



Valor clínico de los potenciales evocados auditivos obtenidos con niveles de estimulación aleatorizados

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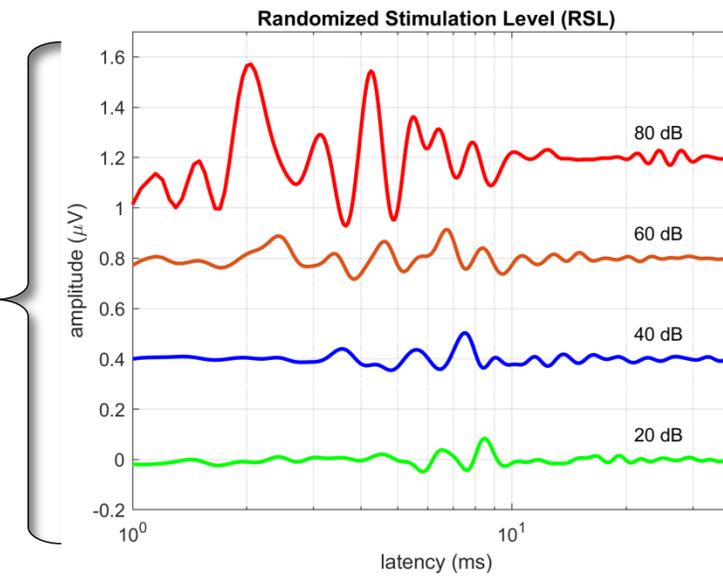
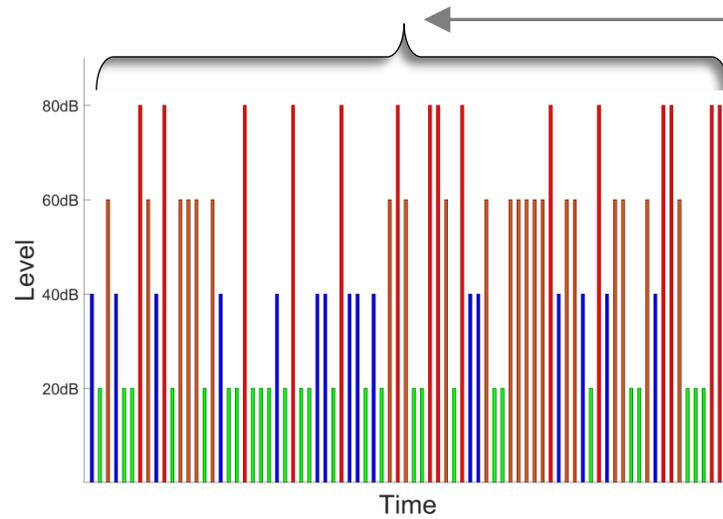
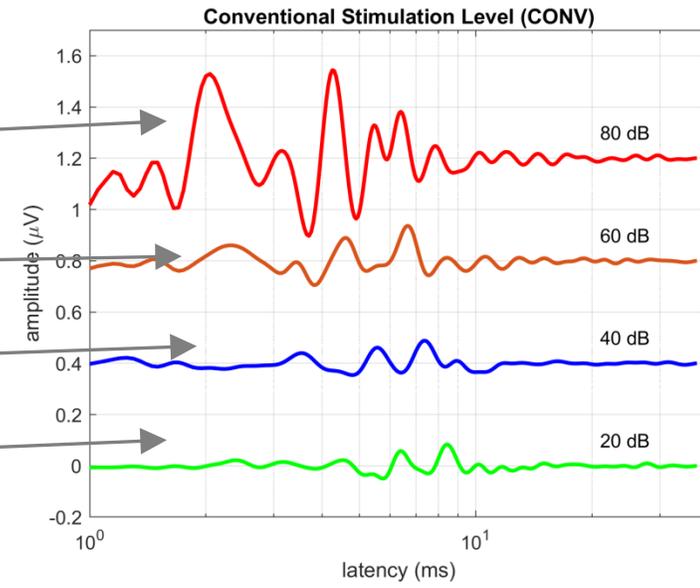
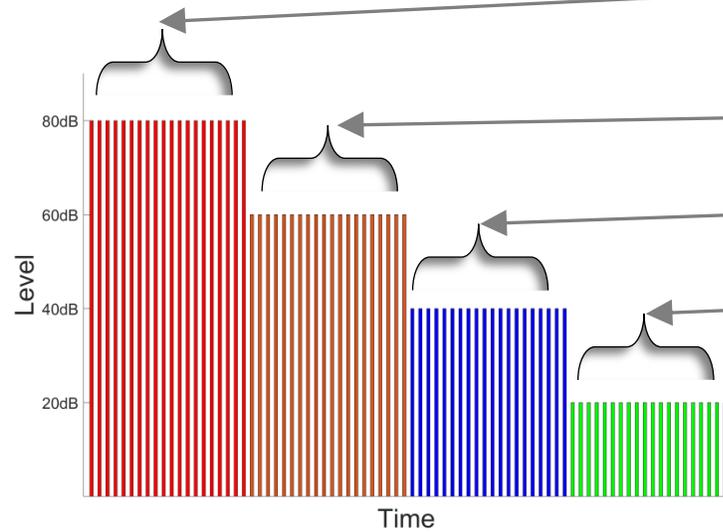
Declaración de potenciales conflictos de interés

