. Summarise the beginning, middle, and end of the book.	- Full correspondence	5. Faz um resumo do início, meio e final do livro.
Section D. Title	D. Interactive Reading	D. Leitura interativa	D. Leitura Interativa	D. Leitura Interativa	D. Interactive Reading	- Full correspondence	D. Leitura Interativa
	1. Gives child opportunity to hold the	1. Dá oportunidade à criança de segurar o	1. Dá oportunidade à criança de segurar o livro e virar as páginas.	1. Dá oportunidade à criança de segurar o livro e virar as páginas.	1. It gives the child the opportunity to hold the	- Full correspondence	1. Dá oportunidade à criança de segurar o livro e virar as páginas.

	book and turn the pages.	livro e de virar as páginas.			book and turn the pages.	
	2. Responds to child's vocalizations or answers child's questions.	2. Responde às vocalizações da criança ou responde às questões da criança.	2. Responde às vocalizações da criança ou responde às questões dela.	2. Responde às vocalizações da criança ou responde às questões dela.	2. Responds to the child's vocalisations or answers the child's questions.	- Use of pronoun "dela" ("hers" as child is a feminine noun in Portuguese) instead of repeating "the child's" - Full correspondence
	3. Follows child's lead (e.g., allows child to make choices).	3. Segue a liderança da criança (p.e. permite que a criança faça escolhas).	3. Segue a iniciativa da criança (p.e. permite que a criança faça escolhas).	3. Segue a iniciativa da criança (ex.: permite que a criança faça escolhas).	3. Follows the child's initiative (e.g., allows the child to make choices).	- Equivalent terms "liderança/iniciativa" - Back translation indicates that the meaning is maintained
	4. Utilizes appropriate speed and volume of speech.	4. Usa velocidade e volume de fala apropriadas.	4. Usa uma velocidade e volume de fala apropriados.	4. Usa uma velocidade e volume de fala apropriados.	4. Use appropriate speaking speed and volume.	- Forwards translations only diverge in the use of a functional word - Back translation indicates that the meaning is maintained
	5. Allows time for child to process, observe, or respond (e.g., does not talk continuously to fill up silence, but rather allows pauses).	5. Dá tempo para a criança processar, observar ou responder (p.e. não fala continuamente para preencher silêncios, mas antes permite as pausas).	5. Dá tempo para a criança processar, observar, ou responder (p.e. não fala continuamente para ocupar o silêncio, permitindo pausas).	5. Dá tempo para a criança processar, observar ou responder (ex. não fala continuamente para ocupar o silêncio, permitindo pausas).	5. Give the child time to process, observe, or respond (e.g., the adult does not talk continuously to fill the silence, allowing pauses).	- Forward translation 2 uses a simplified syntactical form ("mas antes permite/permitindo") - Back translation indicates that the meaning is maintained
Parent Scores Registry	Parent Total Scores A____ B____ C____ D____ Total_____	Cotação Total Pais A____ B____ C____ D____ Total_____	Cotação Total Pais A____ B____ C____ D____ Total_____	Cotação Total Pais A____ B____ C____ D____ Total_____	Total Parents Quotation A____ B____ C____ D____ Total_____	- Equivalent term on the back translation Cotação Total Pais A____ B____ C____ D____ Total_____
Header Child Behaviors	Child Behaviors	Comportamentos da criança	Comportamentos da criança	Comportamentos da criança	Child behaviours	- Full correspondence Comportamentos da criança
Section A. Title	A. Engagement	A. Envolvimento	A. Envolvimento	A. Envolvimento	A. Involvement	- Equivalent term on the back translation A. Envolvimento
	1. Seeks and maintains physical proximity.	1. Procura e mantém proximidade física.	1. Procura e mantém proximidade física.	1. Procura e mantém proximidade física.	1. Seeks and maintains physical proximity.	- Full correspondence 1. Procura e mantém proximidade física.
	2. Visually attentive (e.g., looking at the book or the parent).	2. Atento visualmente (p.e. olhar para o livro ou para o pai/mãe).	2. Está visualmente atento (p.e. a olhar	2. Está visualmente atento (ex.: a olhar para	2. The child is visually attentive (e.g., looking	- It was considered important for the 2. Está visualmente atento (ex.: a olhar para

