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Innovative Technologies and Translational Therapies e-Health

BASE DE PESQUISA - LAIS/UFRN
AUDIÇÃO E LINGUAGEM

# Self-efficacy of families of hard-of-hearing children before and after a communicative attunement program via televideofeedback

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## Abstract

**Aims:** To evaluate the self-efficacy of families of hard of hearing children, users of an auditory rehabilitation service, before and after an intervention program via televideofeedback. **Population:** 12 families of children with hearing loss. **Methods:** Quasi-experimental study (n=12), approved by the institutional Ethics Committee under opinion number 5,272,705. All 12 participating families, divided between the experimental group (EG=6) and control group (CG=6), agreed to participate and signed the free informed consent form. Ten consecutive sessions were held, lasting approximately 40 minutes, using the video feedback tool via telepractice, which we call televideofeedback, in which aspects of attunement of interaction and communication with the families of the experimental group were worked on while the families of the control group continued with conventional therapy sessions at the auditory rehabilitation service in a capital, in the northeast region of Brazil. Families were evaluated with the translated version into Brazilian Portuguese of the Scale of Parental Involvement and Self-Efficacy - SPISE-R by evaluators blind to the study. The sections answered by families pre- and post-intervention involved: A - beliefs (situations that they can believe in or worry about); B- knowledge (how much the family knows about information and skills when the child has hearing loss); 3 - confidence (how confident you are in your ability to support the child) and 4 - actions (how often the actions were performed). Items related to communication from each section were selected for analysis. Inferential statistical analysis used the non-parametric Mann-Whitney test to compare the EG and CG (independent groups) in the pre-and post-intervention periods. **Results:** In the general evaluation of the SPISE-R scale, a statistically significant difference was identified between the control and experimental groups in the items belonging to section B (knowledge), with the EG presenting a higher score when compared to the CG. In the general analysis of the other protocol sections (beliefs, trust, and actions), no statistically significant differences were observed between the groups. However, in an individual analysis of each item relating to the communication of all protocol sections, a statistically significant difference was observed between CG and EG, with the latter achieving a higher score. **Interpretation:** The intervention mediated by televideofeedback increased the self-efficacy of families in the experimental group, especially in their general knowledge and communication with their hard-of-hearing child. **Conclusion:** This e-health approach stands out as having the potential to increase access to specialized auditory rehabilitation services to families of hard of hearing children, enhancing their self-efficacy especially in the initial stages of treatment and in countries with large territorial dimensions and limited access to services, optimizing the development of this population.

## Objectifs

To evaluate the self-efficacy of families of children with hearing impairment who are users of an auditory rehabilitation service before and after an intervention program via televideofeedback.

## Méthodes et Matériels

**1 Quasi-experimental study (n=12)**

Approved by the institutional Ethics Committee (5,272,705)

- Experimental Group (n=6): televideofeedback
- Control Group (n=6): conventional therapy

10 consecutive sessions of 40 minutes

**2 Televideofeedback**

Daily recordings of the interaction between the family and the child in a home environment, followed by synchronous teleconsultations with videofeedback

**3 Scale of Parental Involvement and Self-Efficacy - SPISE-R (version into Brazilian Portuguese)**

by blind evaluators pre- and post-intervention:
A- knowledge | B- beliefs | C- confidence | D- Actions

1 Recording of home interaction video

2 Analysis of interaction video asynchronously

3 Scheduling of synchronous teleconsultation for joint review of positive micro-moments

4 Families reflect and new possibilities emerge, behavior changes, and a new cycle of recording occurs

## Résultats

**Table 1.** SPISE-R for EG and CG (n=12).

| | | *Statistics* | *p* |
|---|---|---|---|
| **PRE** | Teste U de *Mann-Whitney* | 9.50 | 0.100 |
| **POST** | Teste U de *Mann-Whitney* | 4.0 | 0.015* |

**Note. Ha μ control < μ experimental**

Analysis of self-efficacy concerning the communication items of the SPISE-R scale across all protocol sections revealed a statistically significant difference between the CG and EG, with the latter achieving a higher score.

## Conclusion

The intervention enhanced family self-efficacy, especially about communication.

The televideofeedback is an useful tool in countries with continental dimensions and/or limited access to specialized services.

This approach could optimize the development of children with hearing impairment.

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