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Respecto a esta presentación:

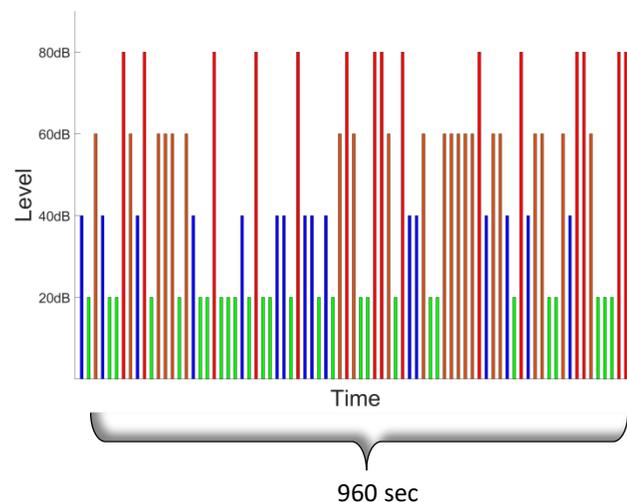
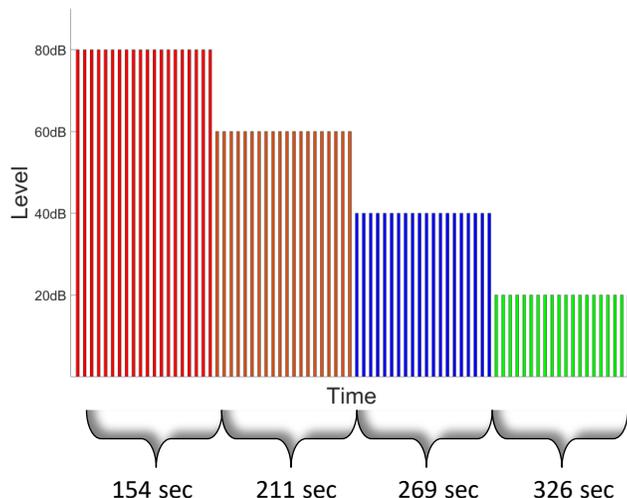
Los autores no tienen potenciales conflictos de intereses

