School of Audiology and Speech Sciences
Blending real-life learning with sound science.

What can happen when hearing loss goes untreated?

Effects of Untreated Hearing Loss

1. Social difficulties

- Poorer social functioning has been associated with hearing impairment

"You're continually adapting and changing and you feel you're just so self-conscious all the time of having that communication problem. It's tiring because you're constantly thinking and concentrating…I'm probably constantly on edge"

- adult with hearing loss

Scarinci et al., 2009
Cacciatore et al., 1999

Effects of Untreated Hearing Loss

2. Psychological Effects

- Social isolation
- Depressive symptoms
- Decreased self-esteem
- Insecurity
- Worry
- Anxiety
- Paranoia

When fitted with hearing aids, 40-60% of users report fewer social and emotional problems

Kramer et al., 2002
NCOA, 1999

Effects of Untreated Hearing Loss

3. Risk of Injury and Safety Concerns

An inability to hear:

- In traffic and at intersections
  - Honking of horns, emergency vehicles, approaching cars
- Around the home or business environment
  - Telephone, doorbell, knocking on door
  - Fire, burglar, clock radio, oven timer

- Vocal warnings
  - "Watch your step!"
  - "Careful, the sidewalk is slippery!"
- Family requiring immediate assistance
  - Grandchildren
  - Low mobility spouses or family members

Effects of Untreated Hearing Loss

4. Physical Health Problems

Increased risk of:

- Stroke
- High blood pressure
- Heart disease

More likely to:

- Take prescription medications & visit doctors
- Need assistance in daily living & in the home

Campbell et al., 1999

Effects of Untreated Hearing Loss

5. Other potential effects of hearing loss

- Impaired memory and comprehension
  - Others may misinterpret as "dementia"
- Decreased workplace performance
- Difficulties with interpersonal relationships
  - E.g. spouse, children, grandchildren

Tun et al., 2009

Current Research

Mary MacDonald's Master's thesis project:

"The Association Between Degree of Hearing Loss and Depression in Older Adults"

Purpose: to investigate the relationship between depressive symptoms and hearing loss using ***objective*** measures of hearing.

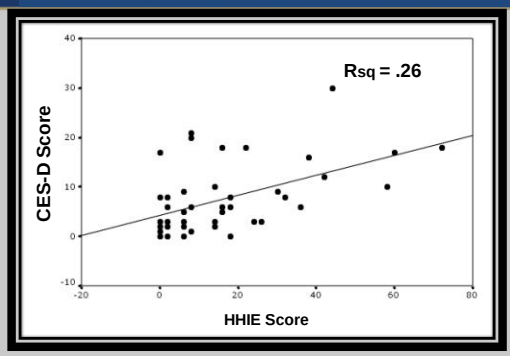
Collaborator: Martha Donnelly, MD, Geriatric Psychiatrist

Current Research

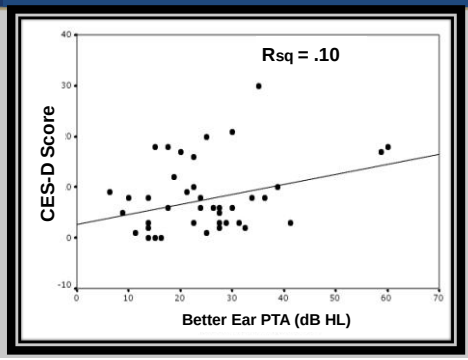
Is there a relationship between objectively measured hearing loss and depressive symptoms?

- 45 males & females aged 65 – 89 yrs
- Have never worn hearing aids
- Methods:
  i. Clinical hearing test (pure tone testing & DPOAEs)
  ii. Hearing questionnaire (HHIE)
  iii. Depressive symptom questionnaire (CES-D)
- Expected findings: As the severity of the hearing loss increases, the prevalence of self-reported depressive symptoms will also increase.
- After adjusting for age, living arrangement, and education…

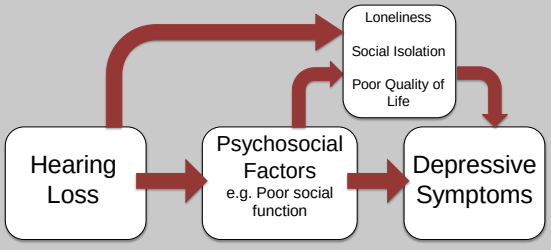
Depression and Self-reported Hearing Loss



Depression and Objective Hearing Loss



Why are Untreated Hearing Loss & Depression Related?



Tentative Conclusions

- The relationship between depressive symptoms and hearing loss seems to exist even when hearing loss is measured objectively
- There is a need to confirm this in a large-scale study