

University of Montana

ScholarWorks at University of Montana

University of Montana Conference on Undergraduate Research (UMCUR)

Apr 28th, 3:00 PM - 4:00 PM

Is it Hearing Loss or is it Dementia? How do you know?

Emma Bozarth

emma.bozarth@umontana.edu

Al Yonovitz

University of Montana, Missoula

Follow this and additional works at: <https://scholarworks.umt.edu/umcur>

Let us know how access to this document benefits you.

Bozarth, Emma and Yonovitz, Al, "Is it Hearing Loss or is it Dementia? How do you know?" (2017).

University of Montana Conference on Undergraduate Research (UMCUR). 7.

<https://scholarworks.umt.edu/umcur/2017/pmposters/7>

This Poster is brought to you for free and open access by ScholarWorks at University of Montana. It has been accepted for inclusion in University of Montana Conference on Undergraduate Research (UMCUR) by an authorized administrator of ScholarWorks at University of Montana. For more information, please contact scholarworks@mso.umt.edu.

Is it Hearing Loss or is it Dementia? How Do You Know?

Al Yonovitz, Ph.D- Au.D, Emma Bozarth

Introduction

Adults over 65 years in US:

- 5.4 million have most common form of dementia – Alzheimer’s
- one in three has a hearing loss

2050 projections worldwide:

- more than 13.8 million people are expected to be affected by dementia
- more than 1.2 billion people are expected to have a hearing loss

There is a high comorbidity of hearing impairment and dementia

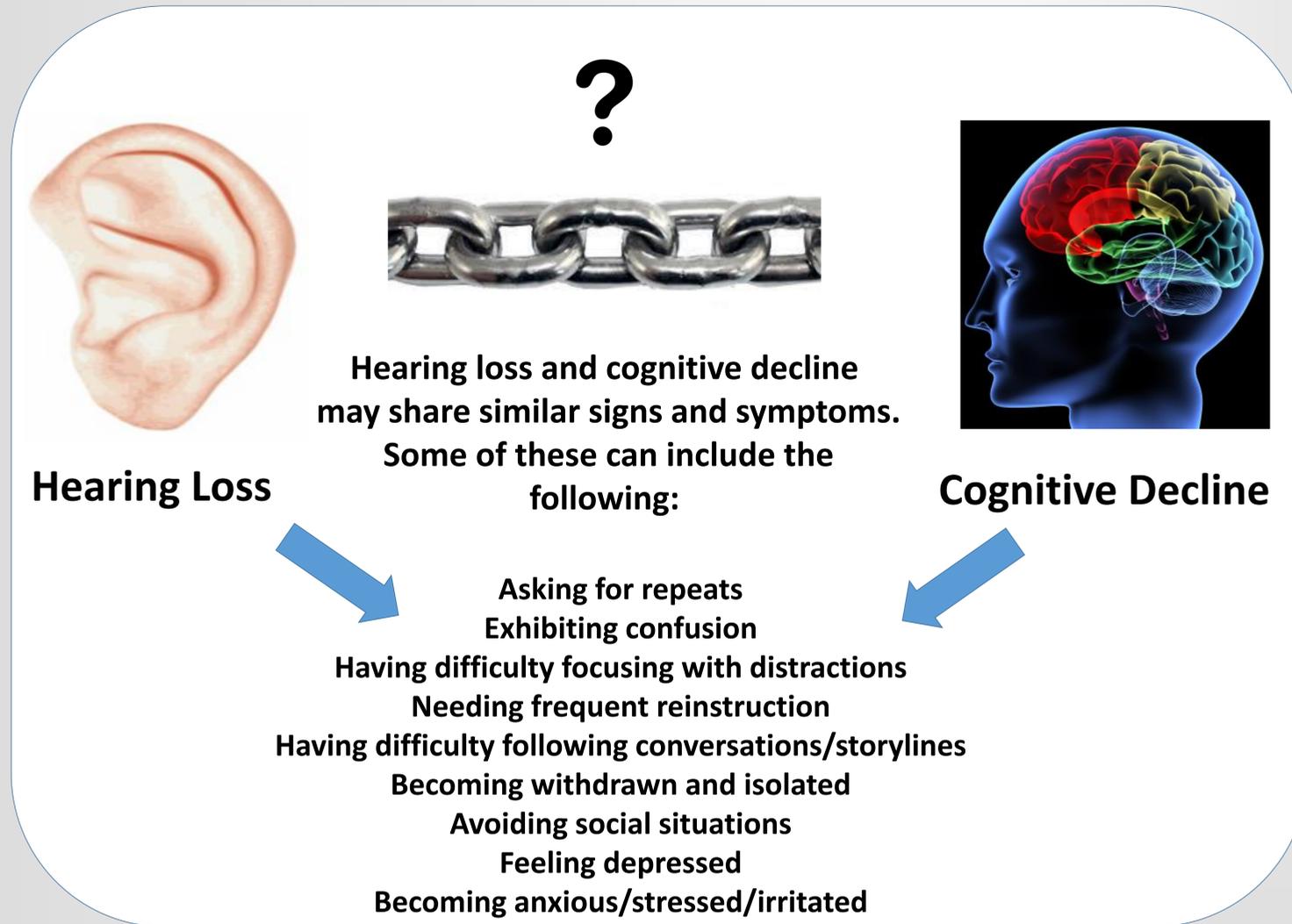
Hearing impairment is *associated* with increased risk of developing dementia; at this point no positive *causal* link has been established