Motivación de RSL





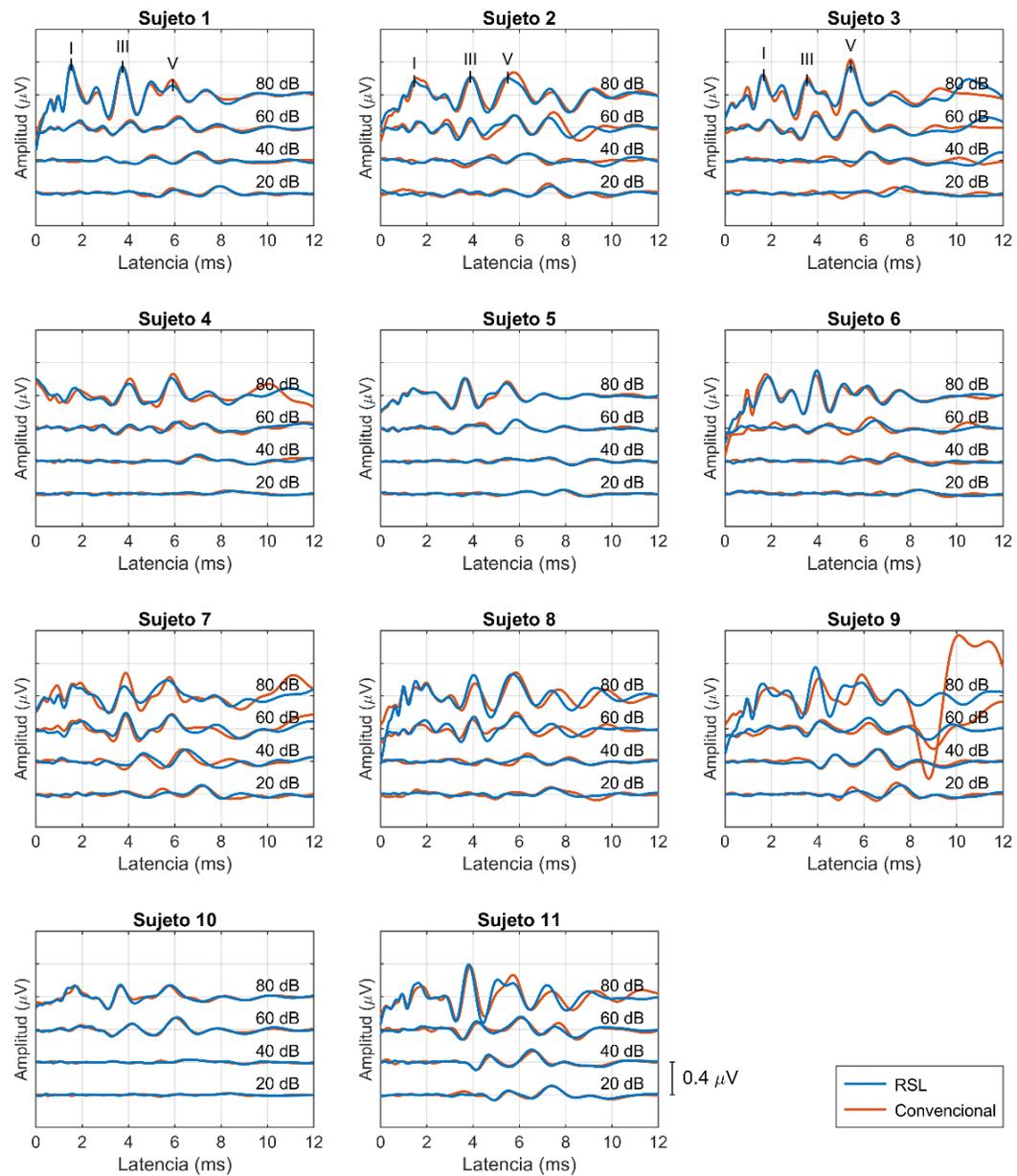
Materiales y métodos

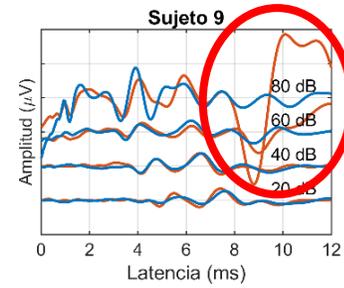
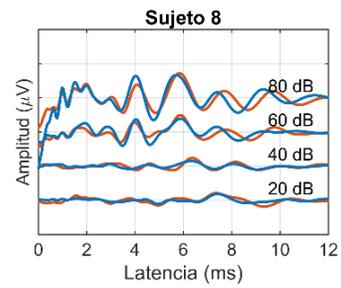
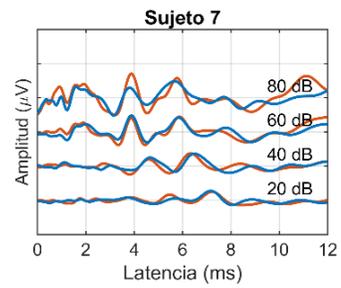
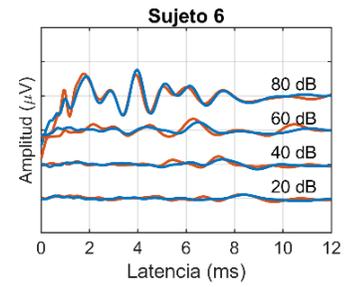
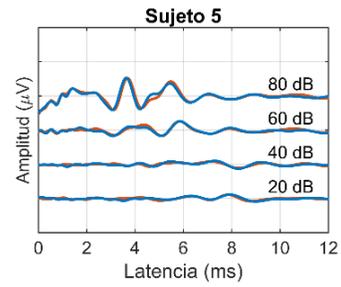
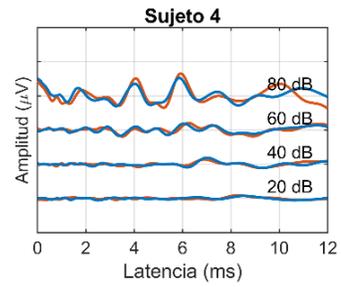
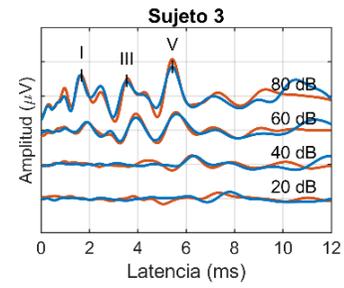
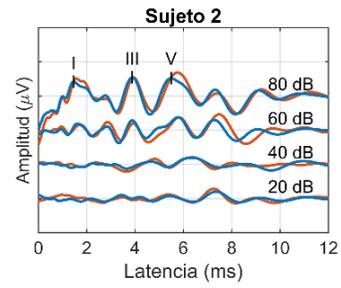
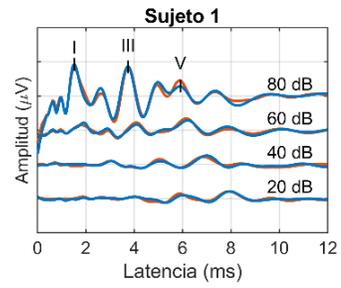


- 11 sujetos (8 mujeres, edades 25-29 años) normooyentes.
- ISI: [38-48] ms.
- Estímulos: clics rarefacción 100 μ s.
- Niveles de estimulación: 80, 60, 40, 20 dB.
- 16 minutos cada registro.
