

# Focusing on Positive Listening Experiences Improves Speech Intelligibility in Experienced Hearing Aid Users

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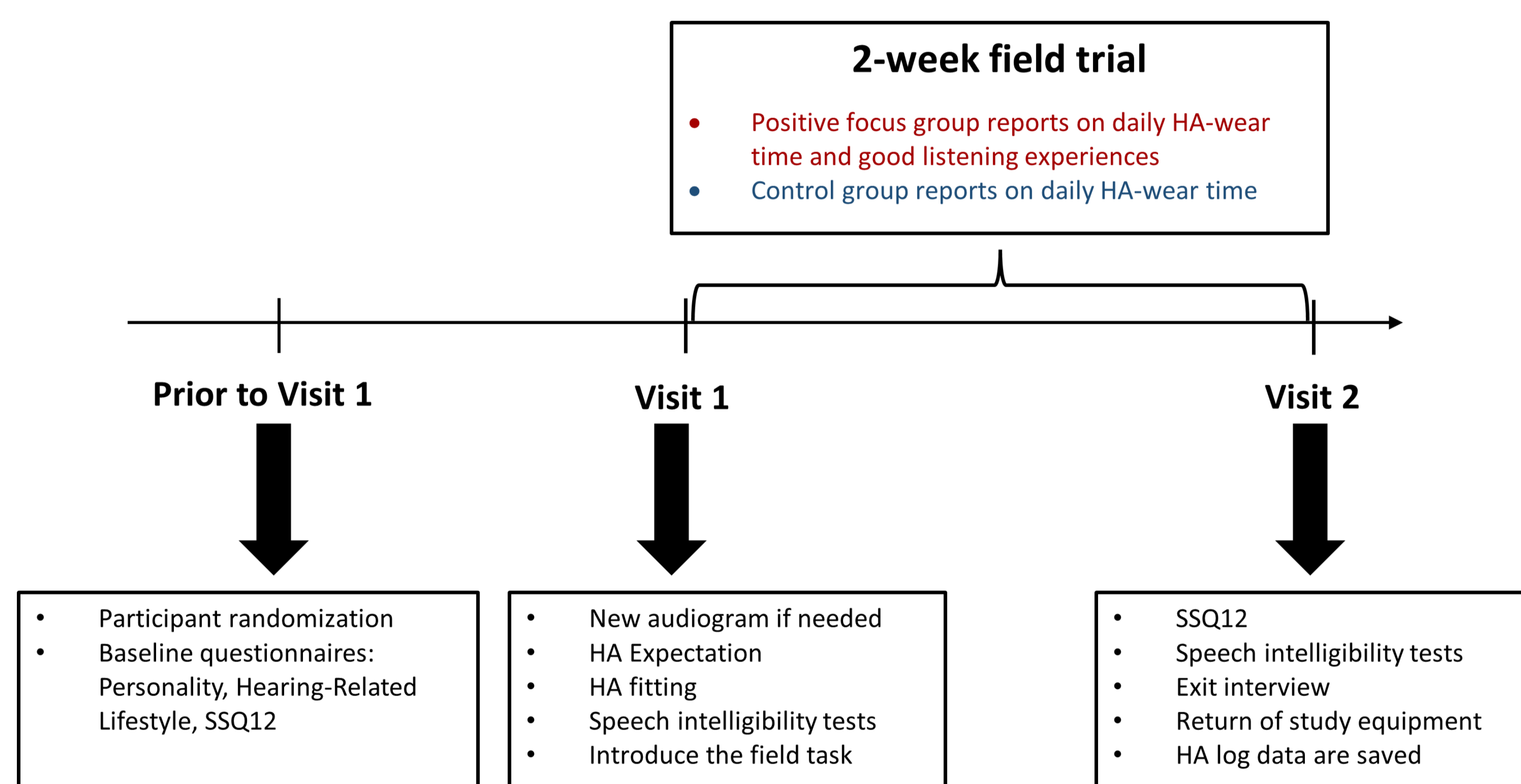
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## Introduction

- Negativity bias is a psychological phenomenon where negative events are subjectively more prominent than positive events of equal objective magnitude<sup>1</sup>.
- In terms of hearing care, this means that hearing aid benefits can be overshadowed by difficult experiences which can negatively influence one's hearing aid outcomes.
- Recently, we showed that focusing on positive listening experiences improves subjective hearing aid outcomes in experienced hearing aid users<sup>2</sup>, and hence seems to help mitigate the negativity bias.
- The **primary aim** of the current study was to investigate whether focusing on and sharing positive listening experiences in everyday life improves speech intelligibility in noise (i.e., an objective hearing aid outcome). A **secondary aim** was to confirm that this intervention improves subjective hearing aid outcome as measured using the Speech Spatial Qualities (SSQ12) questionnaire.