		para o livro ou para o adulto).	o livro ou para o adulto).	at the book or the adult).	sentence to have a verb - Back translation indicates that the meaning is maintained - Equivalent terms "ouve/escuta", but "escuta" implies active engagement	o livro ou para o adulto).
3. Listens to the story (e.g., is quiet when adult is speaking) and sustains interest/engagement.	3. Ouve a história (p.e. está quieta quando o adulto está a falar) e mantém envolvimento.	3. Escuta a história (p.e. está em silêncio enquanto o adulto fala) e mantém o interesse/envolvimento.	3. Escuta a história (ex.: está em silêncio enquanto o adulto fala) e mantém o interesse/envolvimento.	3. Listens to the story (e.g., remains silent while the adult speaks) and maintains interest/involvement.	- "quieta" translates to "being still" so "está em silêncio" (is silent) was considered a closer translation to the original meaning - Back translation indicates that the meaning is maintained - Equivalent terms "aparenta/mostra-se" - Similar terms "room", which translates literally for "bedroom", and "sala", which translates literally for "living room" or a multipurpose room - Back translation indicates that the meaning is maintained	3. Escuta a história (ex.: está em silêncio enquanto o adulto fala) e mantém o interesse/envolvimento.
4. Appears "settled" for the interaction (e.g., does not wander around the room).	4. Aparenta estar "acomodada" para a interação (p.e. não vagueia pelo quarto).	4. Mostra-se "acomodado" para a interação (p.e. não vagueia pela sala).	4. Mostra-se "acomodado" para a interação (ex.: não vagueia pela sala).	4. He appears "settled" for interaction (e.g., the child does not wander around the room).	- The phrasing "por sua iniciativa" (as per her initiative) was chosen instead of "sozinha" because this last phrasing can be read as alone - Equivalent terms "trata bem/é cuidadoso"	4. Mostra-se "acomodado" para a interação (ex.: não vagueia pela sala).
5. Holds the book and/or turns the pages on own (e.g., treats book nicely, turns pages carefully).	5. Segura o livro e/ou vira as páginas sozinha (p.e. trata bem o livro, vira páginas com cuidado).	5. Segura o livro e/ou muda a página por sua iniciativa (p.e. é cuidadoso com o livro e a virar as páginas).	5. Segura o livro e/ou muda a página por sua iniciativa (ex.: é cuidadoso com o livro e a virar as páginas).	5. Holds the book and/or turns the page on his initiative (e.g., is careful with the book and when turning pages).		5. Segura o livro e/ou muda a página por sua iniciativa (ex.: é cuidadoso com o livro e a virar as páginas).