- EEG registrado con amplificador flexible¹ con filtro paso banda 1-3000 Hz.
- Registro de toda la vía auditiva mediante un filtrado dependiente de latencia².
- Análisis de amplitudes y latencias (test de Student).

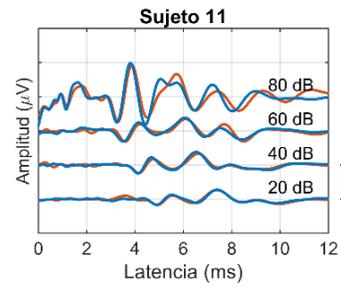
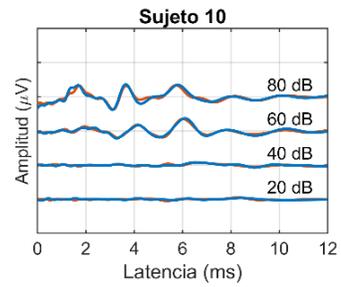
¹Valderrama et al. «A flexible and inexpensive high performance auditory evoked response recording system...» Biomedizinische Technik, 2014 Oct; 59(5):447-59. DOI: 10.1515/bmt-2014-0034.

²de la Torre et al., JASA 148(2), 2020, 599-613.



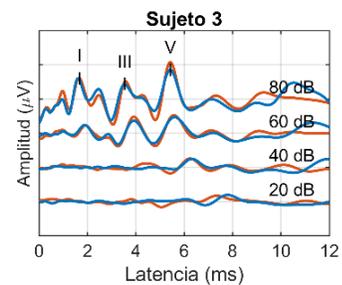
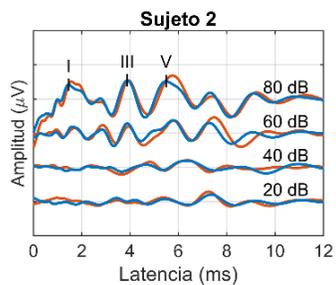
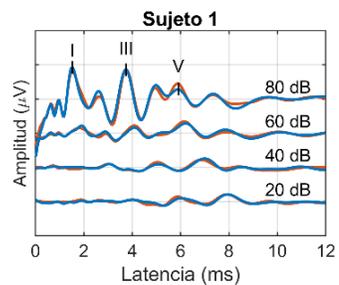