Hearing aids don’t prevent, delay or slow cognitive decline, *but* they allow for cognitive- engaging

Purpose & Methodology

Purpose: To determine if Occupational Therapists (OTs) and Certified Occupational Therapy Assistants (COTAs) in Montana have the knowledge and tools to differentiate between cognitive impairment and hearing loss.

Methodology: A survey was sent via email to OTs and COTAs in Montana. Qualtrics responses received were 36 (n = 36). A majority of respondents (53.6%) had been practicing over 20 years. Geriatrics was setting in which most worked, followed by rehabilitation, acute care, and orthopedics.



Conclusions

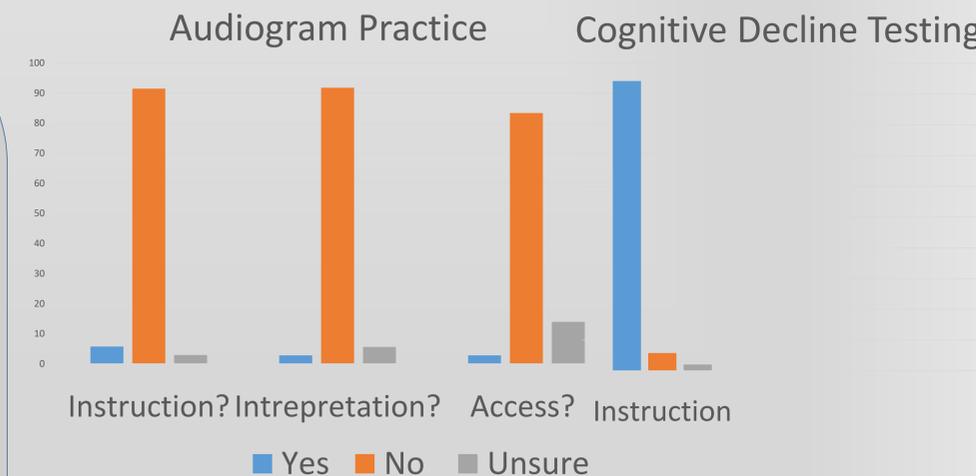
The majority of respondents had the knowledge and tools to administer and interpret cognitive screening tests; however, the majority of respondents did not have the knowledge and tools to administer and interpret hearing screening tests. For interdisciplinary cooperation, pure-tone air-conduction audiometry might be considered for in-service or as part of the curriculum for Occupational Therapy.

