Effects of hearing intervention on falls in older adults:

findings from a secondary analysis of the ACHIEVE randomised controlled trial

Link to study

Brain health

Mental health

Social health

Physical health

Societal impact

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Effects of hearing intervention on falls in older adults:

Overview

A randomised clinical trial of 977 older adults with untreated hearing loss across two cohorts with varied populations..

Researchers looked at the effect of hearing intervention on **falls** over 3 years in older adults with previously untreated hearing loss

Self-reported fall incidence was assessed every 6 months for 3 years for the groups with treated and untreated hearing loss.

Key results

The people with hearing aids had a mean number of 1.45 falls while the ones without hearing aids had 1.98 falls.

This translates to 27% reduction in falls in groups with hearing aids in comparison to ones without.

Use of hearing aids did not significantly increase physical activity.

The results were the same across the different populations.

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Conclusion

A best-practice hearing intervention significantly reduced the number of falls among older adults with untreated hearing loss over a 3-year period.

The 27% reduction in falls highlights that treating hearing loss may offer important physical health benefits.

This effect was observed regardless of participant background, whether newly recruited or part of a long-term aging cohort.

The benefit occurred without an increase in physical activity, suggesting mechanisms such as improved balance and spatial orientation, reduced cognitive load during movement and better awareness of environmental hazards due to increased auditory input.

Effects of hearing intervention on falls in older adults:

SWOT analysis

Evidence: Level 2

S

- Randomized controlled trial design
- Large and well characterised participant group.
- Addresses a critical public health issue
- The study look at a population over a long period of time.
- Rigorous methodology that was adjusted for multiple covariates.

W

- It is a secondary analysis hence the protocol was not originally designed to assess.
- The study may not be representative of a wider population.
- There potentially may be unmeasured factors.
- Self-reporting may lead to bias.
- COVID-19 pandemic may have influenced physical activity levels and fall risk, especially in Year 2.