						- Back translation indicates that the meaning is maintained	
Section B. Title	B. Interactive Reading	B. Leitura Interativa	B. Leitura Interativa	B. Leitura Interativa	B. Interactive Reading	- Full correspondence	B. Leitura Interativa
	1. Responds (verbally or nonverbally) to questions about the book.	1. Responde (verbalmente ou não verbalmente) a questões sobre o livro.	1. Responde (verbalmente ou de forma não-verbal) a questões sobre o livro.	1. Responde (verbalmente ou de forma não verbal) a questões sobre o livro.	1. Answer (verbally or nonverbally) questions about the book.	- Equivalent terms “não verbalmente/de forma não verbal” - Back translation indicates that the meaning is maintained	1. Responde (verbalmente ou de forma não verbal) a questões sobre o livro.
	2. Attempts to relate the book’s content to personal experiences or previous books.	2. Tenta relacionar o conteúdo do livro com as suas experiências pessoais ou livros anteriores.	2. Tenta relacionar o conteúdo do livro com experiências pessoais prévias ou com outros livros.	2. Tenta relacionar o conteúdo do livro com experiências pessoais prévias ou com outros livros.	2. Try to relate the book’s content to previous personal experiences or other books.	- Equivalent terms “anteriores/prévias” and “livros anteriores/outros livros” - Back translation indicates that the meaning is maintained	2. Tenta relacionar o conteúdo do livro com experiências pessoais prévias ou com outros livros.
	3. Offers spontaneous ideas about the story or related topics.	3. Dá ideias espontâneas sobre a história ou sobre tópicos relacionados.	3. Fornece ideias sobre a história ou tópicos relacionados espontaneamente.	3. Fornece ideias sobre a história ou tópicos relacionados espontaneamente.	3. He provides ideas about the story or related topics spontaneously.	- Equivalent terms “Dá/Fornece” - Back translation indicates that the meaning is maintained	3. Fornece ideias sobre a história ou tópicos relacionados espontaneamente.
	4. Poses questions about the story and related topics.	4. Coloca questões sobre a história e tópicos relacionados.	4. Coloca questões sobre a história ou tópicos relacionados.	4. Coloca questões sobre a história ou tópicos relacionados.	4. Ask questions about the story or related topics.	- Full correspondence of forward translations - Equivalent term on the back translation	4. Coloca questões sobre a história ou tópicos relacionados.
	5. Refers to characters or setting.	5. Refere-se a personagens ou contextos/cenários.	5. Faz referências a personagens ou cenários.	5. Faz referências a personagens ou cenários.	5. Makes references to characters or settings.	- Equivalent verb tense use “refere-se/faz referências” - Equivalent term on the back translation	4. Faz referências a personagens ou cenários.
	6. Recalls information from earlier in the story.	6. Lembra-se de informação inicial da história.	6. Refere informação sobre algo que se passou anteriormente na história.	6. Refere informação sobre algo que se passou anteriormente na história.	6. Quote information about something that happened earlier in the story.	- The phrasing “Refere informação” (mentions information) was chosen instead of “Lembra-se” because this last phrasing can be read as “remembers”	4. Refere informação sobre algo que se passou anteriormente na história.

						- Equivalent term on the back translation	
	7. Makes predictions about what will happen next.	7. Faz previsões sobre o que irá acontecer a seguir.	7. Antecipa o que poderá acontecer de seguida.	7. Antecipa o que poderá acontecer de seguida.	7. Anticipate what might happen next.	- Equivalent terms "previsões/ antecipa" - Back translation indicates that the meaning is maintained	7. Antecipa o que poderá acontecer de seguida.
Section C. Title	C. Guided Reading	C. Leitura guiada	C. Leitura Guiada	C. Leitura Guiada	C. Guided Reading	- Full correspondence	C. Leitura Guiada
	1. Points to words while parent is reading.	1. Aponta para palavras enquanto o progenitor está a ler.	1. Aponta palavras enquanto o adulto está a ler.	1. Aponta palavras enquanto o adulto está a ler.	1. While the adult is reading, the child points out words.	- Term "adulto" (adult) considered more comprehensive than "progenitor" ("responsible for birthing" in literal translation) - Back translation indicates that the meaning is maintained	1. Aponta palavras enquanto o adulto está a ler.
	2. Points to/comments on pictures and labels objects and/or identifies words.	2. Aponta para/comenta sobre imagens e nomeia objetos e/ou identifica palavras.	2. Aponta para imagens ou faz comentários sobre elas e nomeia objetos e/ou identifica palavras.	2. Aponta para imagens ou faz comentários sobre estas, e nomeia objetos e/ou identifica palavras.	2. Points to or comments on pictures, and names or identifies objects and/or words.	- It was considered that forward translation 2 had a closer relation to the meaning of the original - Back translation indicates that the meaning is maintained	2. Aponta para imagens ou faz comentários sobre estas, e nomeia objetos e/ou identifica palavras.
	3. Repeats words/phases with or after the adult speaks them (e.g., imitations).	3. Repete palavras/frases com ou após o adulto as verbalizar (p.e. imitações).	3. Repete palavras/frases com o adulto ou depois deste as dizer (p.e. imitações).	3. Repete palavras/frases com o adulto ou depois deste as dizer (ex.: imitações).	3. Repeats words/phases with the adult or after the adult says them (e.g., imitations).	- Equivalent terms "verbalizar/dizer" - Back translation indicates that the meaning is maintained	3. Repete palavras/frases com o adulto ou depois deste as dizer (ex.: imitações).
	4. Displays positive nonverbal feedback/reactions (e.g., laughing, smiling).	4. Demonstra feedback não-verbal positivo (p.e. rir, sorrir).	4. Mostra respostas/reações não-verbais positivas (p.e. rir, sorrir).	4. Apresenta reações não verbais positivas (ex.: rir, sorrir).	4. Presents positive nonverbal reactions (e.g., laughing, smiling).	- During the synthesis step, it was considered that "reações" and feedback/"respostas" could be contained in just one word	4. Apresenta reações não verbais positivas (ex.: rir, sorrir).

