

Tradução e adaptação transcultural do LittleEars Diary Activities para o português brasileiro

Translation and transcultural adaptation of the LittleEars Diary Activities to Brazilian Portuguese

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ABSTRACT

Purpose: This study aims to present the translation and transcultural adaptation to Brazilian Portuguese of the LittleEars Diary Activities and evaluate the usefulness of this instrument for parents of hard of hearing/deaf children. The instrument is an activities diary for parents to aid the development of hearing and language skills of their children. **Methods:** The study entailed 2 stages: (I) translation and transcultural adaptation of the instrument into Brazilian Portuguese; (II); and evaluation of the usefulness of this instrument for parents of hard of hearing/deaf children. The socioeconomic classification instrument was also applied to parents and therapists. **Results:** The instrument translated by the Brazilian translators was deemed semantically equivalent, requiring only terminology adjustments. The backtranslation revealed no conceptual discrepancies, only some language issues. Twenty parents who were in speech therapy participated to assess the coherence of the material and considered it important that this material become available. The alternation between interlocutors expanded beyond the activities; in the return of the therapeutic meetings, the applicability of the activities was already being discussed and, as to the success of the therapies, it was noticed that the parents reported more natural attitudes with the increase of the vocal contributions. **Conclusion:** The objective of presenting the LittleEars Diary Activities translated and culturally adapted to Brazilian Portuguese was accomplished successfully. The instrument proved to be easy to apply, covering other activities of daily life or even other playful games, promoting vocabulary expansion. The material suggested for activities can be adapted to the family's reality. The assessment of the instrument was considered important, useful and guiding by the parents.

Keywords: Hearing loss; Parents; Hearing aids; Hearing impairment rehabilitation; Child development

RESUMO

Objetivo: apresentar a tradução e a adaptação transcultural para o português brasileiro do *LittleEars Diary Activities* e avaliar a utilidade desse instrumento por pais de crianças com deficiência auditiva/surda. Trata-se de um diário de atividades para os pais, visando ajudá-los no desenvolvimento de habilidades auditivas e linguísticas dos filhos. **Métodos:** o trabalho transcorreu em duas etapas: (1) traduzir e adaptar para o português brasileiro; (2) avaliar a utilidade desse instrumento por pais de crianças com deficiência auditiva/surda. Também foi aplicado aos pais, o instrumento de classificação socioeconômica. **Resultados:** a síntese do trabalho dos tradutores brasileiros considerou a equivalência semântica e houve apenas um ajuste terminológico. A retrotradução não apresentou discrepâncias conceituais, apenas problemas linguísticos. Participaram da avaliação 20 pais que estavam em atendimento fonoaudiológico para avaliar a coerência desse material, e que consideraram importante que o material se torne disponível. A alternância entre interlocutores se expandiu para além das atividades; nos retornos dos encontros terapêuticos, já se discutia a aplicabilidade das atividades e, no suceder das terapias, notou-se que os pais reportavam atitudes mais naturais, com o aumento das contribuições vocais. **Conclusão:** cumpriu-se o objetivo de apresentar o *LittleEars Diary Activities* traduzido e culturalmente adaptado ao português brasileiro. O instrumento mostrou-se de fácil aplicação, de forma a abranger a utilização em outras atividades de vida diária, ou mesmo em outras brincadeiras lúdicas, a fim de promover a expansão de vocabulário. O material sugerido para atividades pode ser adequado à realidade da família. O instrumento foi considerado importante, útil e norteador de atividades, segundo os pais participantes do estudo.

Palavras-chave: Perda auditiva; Pais; Auxiliares de audição; Reabilitação da deficiência auditiva; Desenvolvimento infantil

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INTRODUCTION

Emerging technologies in electronic devices hearing aids (HA) and cochlear implants (CI) – improve audibility deaf/hard of hearing children, allowing families to make early interventions, although they may sometimes face difficulties in how to provide sufficient language exposure for establishing a strong, efficient linguistic base. Therefore, parents should be aware of some of the instruments that may help them to develop playful and creative daily life activities⁽¹⁾.

Along with the technological development, the measures adopted by public policies have created a much more promising scenario for identifying hearing impairment as early as possible. Currently, a large portion of newborns is subjected to the universal neonatal hearing screening (UNHS) (Federal Law 12.303/2010)⁽²⁾. In case the child fails to pass the test, the UNHS allows to establish an early diagnosis; once hearing loss is identified, recovery measures are taken, which include adaptations of HA and CI, always concomitantly to the speech therapy⁽³⁾.