Findings

Almost all respondents stated that they had experienced concern about a patient’s/client’s cognitive functioning (100%) and hearing ability (88.89%). Concerns were resolved by instructing, reframing, explaining to a significant other, and directing to appropriate referrals. There were a variety of cognitive screening tests administered.

94.29% had received instruction for administering cognitive screening tests, 85.71% had access to cognitive screening testing tools, and 85.29% could interpret results from cognitive screening tests.

Inversely, regarding hearing screening testing, 91.43% had not received instruction for operating an audiometer, 83.33% did not have access to an audiometer, and 91.67% could not interpret an audiogram.



References

Amieva, H., Ouvrard, C., Guillot, C., Meillon, C., Rullier, L., & Dartigues, J. (2015). Self-reported Hearing Loss, Hearing Aids, and Cognitive Decline in Elderly Adults: A 25-Year Study. *Journal of the American Geriatrics Society*, 63(10), 2099-2104.

Bouton, K. (2013, Spring). You can't see it, but I can't hear you. *Hearing Health*, 29(2), 16-18.

Dawes, P. (2017, January 9). 200: Hearing loss and dementia – Association, link, or causation? *AudiologyOnline*, Article 19111. Retrieved from www.audiologyonline.com

Dawes, P., Emsley, R., Cruickshanks, K.J., Moore, D.R., Fortnum, H., Edmondson-Jones, M., McCormack, & Munro, K.J. (2015, March 11). Hearing loss and cognition: The role of hearing aids, social isolation and depression. *PLoS ONE* 10(3): e0119616. doi:10.1371/journal.pone.0119616.

Deleahanty, H. (2016, October). Rudolph Tanzi: A Harvard University neuroscientist and one of the world's leading researchers on Alzheimer's disease talks with Hugh Deleahanty about promising developments on the road to a cure. *AARP Bulletin*, 57(8).

Fagan, F. (2011). Hearing loss: is it a risk factor for Alzheimer's disease, or an early marker of cognitive decline – or both? *Canadian Nursing Home*, 22(4), 4-11.

Garnefski, N., & Kraaij, V. (2012). Cognitive coping and goal adjustment are associated with symptoms of depression and anxiety in people with acquired hearing loss. *International Journal of Audiology*, 51, 545-550.

Jorgensen, L. (2016, July 15). Diagnosis of dementia affected by hearing loss. *Hearing Review*. Retrieved from http://hearingreview.com/2016/07/diagnosis-dementia-affected-hearing-loss/

Keidser, G., Seeto, M., Rudner M., Hygge, S., & Ronnberg, J. (2015) On the relationship between functional hearing and depression. *International Journal of Audiology*, 54(10), 653-664.

Lin, F.R., & Albert, M. (2014). Hearing loss and dementia – who is listening? [Editorial]. *Aging and Mental Health*, 18(6) 671-673.

Lin, F.R., Metter E.J., O'Brien, R.J., Resnick, S.M., Zonderman, A.B., & Ferrucci, L. (2011, February). Hearing loss and incident dementia. *Archives of Neurology*, 68(2), 214-222. Retrieved from http://jamanetwork.com/journals/jamaneurology/fullarticle/802291?version=meter%20at%20null&module=meterLinks&pgtype=article&contentid=&mediatid=&referrer=&priority=true&action=click&contentClick=meter-links-click

Photo/Graphic Credits

Ear: <http://www.clipart.com/clipart-left-ear-image.html>
 Question mark: http://www.freepik.com/free-icon/question-mark_731610.htm
 Chain links: <http://www.anzor.com.au/stainless-steel-chain/product>
 Person with brain: <https://www.ucl.ac.uk/pals/seminars/experimental-psychology-seminar-auditory-sequence-processing>