						- Back translation indicates that the meaning is maintained - Equivalent terms “demonstra/mostra” - Phrasing “interação com um livro de histórias” could be read as interacting with a book instead of while reading a book (“interação durante a leitura de histórias”) - Back translation indicates that the meaning is maintained	
	5. Displays overall enjoyment of storybook interaction.	5. Demonstra prazer geral na interação com um livro de histórias.	5. Mostra prazer na interação durante a leitura de histórias.	5. Mostra prazer na interação durante a leitura de histórias.	5. Shows pleasure in interacting while reading stories.		5. Mostra prazer na interação durante a leitura de histórias.
Child Scores Registry	Child Total Scores A____ B____ C____ Total_____	Cotação Total Criança A____ B____ C____ Total_____	Cotação Total Criança A____ B____ C____ Total_____	Cotação Total Criança A____ B____ C____ Total_____	Total Child Quotation A____ B____ C____ Total_____	- Equivalent term on the back translation	Cotação Total Criança A____ B____ C____ Total_____
Caption/ Scores Key	SCORE (0–3) 3 = most of the time (80% of time) 2 = some of the time (50%–79% of time) 1 = infrequently (<49% of time) 0 = no evidence	SCORE (0–3) 3 = maioria das vezes (80% do tempo) 2 = algumas vezes (50%–79% do tempo) 1 = pouco frequente (<49% do tempo) 0 = sem evidência	Cotação (0-3) 3 = a maioria das vezes (80% do tempo) 2 = algumas vezes (50%-79% do tempo) 1 = poucas vezes (menos de 49% do tempo) 0 = não observado	Cotação (0-3) 3 = a maioria das vezes (80% do tempo) 2 = algumas vezes (50%-79% do tempo) 1 = poucas vezes (menos de 49% do tempo) 0 = não observado	Quotation ((0-3) 3 = most of the time (80% of the time) 2 = sometimes (50%-79% of the time) 1 = a few times (less than 49% of the time) 0 = not observed	- The phrasing “menos de”, as in “less than”, was deemed easier to understand than de mathematical symbol “<” - Equivalent terms “sem evidência/não observado” - Equivalent term on the back translation “score/quotation”	Cotação (0-3) 3 = a maioria das vezes (80% do tempo) 2 = algumas vezes (50%-79% do tempo) 1 = poucas vezes (menos de 49% do tempo) 0 = não observado

Escala de Envolvimento Responsivo Adulto-Criança durante a Leitura Partilhada de Histórias (EERAC-LPH)¹

Esta escala foi preparada para avaliar os comportamentos de cuidadores e crianças que facilitam o desenvolvimento da linguagem durante a leitura partilhada de histórias (LPH). Foi pensada principalmente para idades anteriores à educação pré-escolar (0-3 anos).

O observador pode fazer os registos que considerar necessários durante o momento de LPH. Para cotar a escala deve ser usada a chave indicada abaixo, tendo em conta a frequência dos comportamentos observados em toda a duração do momento de LPH.

Chave de cotação: 3 = a maioria das vezes (80% do tempo)
2 = algumas vezes (50%-79% do tempo)
1 = poucas vezes (menos de 49% do tempo)
0 = não observado

A descrição dos itens da escala pode ser usada para aconselhar os cuidadores quanto a comportamentos facilitadores do desenvolvimento da linguagem a implementar e/ou consolidar. A escala pode ser usada para monitorizar o progresso do uso da LPH com o objetivo de facilitar o desenvolvimento da linguagem.