## Methods

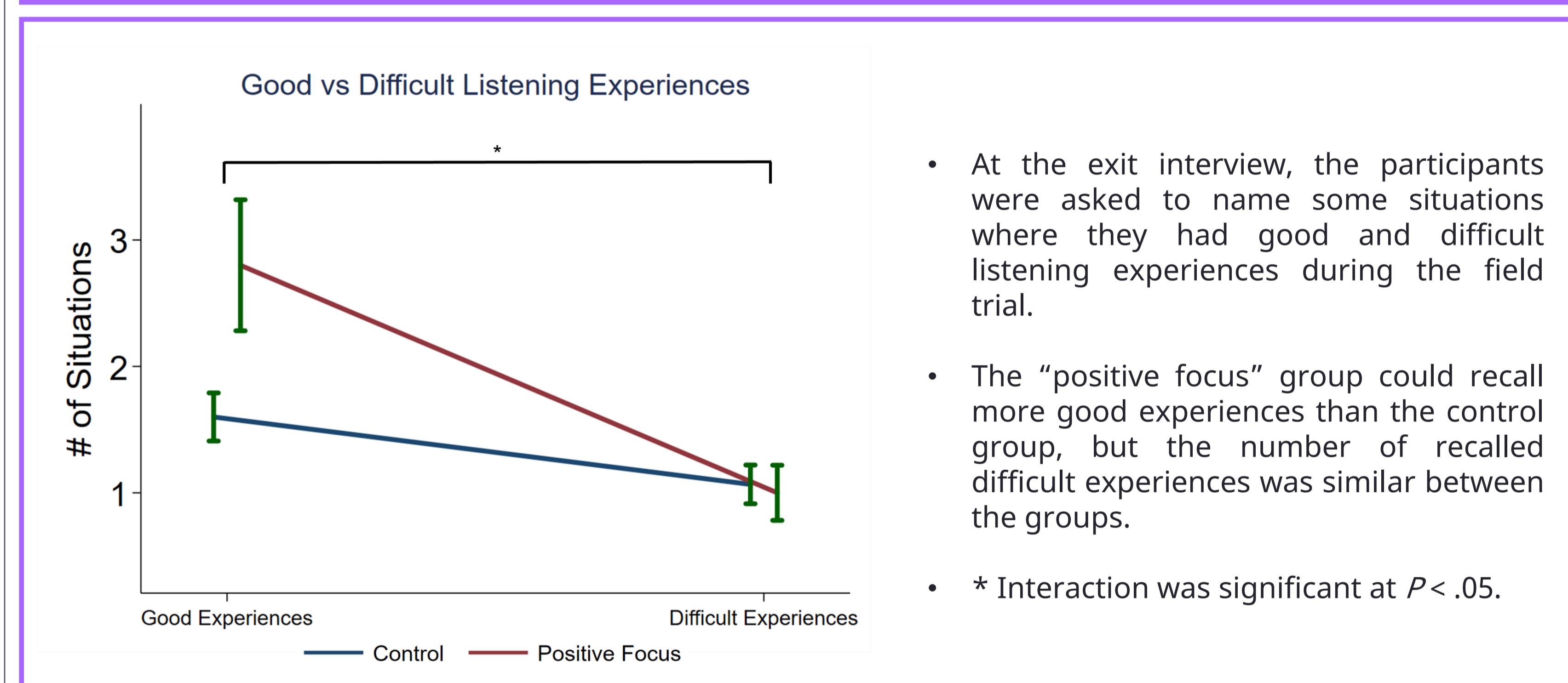
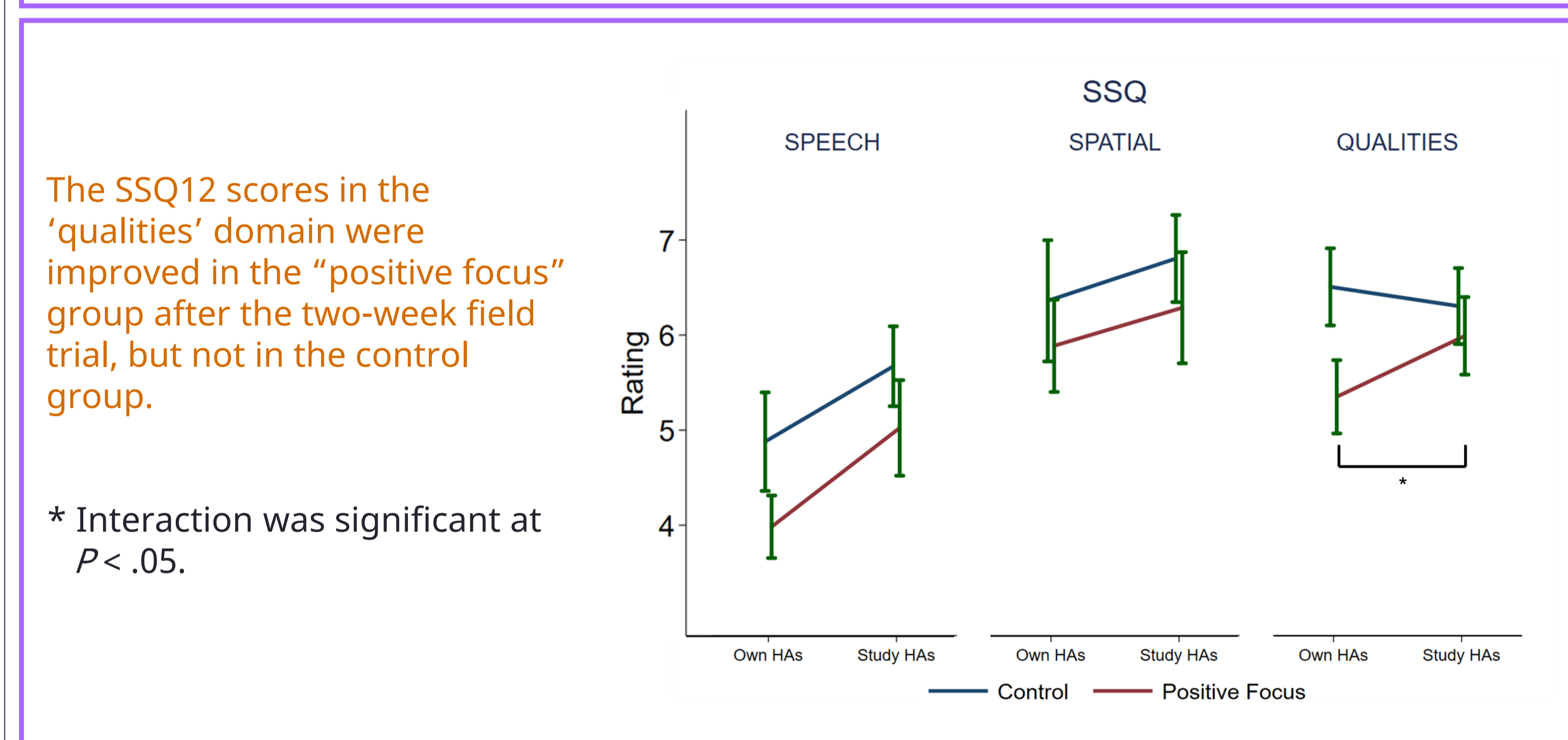
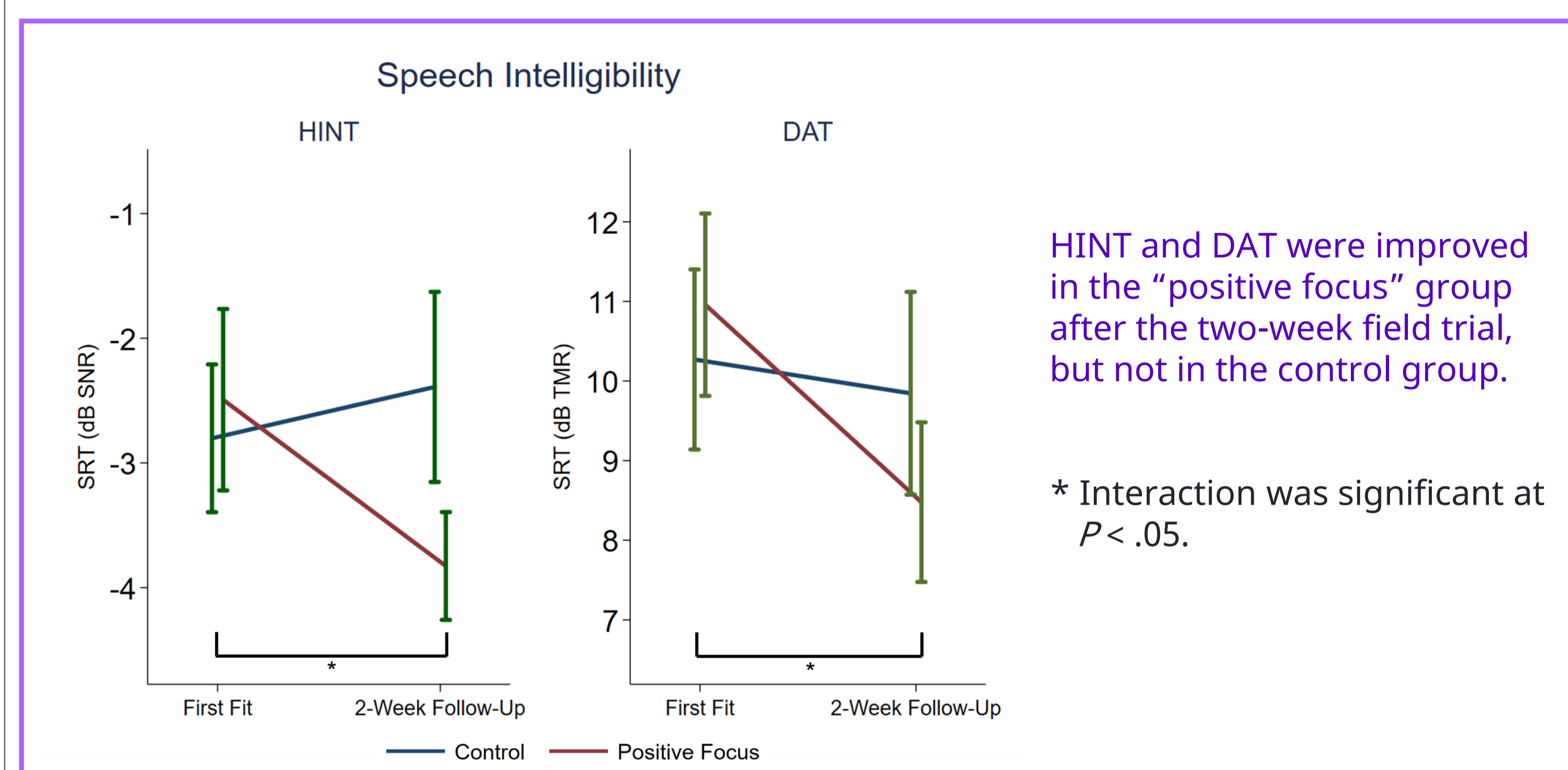
- 30 participants were randomized into a "positive focus" or a control group (N = 2 x 15).
- The study consisted of two laboratory visits and a two-week field trial.