Therapeutic techniques for parents of deaf/hard of hearing children and babies are based on guidelines that target prompt hearing and language stimulation, as well as family engagement to promote exchange of communication between parents and children. Children learn the language by participating in conversations with adults, with small talk and fun dialogues⁽⁴⁻⁶⁾.

The purpose of the intervention is to assist parents with the process of language acquisition by offering input and social components as to maximize their child's learning results^(7,8). Parents have a fundamental role in the child's global development, the greater their engagement, the faster the progress of the child. Parents are the ones who spent most time with children, having many opportunities to observe, explore and lead, largely influencing their children. When confronted with a hearing loss diagnosis, many parents may feel insecure and unskilled to offer sufficient linguistic support and ensure a better linguistic and hearing skills development.

Empiric evidence has shown that both the quantity and quality of words spoken to a child do influence their linguistic performance⁽⁹⁻¹¹⁾. Consequently, parent engagement is an essential factor in the intervention program for the children's linguistic achievements.

However, it is not easy to assess whether the child's hearing and communication performance is in accordance with the developmental stages, especially in very young children. For that reason, a family-centered approach tries to build a partnership between family and therapist in order to acknowledge each party's expertise, establishing mutual cooperation and encouraging activities that improve the child's development. Thus, instruments that guide parents in stimulating the child's hearing and linguistic skills have proved to be important tools⁽¹²⁻¹⁴⁾. Over the first three years of life, children depend exclusively on adults⁽¹⁵⁾, in addition to being a critical period for the growth of auditory connections and development of neural circuits all over the brain⁽¹⁶⁾.

Companies that manufacture CI and HA for pediatric use also elaborate complementary treatments to assist parents and therapists in the typical development of hearing, linguistic, and cognitive skills. Such companies are aware that for a better

performance of these skills, it is crucial to make constant and full-time use of electronic devices combined with continuous stimulation engagement. Parents should feel comfortable and have autonomy to monitor the electronic devices and to explore day-to-day opportunities.

In this sense, speech therapists who coordinate the sector of hearing recovery at the MED-EL Medical Electronics have come up with the *LittleEars Diary Activities* instrument, which allows for guided observation and documentation of the child's development. Both parents and therapists have the opportunity to share information on the diary and record their assessments, in addition to improving the interactions between parents and children. An experiment was conducted in Turkey⁽¹⁷⁾ where six families of deaf/hard of hearing children received a weekly incentive to explore their children's skills and encourage other family members to participate in the activities proposed by the *LittleEars Diary Activities*.

In Brazil, scientific research has shown an increasing use of international tools, translated and properly adapted to both the language and culture of the country⁽¹⁸⁻²²⁾; nevertheless, such relevant instruments are associated with the assessment of developmental milestones. The present research endeavors to present an activity list unprecedented in the country for parents to use in their daily activities. Transcultural translation and adaptation are only the first steps, the instrument applicability should be assessed in order to ensure its reliability⁽²³⁾.

In this context, studies of such nature are justified especially due to the increase in the number of children diagnosed with hearing loss, whose parents decide for oral language acquisition, making it necessary to access hearing and speech. Identifying hearing failure as early as possible allows children who will receive HA or CI to develop their communication, hearing, and linguistic skills as much as possible. Accordingly, guidelines are provided for family-centered hearing recovery tasks.

Finally, the purpose of this study is to introduce the transcultural translation and adaptation of the *LittleEars Diary Activities*⁽²⁴⁾ into Brazilian Portuguese and to assess the instrument applicability by parents of deaf/hard of hearing children.

METHODS

Ethical elements

This research was approved by the Human Research Ethics Committee of the Santa Casa of São Paulo (ruling No. 3.304.283), Certificate of Presentation for Ethical Consideration (CAAE, acronym in Portuguese) code No. 09728919.5.0000.5479. No conflict of interests was pointed out. Parents and professional speech therapists signed a Free and Informed Consent Form (FICF).

Procedure

This research was conducted in two stages: (1) transcultural translation and adaptation of the *LittlEars Diary Activities*⁽²³⁾ into Portuguese Brazilian and (2) assessment of applicability by parents of deaf/hard of hearing children.

The LittlEars diary encompasses 28 activities that can be distributed along 28 weeks and are arranged in three columns: the first one with a brief description of date, participants, child's hearing age, and general conditions, the second one with the suggested supporting materials, and the third one introducing the activity per se. Each activity explains how to explore the tool, stimulating the child to play with the selected materials, and introducing them to the corresponding linguistic expressions (describing all actions involved as thoroughly as possible, and not only naming each noun, for example). All activities consist in daily situations adapted to be playful (for instance, making a fruit salad, changing and bathing a doll, among others).

