**Supporting Information A: Auditory Processing Test**

In the current investigation, participants engaged in auditory acuity discrimination task. While the methodology is detailed in the main manuscript, the test materials used in the current study (auditory processing batteries) have been coded in JavaScript/HTML and are currently deposited [here](https://osf.io/bkj6v/?view_only=ac2d73e7092b4a018c9a5331eff02171)

(<https://osf.io/bkj6v/?view_only=ac2d73e7092b4a018c9a5331eff02171>) so that the reviewers can access and listen to the stimuli for peer review. In the near future, a ZIP file will be released at our in-house website ([www.sla-speech-tools.com](http://www.sla-speech-tools.com), under construction).

**Supporting Information B: Speech Perception Test**

You will now hear a number of words. Each time you hear a word, find its corresponding number on this sheet where you will see two possible choices. Please circle the word you believe was actually read.

Now you will hear two examples.

Please circle the word you hear:

(a) shore (b) fall

sore far

1. choke

chalk

2. late

rate

3. glow

grow

4. land

lend

5. river

liver

6. thing

sing

7. hurt

heart

8. sour

sore

9. cat

cut

10. fir

far

11. home

foam

12. merry

marry

13. leap

lip

14. sin

shin

15. flesh

fresh

16. myth

miss

17. shock

shuck

18. sum

thumb

19. fit

feet

20. base

vase

21. boat

bought

22. did

dead

23. feet

heat

24. fell

fill

25. win

wing

26. vent

bent

You will now hear a number of sentences. Each time you hear a sentence, find its corresponding number on this sheet. There you will see two words, one of which was part of the sentence, and one which was not. You should circle the word you believe was actually read.

Now you will hear an example. Please circle the word you think was read in this sentence:

**call**

**car**

I’m expecting my dad to give me a sometime soon.

1. Even though the show has only been playing for a week, it’s

already created a big

**stir.**

**star.**

1. The millionaire was so paranoid about his greedy relatives that he put

all his money in the

**well.**

**will.**

**mass**

**mess**

3. You should go take a look at the huge in the science lab.

4. The tailor was trying to sew his

**best.**

**vest.**

**sick**

**thick**

5. I will not read the book because I hate this kind of plot.

thought

**sought**

6. This problem is really difficult. I for an answer, but I just

can’t seem to figure it out.

**ducks**

**docks**

7. The boat passed by the on the lake.

**free**

**flee**

8. That man is so crazy that he thinks he needs to the country.

**bass**

**bath**

9. He did not enjoy the at all.

**filling**

**feeling**

10. Ever since I quit smoking, I really miss my lungs full of

smoke.

**sin.**

**sing.**

11. I go to church because I often

12. My sister loves to play with

**crowns.**

**clowns.**

**lane?**

**rain?**

13. Isn’t that your son out there in the

**bowels,**

**vowels,**

14. My son has trouble with his and it makes him so

embarrassed.

**walk**

**woke**

15. Everyone was surprised to hear that I very early in the morning.

**fated**

**hated**

16. That man seems to have been for his success.

**“single”.**

**“shingle”.**

17. For some reason, I can never remember how to spell the word

**healing.**

**feeling.**

18. I need to go visit her in the hospital and see how she is

**bend.**

**band.**

19. On my way to the parade I had to walk around the

**cot**

**coat**

20. The worst thing about my trip was that my was so

uncomfortable.

“lurk”

**“lark”**

21. On my English test, was the only word I didn’t define correctly.

**light**

**right**

22. How did you decide on the exposure to use for this picture?

**sleep.**

**slip.**

23. I have to be very careful when I go into that classroom, or else I will

**bed.**

**bid.**

24. Immediately after the businessman awoke he made the

**rut**

**rat**

25. I went out of my way to avoid the that was in my path.

**Supporting Information C: Auditory Processing and Memory Profiles**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | *M* | *SD* | 95% CI | |
| *Min* | *Max* |
| A. Auditory processing abilities |  |  |  |  |
| Formant discriminationa | 72.16Hz | 30.26 | 64.94 | 79.36 |
| Pitch discriminationa | 3.786Hz | 2.484 | 3.195 | 4.38 |
| Duration discriminationa | 39.45ms | 41.1 | 29.65 | 49.25 |
| B. Cognitive abilities |  |  |  |  |
| Phonological short-term memory | 30.40 | 5.24 | 29.14 | 31.65 |
| Complex working memory | 60.65 | 10.10 | 58.24 | 63.06 |
| Declarative memory | 64.14 | 20.08 | 59.35 | 68.93 |
| Procedural memory | 22.17 | 16.38 | 18.26 | 26.07 |

*Note*. alower scores indicate more precise auditory processing abilities