PAM



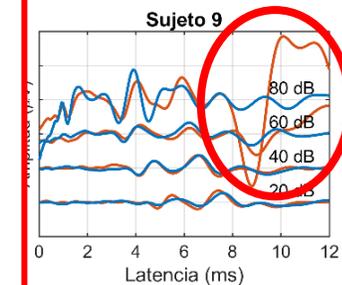
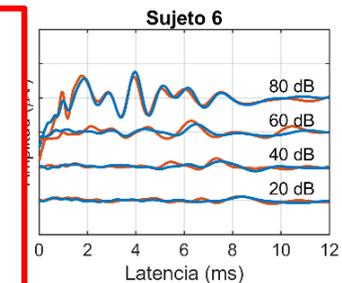
0.4 μV



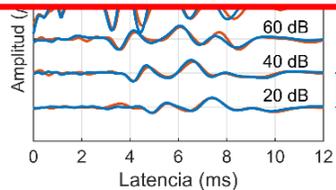
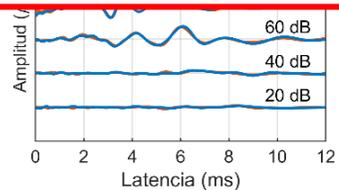


$$ABR_{\text{CONV}} = ABR_{\text{RSL}}$$

Diferencias en PAM



PAM



0.4 μV



Encuesta confort auditivo



- Disponible en: http://sl.ugr.es/subjective_evaluation_sound_stimulus
- Compara confort auditivo en modelo convencional vs RSL.
- 238 voluntarios.
- Google Forms.

Designing an audiological test

At the University of Granada we are designing an audiological test in which, in a real situation, the subject under study will have to listen to a sound stimulus for 20 minutes, remaining as relaxed and static as possible.

But we don't want to bore you with the 20 minutes that the real test lasts!

We would only like to have your opinion so that you could tell us with which sound you would be more comfortable if you had to listen to it during the 20 minutes that the real test lasts and remaining still.

We have three different sounds that we want to test:

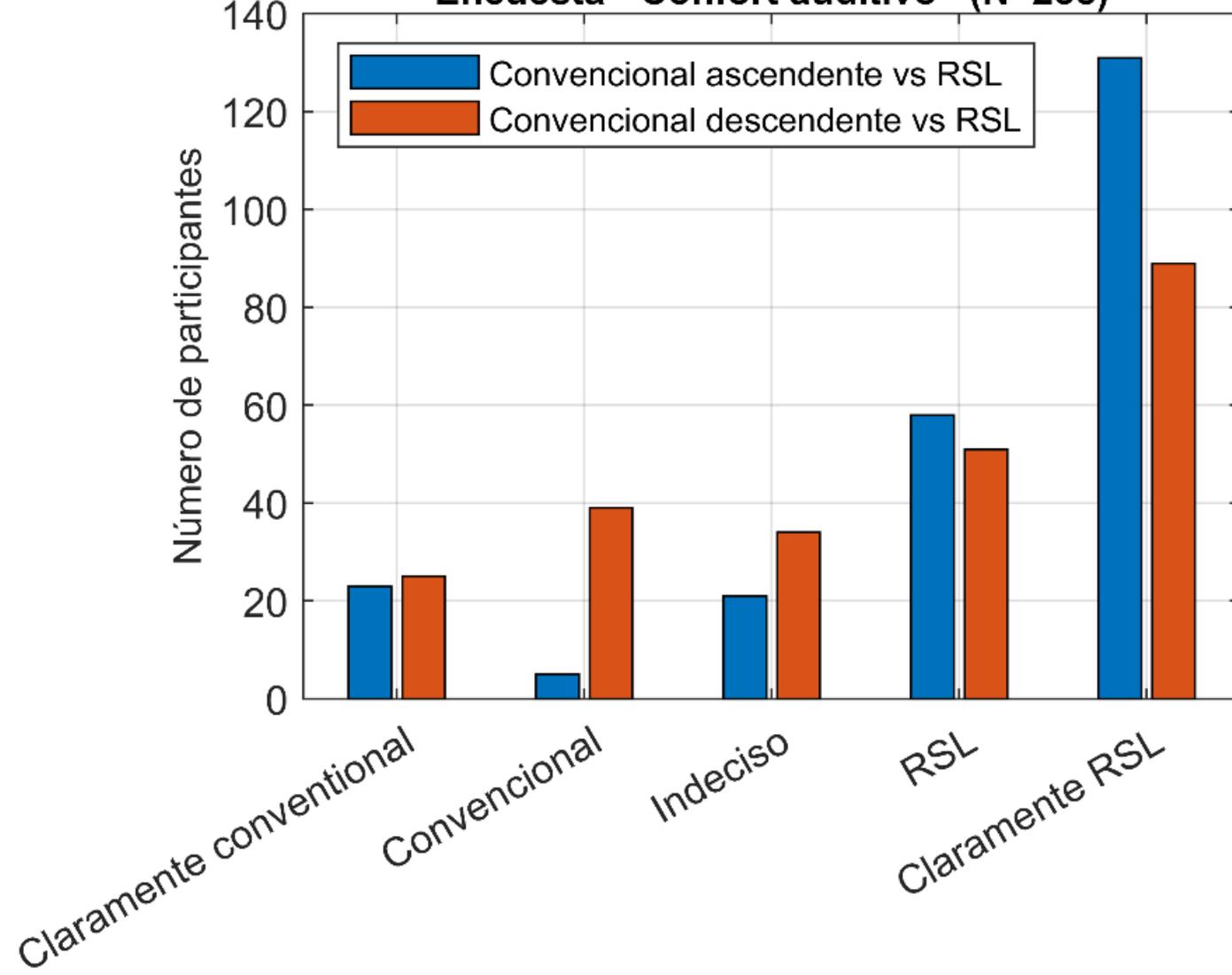
- ASCENDING SEQUENTIAL
- DESCENDING SEQUENTIAL
- RANDOMIZED

Necessary material: mobile phone, personal computer or tablet and possibly an earphones.
Time: less than 5 minutes.

Thank you very much for your participation!

(If you found it interesting, you can forward this questionnaire to all the people you want. It is totally anonymous)

Encuesta - Confort auditivo (N=238)



Encuesta estimación respuesta neuronal



- Disponible en: http://sl.ugr.es/comparing_ABR_recording_techniques
- 14 audiólogos voluntarios.
- Compara preferencia modelo convencional vs RSL para estimar respuesta neuronal.
- Video acelerado en factor 10.
- Google forms.

Comparing ABR recording techniques