- Big-Five Inventory (BFI), Hearing-Related Lifestyle Questionnaire (HEARLI-Q) and a hearing aid expectation question were administered at baseline to check whether the groups were balanced on these characteristics.
- Study hearing aids were Widex MOMENT MRB2D 440 receiver-in-canal (RIC).
- Speech intelligibility measurements in stationary speech-shaped noise (HINT) and competing speech (DAT) were performed before and after the field trial.
- During the field trial, both groups sent daily text messages reporting hours of hearing aid use to an experimenter.
- The "positive focus" group was instructed to focus on positive listening experiences and to also report them in the daily text messages.

## Results

- The "positive focus" group scored lower in the BFI 'neuroticism' domain ( $2.1 \pm 0.7$  vs  $2.7 \pm 0.8$ ,  $P = .03$ ). Hence, all the analyses were controlled for neuroticism.
- Otherwise, the groups were balanced on age, gender, hearing aid experience, hearing loss, hearing-related lifestyle, hearing expectation, and the remaining four BFI domains.
- The control group used the study hearing aids  $11 \pm 3$  hours per day and the "positive focus" group used the study hearing aids  $13 \pm 2$  hours per day ( $P = .18$ ).



## Conclusions

- The current study showed that focusing on and sharing positive daily-life listening experiences improves speech-in-noise performance in experienced hearing aid users.
- More good listening experiences were reported at the exit interview by the "positive focus" group in comparison to the control group, but the number of difficult experiences was the same between groups -> positive focus in everyday life does not reduce the number of difficult experiences, but potentially makes them less relevant and this is what leads to improved hearing aid outcomes.
- These results point to the importance of adopting a 'positive focus' approach during hearing aid treatment. The positive focus intervention could lead to better hearing aid outcomes by minimizing the effect of difficult listening experiences and improving speech intelligibility.

1. Rozin, P., & Royzman, E. B. (2001). Negativity bias, negativity dominance, and ontogion. *Personality and Social Psychology Review*, 5(4), 296-320;

2. Lelic, D., Parker, D., Herrlin, P., Wolters, F., & Smeds, K. (2023). Focusing on positive listening experiences improves hearing aid outcomes in experienced hearing aid users. *International Journal of Audiology*, 1-11.