

# AB036. An interview based assessment's sensitivity and specificity for identifying dual vision and hearing loss in older adults with and without risk of Mild Cognitive Impairment

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**Background:** Dual vision and hearing loss or dual sensory impairment (DSI) negatively impacts a person's ability to communicate, acquire information, and perform daily activities. Because the incidence of DSI is higher in older adults (65+), and the fact that most developed countries are aging, there is expected increase in DSI prevalence. The detection and evaluation of DSI is of utmost importance because several aspects of health care delivery, and communication with health professionals, depend on it. Identifying DSI in older adults can be more difficult when they present with mild cognitive impairment (MCI), which may limit their ability to report sensory loss, potentially resulting on medical professionals failing to detect DSI. The interRAI CHA is the only standardized interview instrument for adults (18+) that helps first-line health care providers to identify and assess DSI. This study evaluated this instrument's sensitivity and specificity for detecting vision and or hearing loss in older adults with and without risk of MCI.

**Methods:** The study sample consisted of 200 adults

aged 64+ that were receiving rehabilitation services for either vision loss only, hearing loss only, or DSI. Two measurements were collected: (I) interRAI CHA, which consists of roughly 150 closed-ended questions, two of which are used to identify DSI; (II) Montreal Cognitive Assessment (MoCA), a 10-minute screening test that assess cognitive function and identifies individuals at risk of MCI. The interRAI CHA sensitivity and specificity for identifying DSI was calculated in comparison to gold standard objective measurements of vision and hearing obtained from participants' medical records. Sensitivity and specificity results were stratified based on risk of MCI, as assessed by the MoCA.

**Results:** Sensitivity for DSI was slightly better for respondents that were not at risk of MCI (97.4%) compared to those who were at risk of MCI (96.2%). Likewise, sensitivity for HL only was slightly better for respondents that were not at risk of MCI (97.4%) compared to those who were at risk of MCI (96.8%). Because sensitivity was 100% for VL only, the potential impact of MCI risk on the interRAI CHA's sensitivity for detecting VL only cannot be studied in this sample. Specificity for DSI and HL were higher for participants not at risk of MCI (HI: 96.2%, DSI: 94.8%), compared to those at risk of MCI (HI: 90.2%, DSI: 91.1%). Dissimilar to this, in the VI group specificity was slightly better in participants at risk of MCI (100%), compared to those not at risk of MCI (98.7%). This was due to a single participant not at risk of MCI who was not classified as VL by the medical record, yet did report difficulties with vision when responding to the interRAI CHA question on vision.

**Conclusions:** The interRAI CHA's sensitivity and specificity for detecting DSI was lower for older adults at risk of MCI, compared to those not at risk of MCI. Future research should investigate strategies to improve identification of DSI in persons at risk of MCI.

**Keywords:** Dual sensory impairment; deafblindness; screening

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