Nome da criança _____

Data de nascimento da criança ____ / ____ / ____

Cuidador _____

Data da observação	Idade da criança	Duração da LPH	Observações	Indicações ao cuidador

¹ Tradução e validação cultural da *The Responsive Adult-Child Engagement During Joint Book Reading Scale (RACED-JBR)* (DesJardin, 2011) por Ana Sofia Lopes (Terapeuta da Fala, anasofslopes@gmail.com)

Comportamentos parentais/do cuidador		Comportamentos da criança	
A. Envolvimento		A. Envolvimento	
1. Mantém interesse e atenção através de comportamentos não verbais (ex.: contacto ocular, expressões faciais, riso, toque).		1. Procura e mantém proximidade física.	
2. Fornece reforço positivo verbalmente (ex.: “Boa!”, “Conseguiste!”, “É isso mesmo!”).		2. Está visualmente atento (ex.: a olhar para o livro ou para o adulto).	
3. Dirige linguagem emocional e entoação à criança (ex.: “Olha o gatinho! – Olá gatinho!”).		3. Escuta a história (ex.: está em silêncio enquanto o adulto fala e mantém o interesse/envolvimento).	
4. Faz várias tentativas para envolver a criança na história/interação se a tentativa inicial não funcionar.		4. Mostra-se “acomodado” para a interação (ex.: não vagueia pela sala).	
5. Tenta promover e manter proximidade física com a criança (ex.: criança no colo, criança junto a si, adulto move-se para junto da criança).		5. Segura o livro e/ou muda a página por sua iniciativa (ex.: é cuidadoso com o livro e a virar as páginas).	
6. Monitoriza a compreensão da criança estando atento aos comportamentos desta (p. ex.: expressões faciais, movimentos da criança) e ajusta a interação (ex.: repete palavras, procurando a atenção da criança).			
B. Estratégias de Literacia		B. Leitura Interativa	
1. Aponta/nomeia imagens/objetos no livro.		1. Responde (verbalmente ou de forma não verbal) a questões sobre o livro.	
2. Mostra e solicita questões sobre o conteúdo do livro (ex.: para destacar o texto ou expandir o tópico).		2. Tenta relacionar o conteúdo do livro com experiências pessoais prévias ou com outros livros.	
3. Aponta para palavras/letras/frases enquanto lê.		3. Fornece ideias sobre a história ou tópicos relacionados espontaneamente.	
4. Faz referências a personagens ou cenários.		4. Coloca questões sobre a história ou tópicos relacionados.	
		5. Faz referências a personagens ou cenários.	
		6. Refere informação sobre algo que se passou anteriormente na história.	
		7. Antecipa o que poderá acontecer de seguida.	
C. Técnicas de Ensino		C. Leitura Guiada	
1. Relaciona o conteúdo do livro a experiências prévias (ex.: “Olha, é um cãozinho como o nosso!”).		1. Aponta palavras enquanto o adulto está a ler.	
2. Elabora a partir das ideias da criança.		2. Aponta para imagens ou faz comentários sobre estas, e nomeia ou identifica objetos/ou identifica palavras.	

3. Define vocabulário novo.	
4. Solicita antecipação.	
6. Faz um resumo do início, meio e final do livro.	
D. Leitura Interativa	
1. Dá oportunidade à criança de segurar o livro e virar as páginas.	
2. Responde às vocalizações da criança ou responde às questões dela.	
3. Segue a iniciativa da criança (ex.: permite que a criança faça escolhas).	
4. Usa uma velocidade e volume de fala apropriados.	
5. Dá tempo para a criança processar, observar ou responder (ex. não fala continuamente para ocupar o silêncio, permitindo pausas).	
Cotação Total Pais	Data
A B C D Total	
Cotação Total Pais	Data
A B C D Total	
Cotação Total Pais	Data
A B C D Total	
Cotação Total Pais	Data
A B C D Total	

3. Repete palavras/frases com o adulto ou depois deste as dizer (ex.: imitações).	
5. Apresenta reações não verbais positivas (ex.: rir, sorrir).	
Cotação Total Criança	Data
A B C Total	
Cotação Total Criança	Data
A B C Total	
Cotação Total Criança	Data
A B C Total	
Cotação Total Criança	Data
A B C Total	