Hearing intervention for decreasing risk of developing dementia in elders with mild cognitive impairment: study protocol of a multicenter randomized controlled trial for Chinese Hearing Solution for Improvement of Cognition in Elders (CHOICE)

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## **Objectives**

To further investigate whether hearing aids fitting improves the cognitive function in older adults who diagnosed with moderate-to-severe age-related hearing loss(ARHL) and mild cognitive impairment(MCI).

## **Methods and Materials**

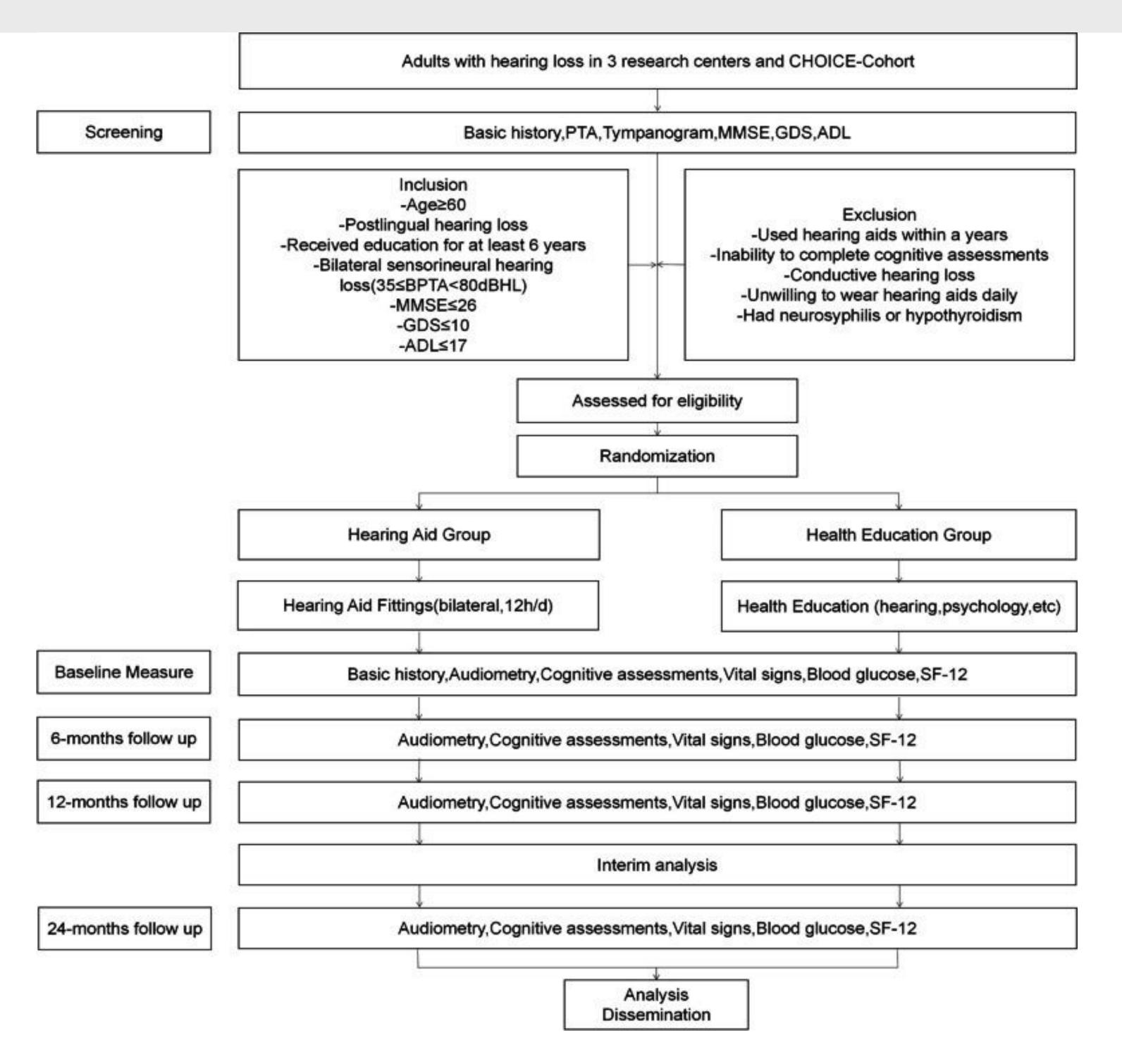
This study is a multiple-center parallel-arm, randomized controlled trial. 688 older adults (age  $\geq$  60) are intend to be enrolled in Shanghai China from 2019 to 2023. All subjects will be assigned to either the hearing aid fitting group or the health education group. Audiometry, cognitive function assessments, etc. will be collected at baseline, 6, 12, and 24 months post-intervention. The primary outcome of our study is the rate of progression to dementia among the two groups of participants.

## **Results and Conclusion**

703 subjects have been recruited from our four study centers, and their mean age is 74.5 year, mean better-ear PTA(pure tone average at 0.5, 1, 2, 4 kHz) is 50.2 dB and mean MMSE score is 23.5.

Up to 10 July 2024, 501 of them have completed 1-year follow-up, and 97 subjects have completed 2-years follow-up. In addition to the final results of the study, we intend to perform a mid-term analysis by using 1-year follow-up data at the end of 2024.

We believe that hearing aid fitting can be a valuable tool in the management of ARHL to delay the development of cognitive decline.



Flowchart for the study