At the University of Granada we are analyzing two different techniques, named RSL and SSL, for recording Auditory Evoked Potentials and in particular Auditory Brainstem Responses (ABR).

As an audiologist or expert in the field we would like to have your opinion.

The following video represents the ABR recording of 11 subjects at 4 stimulation levels (i.e. 20-40-60-80 dB) using RSL (left panel) and SSL (right panel). The duration of each recording session was 16 minutes (960 seconds).

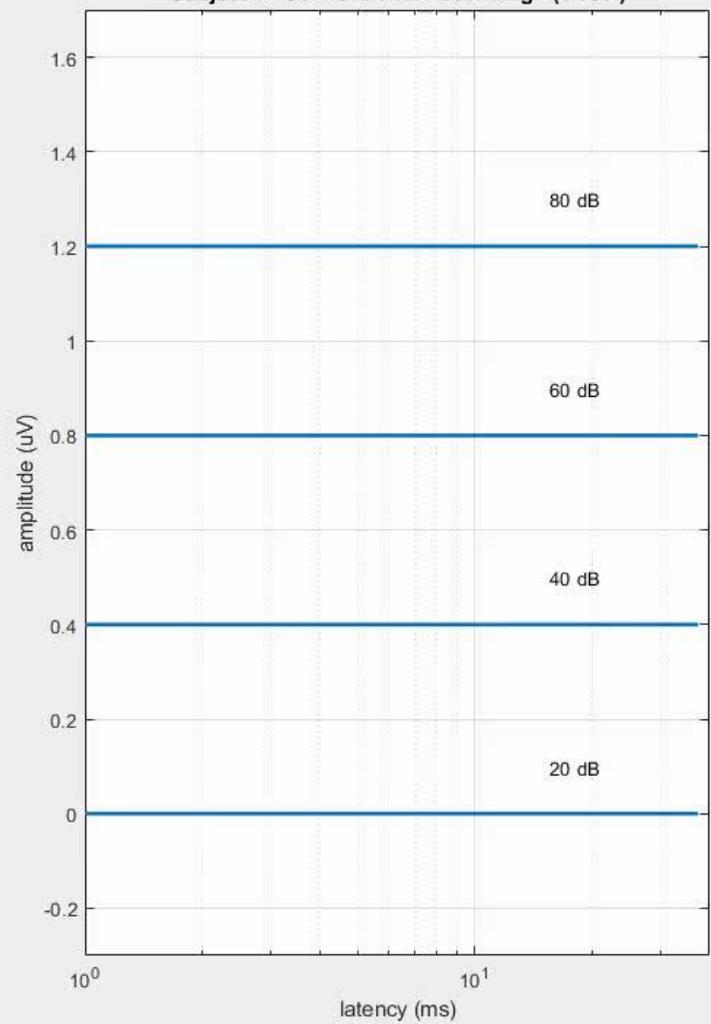
Observe in the video the ABRs as they are provided by both techniques. Consider which of these techniques provides more consistent results, or provides consistent results sooner.