Once culturally translated and adapted, the instrument was sent to twenty families of deaf/hard of hearing children.

Transcultural translation and adaptation were authorized by MED-EL.

Part 1: Translation

The transcultural translation and adaptation of the instrument followed the Beaton et al.⁽²³⁾ model. Initially, two Brazilian translators took part in the process: one from the speech therapy field with previous experience in hearing recovery, and a layperson. Afterwards, both versions were compared for a single translation to be defined, which was then forwarded for retroactive translation by a native English speaker who was not familiar with the original version. The versions were then compared by the author of the present study. Following the comparison, the tool was forwarded to other five speech therapists for further suggestions and adaptations of terms and cultural expressions, seeking to ensure a trustworthy translation in relation to the original English version.

LittlEars Diary Activities encompasses 28 activities with guidelines for parents and children to interact, targeting daily activities and playful games. The tasks are organized to assist parents who may have difficulties in elaborating activities with accurate goals to improve their children's receptive and expressive language skills. Each activity is described in detail along with suggestions of supporting material and indications for exploratory language stimulation. The instrument helps parents to learn proper communication and games techniques, often used by therapists, and much discussed as to their efficacy for daily application. The supporting materials are merely suggestions and can be replaced, for example, with household utensils, objects built with recyclable materials, or the child's own toys. This tool is recommended for children age 1 to 6 years old.

Part 2: Assessment

The translated and adapted instrument was assessed by twenty parents of deaf/hard of hearing children who had

been attending speech therapy. The parents were asked to report and/or film their observations regarding the activity performed by the child, for further discussion with the speech therapists. They were also asked to evaluate the content of the activity and to inform whether it was relevant or not to their daily routine.

The parents were also subjected to a socioeconomic classification questionnaire, which is another indicator required for the instrument assessment⁽²⁵⁾.

The inclusion criterion was to select parents of deaf/hard of hearing children who frequently attended hearing/verbal stimulation programs. The exclusion criterion, in turn, disregarded parents whose mother tongue was any other than Portuguese.

RESULTS

Part 1: Translation

LittlEars Diary Activities was transculturally translated and adapted to guide parents of deaf/hard of hearing children in exploring communication with daily activities.

The Brazilian translators work focused on semantic equivalence and identified only one terminology adjustment: the term 'encourage' was sometimes translated as '*incentivar*' and sometimes as '*estimular*', according to each specific context.

The goal of the transcultural adaptation of the tool is to make it understandable to any professional involved as well as to the family itself, regardless of age, education, or socioeconomic level.

Retroactive translation indicated no conceptual discrepancies, only linguistic issues.

Chart 1 summarizes the activities proposed by the instrument. Full versions will be provided by the MED-EL.

Part 2: Assessment

Twenty parents who attended speech therapy service were invited to evaluate the coherence of the material, including 14 females and 6 males – data that reveals a 30% active participation of men in the therapeutic process. Age varied from 23 to 51 years old, with 17 individuals at the age group of 30 to 39. The parents were also classified according to their socioeconomic class as follows: lower low (LL) – 1 individual; upper low (UL) – 7; lower middle (LM) – 5; middle (M) – 5, and upper middle (UM) – 2. As for education, 11 participants completed higher education, 6 completed high school, and 3 had incomplete high school (Table 1).

The parents did not suggest any grammar correction. All of them considered important that the material became more accessible. Despite having previously performed most of the activities with their children, the parents added that they had not emphasized the linguistic element as much as they had with the instrument. They also reported that after the activities, other daily situations were highlighted in their conversations with their children.

