

INTRODUCTION

- A diagnosis of mild cognitive impairment (MCI) requires subjective concerns about cognitive changes expressed by the individual, a close informant, or a clinician
- Reliable information is imperative for accurately diagnosing MCI and for continued support as the disease progresses, since individuals may lose insight into their own impairment
- Many informants in research are cohabitating spouses, but when a participant lives alone, they must rely on a friend, child, sibling, or other family member

OBJECTIVE

Does a participant's diagnosis, living situation with their informant, and relationship to their informant affect self- and informant-reports of cognitive decline?

METHODS

- Participants (N=348) and their informants were drawn from the Michigan Alzheimer's Disease Research Center's longitudinal cohort
- Participants were community dwelling adults ages 55+ who lived alone or with a spouse, and who received a consensus diagnosis of cognitively unimpaired (CU) or MCI using NACC UDsv3 criteria
- Participants and informants independently completed 20-item Cognitive Change Index (CCI), where higher scores indicate greater perceived decline
 - Rated participant's cognitive abilities on a 5-point Likert scale (1=Normal ability/No change from 5 years ago, 5=Severe problem/Much worse than 5 years ago)
 - Discrepancy scores were calculated by subtracting informant-reported CCI scores from self-reported CCI scores
- The Geriatric Depression Scale (GDS), consisting of 15 yes/no questions was also administered to participants
 - Score >5 suggests depression
- Living situation, diagnosis, age, sex, education, race, and depressive symptoms (GDS) were used to predict CCI scores in a linear regression analysis
 - To predict CCI discrepancy scores, a linear regression analysis was run with informant relationship in place of living situation

LINEAR REGRESSION ANALYSIS

CCI SELF-REPORT

	Living Alone (N=109)		Living w/ Partner (N=239)	
Diagnosis	$\beta = 4.66$	$p < 0.05$	$\beta = 8.79$	$p < 0.001$
Age	$\beta = 0.29$	ns	$\beta = 0.11$	ns
Sex	$\beta = -0.21$	ns	$\beta = -0.87$	ns
Race	$\beta = -1.67$	ns	$\beta = -1.60$	ns
Education	$\beta = -0.39$	ns	$\beta = -0.55$	ns
GDS	$\beta = 2.76$	$p < 0.001$	$\beta = 3.41$	$p < 0.001$

CCI INFORMANT-REPORT

	Living Alone (N=109)		Living w/ Partner (N=239)	
Diagnosis	$\beta = 2.02$	ns	$\beta = 8.22$	$p < 0.001$
Age	$\beta = 0.12$	ns	$\beta = -0.01$	ns
Sex	$\beta = 1.36$	ns	$\beta = -1.76$	ns
Race	$\beta = -4.36$	$p < 0.05$	$\beta = -1.80$	ns
Education	$\beta = -0.43$	ns	$\beta = -0.57$	ns
GDS	$\beta = 2.13$	$p < 0.01$	$\beta = 3.41$	$p < 0.001$

CCI DISCREPANCY SCORES

Child	$\beta = -0.18$	ns	Age	$\beta = 0.12$	ns
Sibling	$\beta = 2.17$	ns	Sex	$\beta = 0.49$	ns
Other rel.	$\beta = 4.47$	ns	Race	$\beta = 1.32$	ns
Friend	$\beta = 5.19$	$p < 0.05$	Education	$\beta = -0.06$	ns
Diagnosis	$\beta = 1.15$	ns	GDS	$\beta = 1.09$	$p < 0.01$

Demographics	Living Alone (N=109)	Living w/ Partner (N=239)
Diagnosis, % MCI	47%	34%
Age, M (SD)	73 (6)	71 (6)
Sex, % Female	85%	51%
Race, % Black	55%	13%
Education, M (SD)	16 (2)	17 (2)
GDS, M (SD)	2 (2)	1 (2)

RESULTS

- As expected, self-reported CCI scores were higher for participants with MCI in both living conditions
- Informant-reported CCI scores were only higher for participants with MCI when living together**
- Informant-reported CCI scores did not significantly differ between MCI and CU participants when the informant did not live with the participant
- Discrepancy scores were higher when the informant was a friend rather than a spouse, regardless of diagnosis. No significant difference if the informant was a relative

DISCUSSION

- Previous research found that informant-reported CCI scores were effective in distinguishing CU adults from those with MCI
- However, we found that informants living separately from participants may not be able to effectively detect cognitive changes associated with MCI
- When a participant with MCI lives alone, their self-reported information may be more reliable than informant-reported information
- Informant-reported decline was more aligned with self-reported decline when the informant was a family member rather than a friend
- This study was limited by a highly educated, community-based volunteer sample

ACKNOWLEDGEMENTS

This project was supported by the NIH/NIA funded Michigan Alzheimer's Disease Research Center (P30AG072931)