***Obligatorio**

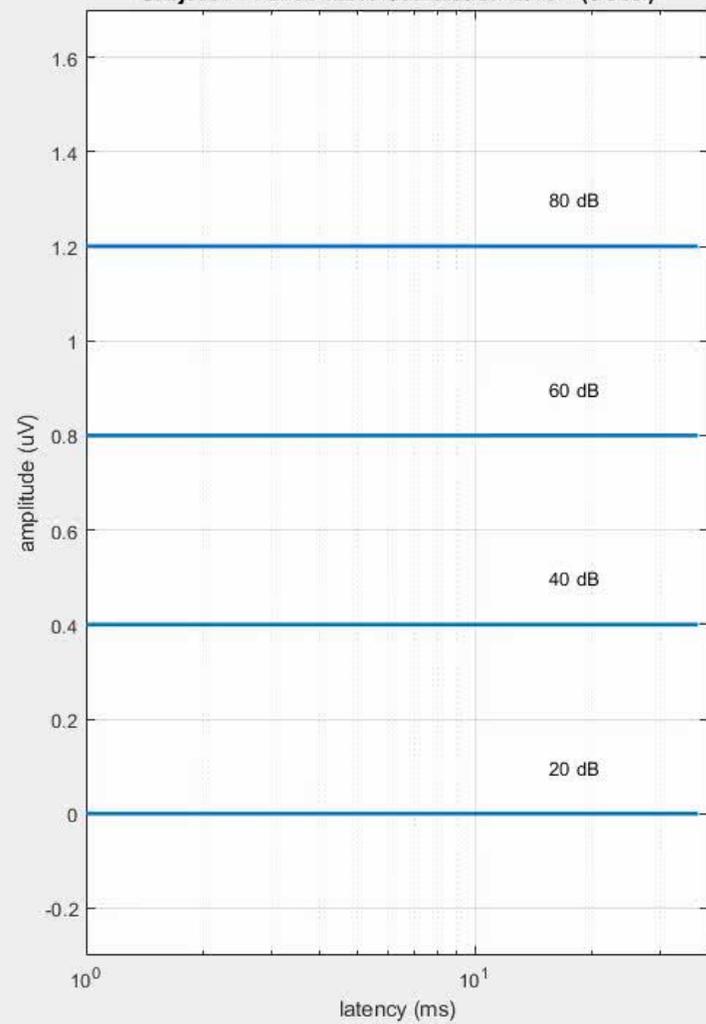
RSL Vs SSL - ABR recording techniques

Ver en YouTube

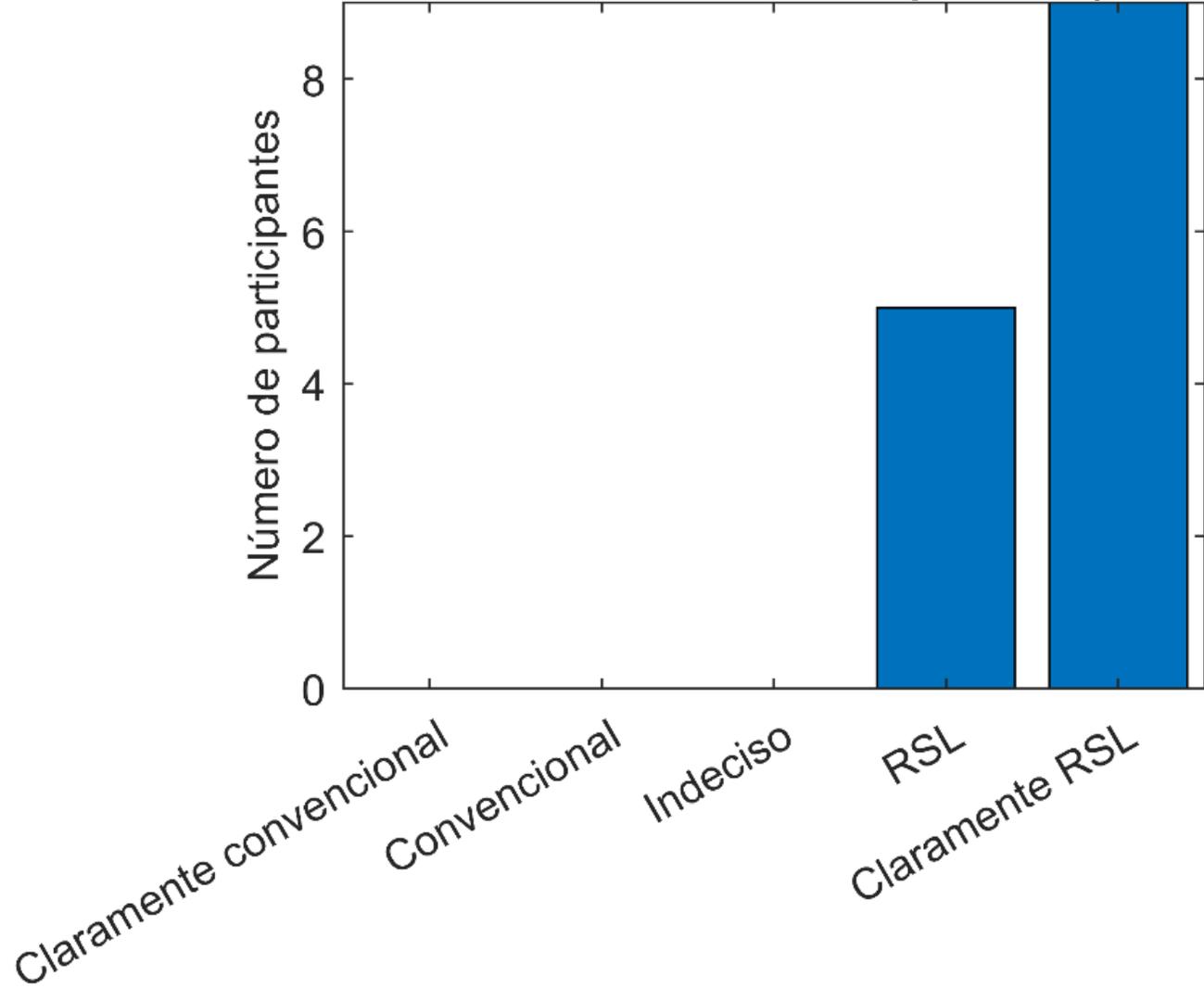
Subject 1 - Conventional Ascending - (0 sec.)



Subject 1 - Randomized Stimulation Level - (0 sec.)



Encuesta - Detección de respuesta (N=14)

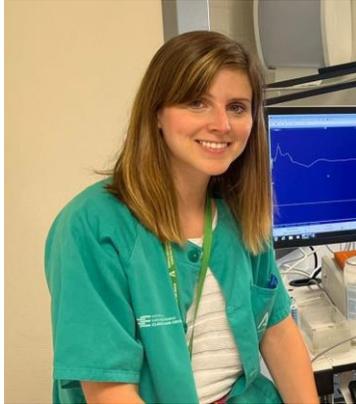


Conclusiones



- Las ondas con modelo convencional y RSL presentan morfología similar.
- Ausencia de PAM en registro con RSL.
- Mayor confort reportado con patrón RSL respecto al modelo convencional en población encuestada.
- Mayor rapidez y facilidad para estimar la respuesta neuronal con RSL reportado por audiólogos.

Gracias por su atención



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