Chart 1. Summary of the 28 activities in the *LittlEars Diary Activities*¹

Week	Material	Activity
1	Doll, spoon, mug, bib, bed, blanket, bottle, surprise box	Let the child open the box and take whatever they want. Allow them to freely handle the objects, pay attention to their interests, and talk about what they are doing. Whenever suitable, simulate actions – for example, feeding and cleaning the mouth of the doll – and encourage the child to imitate them.
2	Plastic duck, rubber puppy that barks when squeezed, ball that makes noise when shaken	Encourage the child to explore objects. Show them how they make noise. Be quiet to hear the sounds. Try to simulate those sounds with your voice.
3	Finger puppets, stackable plastic cups	Wave the finger puppet around and tickle the child, create a story. Let them examine the puppet, take it off of the finger, direct the child's attention to you by balancing a plastic cup on your head.
4	Plastic clothes basket, clothes line	Pretend that you are doing the washing together, folding, and arranging garments, hang them up and play with the pegs. An opportune moment to talk about clothes, to explore size, color, texture, and type of clothing.
5	Set of toys associated with previously chosen rhymes	Try to associate the pictures (in timed sequence, for example) with the rhymes you sing.
6	Cardboard boxes of several sizes, with one side open and covered with gift paper, large ball	Show the child the larger box. Open the lid and take a peek. Close it again quickly – this should encourage them to look too. Talk about what they are doing.
7	Kitchen drawer that is at the height of the child full of “dangerous” items	Encourage the child to explore kitchen utensils. Pay attention to their interest and play in the way they want to.
8	Two changes of clothes, with garments in different colors, sizes of sleeves, textures, and thicknesses	Have fun dressing up in very different clothes, for example, trying on clothes or shoes that are too small for you.
9	Cardboard box that fits a toy truck, with one side cut off to simulate a door	Encourage the child to open the “garage door” by looking around and talking enthusiastically. Talk to the child about what they express the most interest in.
10	Play dough and molds shaped as cats and dogs	Smell the play dough and allow the child to manipulate it freely. Pretend the cat shaped dough is real and say “come, kitty”; then respond “meow”. Do the same thing with the dog shaped one.
11	Plastic doll with hair, with dirty and clean clothes	Smell the doll and let them know that it is dirty and smelly and needs to be changed or washed.
12	Balloons, bottle of water	Have the child help fill a balloon. Count to three, release the balloon, watch it fly, say “good-bye”, and ask the child to pick it up.
13	Two “Mr. Potato Head” dolls	Talk about the parts of the body that the child handles, for example, an arm. Draw their attention to their own arm and match parts of their body to those of the body of the doll.
14	Surprise boxes containing airplane, minibus, train, boat	Talk to the child about what they are doing and, with short and clear sentences, try to mimic the sound of each vehicle: “vummm” for the airplane, “brum” for the car, “splash” for the boat etc.
15	Pieces of colored plastic tableware: teacup, saucer, spoon, plates, kettle, cookie jar etc.	Introduce the cups, saucers, plates, spoons, kettle, and a cookie jar. Pretend to stir and drink an imaginary tea. Hold the child's interest by presenting tea, sugar, and water.
16	Two small drums, drumsticks, paper hat	Music “Soldier March”. Listen to some of the marching music and only play the drum when the music starts. Play statues and stand still when the music stops.
17	Kitchen utensils, cutlery drawer, refrigerator drawer, vegetables	Encourage the child to open the drawer, show that there is no food and ask: “What can we do?” Ask for help setting the table and indicate what is needed.
18	Play dough, shapes of animals and vehicles	Encourage the child to play with the dough by kneading it, making shapes, with accompanying onomatopoeia.
19	Purse with various utensils (glasses, mirror, comb, coin purse, bunch of keys etc.)	Let the child explore the bag. Pay attention to their interest and talk about what they are doing or handling.
20	Set of animals (horse, pig, rabbit), pots to feed them, cardboard box	Encourage them to explore the box, pick up the animals, pet them and feed them. Take them to see real animals.
21	Pieces of fabric in different sizes. Try to select different textures	Direct the child's attention to the differences, saying “look, my patch is small, yours is big”; “mine is little, yours is large” etc.
22	A kitchen drawer that the child can reach, containers of plastic, puppets	Direct the child's attention to the drawer with a hand puppet by having them open the drawer and look inside. Let them play freely with what they find and talk about it.

¹ All activities were aimed at building connections with other people in daily life situations to allow to create conversational exchanges/shift changes, explore new words, solve problems, and develop social skills. The instrument suggests some ideas to parents, who can adapt them to their own reality and use the materials they have available.

Chart 1. Continued...

Week	Material	Activity
23	Musical instruments	Hold the child's attention by indicating that they are listening to something. Be quiet, point to the ear, and show enthusiasm.
24	Photographs of the child and/or siblings and parents in daily activities	These pictures should be relatively large, colorful, and simple, with only one event. The child should be able to easily identify the events.
25	A collection of age-appropriate books	The child should have access to books, exploring the same book several times helps the child to review the story, characters, and their actions, thus being able to anticipate events, wait for the adult's excited reactions, and try to role-play.
26	Toy bird, cage, birdseed, newspaper	Present a toy bird in a fun way (by taking it out of the pocket, for example). Make bird sounds, point out to the cage, show that the bird has no water or food and explore how to care for the bird.
27	Shopping bag with canned food, cereal, bread, butter, eggs	Talk about careful handling, refrigeration, what happens if an egg falls down, counting eggs, storing eggs in the refrigerator shelf etc. Let the child participate in daily household activities, such as putting away the groceries.
28	Fruit	Make a fruit salad. For this activity to be linguistically constructive, the child must be actively involved, and the adult must lead it slowly, taking every opportunity to talk meaningfully with the child.