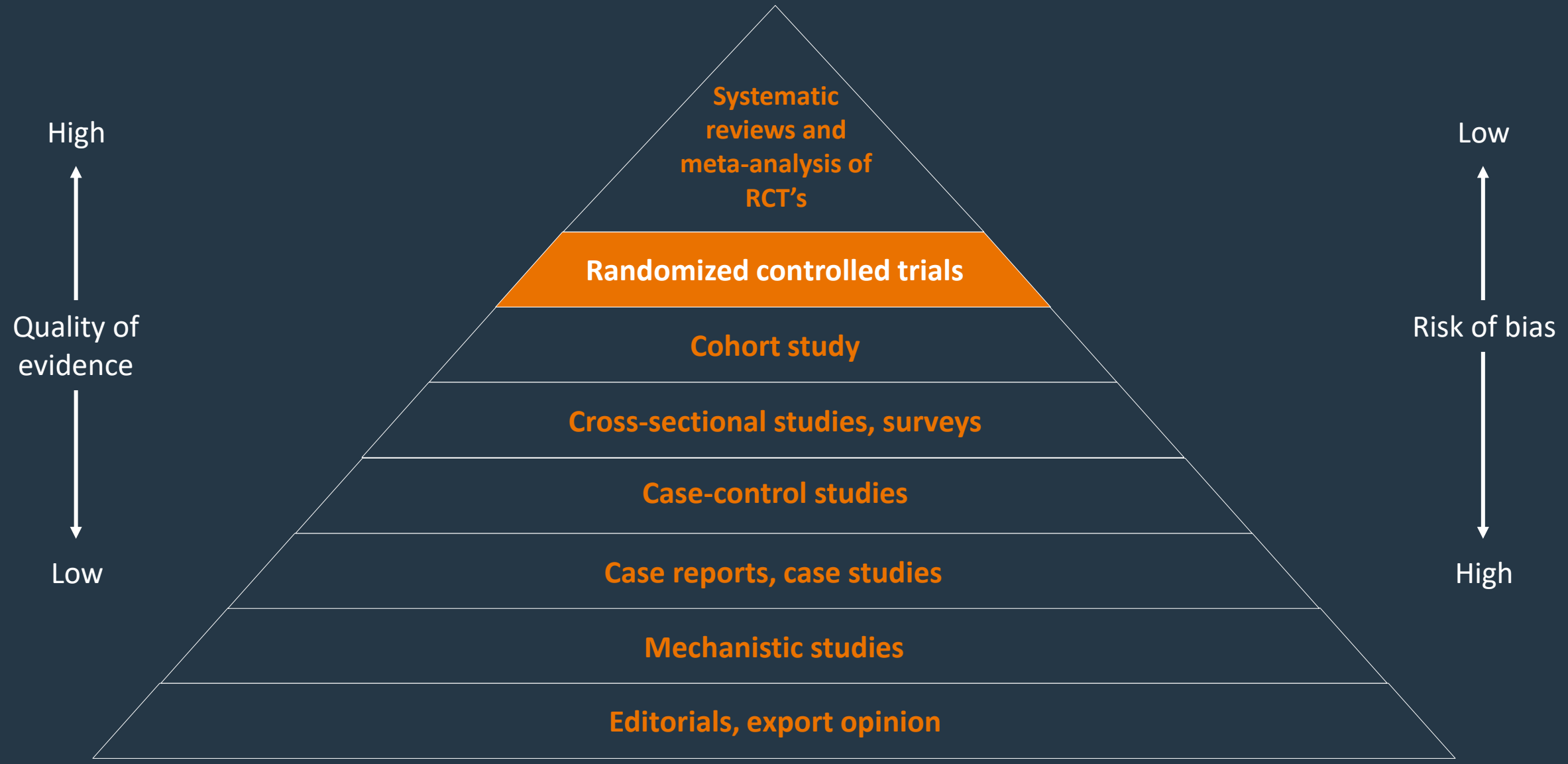
O

- Data supports integrating hearing care into fall-prevention strategies.
- Can inform Medicare/insurance coverage discussions for hearing aids by linking hearing loss to broader health outcomes.
- Findings may encourage development of hearing tech designed with fall prevention in mind.

T

- Results might be misunderstood as definitive evidence of hearing aid effectiveness in falls.
- Real-world uptake of hearing aids is often low, and poor adherence may limit the effectiveness of such interventions.

Effects of hearing intervention on falls in older adults:



Appendix

Template background

The evidence hierarchy

A guideline to understanding scientific evidence

High

Quality of evidence

Low

- **Systematic reviews and meta-analysis of RCT's :** Analyzes data across randomized trials to strengthen the effect size and to test if a seen effect persists across studies
- **Randomized controlled trials :**Prospective studies that measure the effectiveness of a new intervention or treatment through minimizing bias to examine effect of intervention.
- **Cohort study:** A type of nonexperimental or observational study design. In a cohort study, the participants do not have the outcome of interest to begin with but are selected based on the exposure status.
- **Cross-sectional studies, surveys:** Cross-sectional study design is a type of observational study design
- **Case-control studies:** A detailed report of the symptoms, signs, diagnosis, treatment, and follow-up of an individual patient. Case reports usually describe an unusual or novel occurrence and as such, remain one of the cornerstones of medical progress and provide many new ideas in medicine
- **Case reports, case studies:** A detailed report of the symptoms, signs, diagnosis, treatment, and follow-up of an individual patient. Case reports usually describe an unusual or novel occurrence and as such, remain one of the cornerstones of medical progress and provide many new ideas in medicine
- **Mechanistic studies:** A mechanistic clinical trial is designed to understand, in humans, a biological or behavioural process, the pathophysiology of a disease, or the mechanism of action of an intervention. Does not focus on efficacy of intervention.
- **Editorials, export opinion:** A statement from an expert based on extensive experience, but without using scientific evidence to substantiate the opinion or statement

Low

Risk of bias

High

SWOT analysis

Strengths, weaknesses, opportunities and threats

S What are the strengths of the study and what positions it as a credible source of information.

W Which weaknesses can be identified in the study which should be considered when analyzing the results and the general applicability.

O Does the present study represent an opportunity to leverage the information in our communication and our strategy within the topic of the study.

T Are there potential unmeasured confounding in the study or overlooked elements which can jeopardize the integrity of the study or do the results pose a threat to current strategy on the topic.