Table 1. Characterization of parents according to gender, age, socioeconomic level, and education

Parents	Gender	Age	Level socioeconomic	Education
1	M	35	LM	Bachelor's degree
2	F	32	LM	Bachelor's degree
3	F	33	M	Bachelor's degree
4	M	34	M	Bachelor's degree
5	F	48	M	Bachelor's degree
6	M	51	M	Bachelor's degree
7	F	36	UL	Complete high school
8	F	34	UL	Bachelor's degree
9	F	31	UL	Complete high school
10	F	32	UL	Incomplete high school
11	F	23	UL	Incomplete high school
12	M	32	UL	Complete high school
13	F	32	UL	Complete high school
14	F	35	LM	Bachelor's degree
15	M	34	M	Complete high school
16	F	30	LL	Elementary education
17	F	39	LM	Bachelor's degree
18	F	38	LM	Complete high school
19	F	35	UM	Bachelor's degree
20	M	36	UM	Bachelor's degree

Subtitle: F = Female; M = Male; UL = Lower Low; LL = Upper Lower; LM = Lower Middle; M = Middle; UM = Upper Middle

DISCUSSION

This study described the transcultural translation and adaptation of the *LittlEars Diary Activities*. Even though the alterations seem to favor a more colloquial translation, cultural inferences are important and help the Portuguese language reader to use the material more naturally throughout the 28 weeks, without needing major adaptations, having to make judgments or facing difficulties.

Parental contributions showed increased engagement in reading, interpretation, and applicability of the material to daily activities, in line with previous studies⁽¹⁸⁻²²⁾ and the guidelines⁽²³⁾ for transcultural translation and adaptation. The final version had a few grammar and linguistic adjustments,

allowing to conclude that, in general, the material achieves its objective: helping parents to understand the importance of oral communication with their children and to harness the whole linguistic experience implicit in daily activities, such as feeding, changing clothes, among others. As such, for the parents, the main achievement was having access to further information – even though it only reinforced activities already shared with the children – for the activities to be taken as daily conversational reinforcing responsibility, which has also been addressed in previous reference studies^(1,3,5-11).

The exchange between interlocutors expanded beyond the activities. When returning to the therapeutic meetings, they discussed the applicability of the activities and as the therapies developed, the parents reported increasingly natural reactions to more vocal involvement.

The parents acknowledged that the children's vocalizations evolved by speaking more and engaging in speech-exchange situations – including glances and basic gestures.

The instrument improves parents' self-confidence in their communication attempts, intending to extend the conversation and dialogue beyond the therapeutic session. Corroborated by the literature^(6-9,12,13,15,16), learning to speak and hear surpasses the use of electronic devices (HA and/or CI). The constant use of devices is indeed important and should be featured in hearing skills performance. Nonetheless, guiding parents to use specific strategies in daily activities helps to break through barriers created by the lack of communication-exchanges. Children's brains grow according to the inputs of communication, linguistic, and conversational experiences, as defined by Flexer et al.⁽¹⁶⁾. The authors demonstrated that establishing neural connections with conversational exchanges is instrumental for language acquisition.

Herein, the parents reported that the therapeutic meetings explored situations other than those proposed by the instrument, thus corroborating Kosaner et al.⁽¹⁷⁾.

Understanding that the yearly years are crucial to oral language development is the first step for families to explore the broad universe of communication. Daily linguistic experiences can be incorporated naturally into child's significant language, as indicated by Flexer et al.⁽¹⁶⁾ when pointing to the importance and influence of hearing on neural activities and linguistic development during the child's early years.

Assessing the development of a child with deaf/hard of hearing on short and long terms is fundamental for devising the follow-up of the skills that are going to be necessary throughout the child's life. At signs of difficulties in any of these skills – hearing, receptive and expressive language, articulation, cognition, pragmatics –, playfulness and literacy are important indicators for professionals to assess the technological elements being used and/or establish the necessary changes.

CONCLUSION

The goal of presenting the *LittlEars Diary Activities* culturally translated and adapted to Brazilian Portuguese was met, and the material will be available soon on MED-EL website (<https://www.medel.com/pt-br>).

The instrument was shown to be easily applicable and useful for vocabulary enlarging, by extending to other daily activities or even other playful games. The supporting materials suggested for the activities can be adjusted to the family's reality.

The tool was considered relevant, helpful, and instructive by the parents of deaf/hard of hearing children who participated in the study.

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