Assessing Language Changes associated with Dementia and Cognitive Impairment in Older CALD Bilinguals

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Prevalence of Bilingualism
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- Australians born overseas: 31.2%
- One/both parents born overseas: 46.3%
- Speak language other than English at home: 23.2%
- Aged over 65 speaking LOTE at home: > 30%
- Estimated overall bilingualism: at least 26 - 49%

ABS 2011
Increasing prevalence 2006 - 2011

- Australians born overseas: 31.2% (29.1%)
- One/both parents born overseas: 46.3% (44%)
- Speak language other than English at home: 23.2% (21.5%)
- Aged over 65 speaking LOTE at home: > 30%
- Estimated overall bilingualism: at least 26 - 49%

Census Data Australia 1991-2011: Increase in Language Other Than English and Age 65 + years
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Increased ageing for language groups

Countries of birth with oldest and youngest populations (a)

(a) Populations with more than 5,000 people.

ABS 2006
Increased ageing for language groups

Countries of birth with oldest and youngest populations(a)

- Latvia
- Slovenia
- Italy
- Hungary
- Greece
- Overseas-born
- Australian-born
- Bangladesh
- Thailand
- Taiwan
- Afghanistan
- Sudan

- Risk of stroke, heart disease
- Rate of dementia
- Risk of aphasia & communication impairment

(a) Populations with more than 5,000 people.

ABS 2006
Bilingualism matters: language, emotion & cognition

- Language associated with identity
- Preferred language/s – for speaker, context, topic, emotional content
- Language of education can affect performance on formal / cognitive tasks
- English ability important for community and social participation, access to medical services and information
Language changes and loss in dementia

- problems with naming (wordfinding)
- loss of meanings of words
- reduced ability to express oneself in sentences
- reduced comprehension of longer and more complex sentences
- loss of reading and writing skills
- impaired social conversation – affects interactions
Limited research into bilingual language changes

- clinical and anecdotal reports of loss of second language
- however some families report parallel loss of first and second languages
- little published research, no longitudinal cohort studies and no detailed language investigations

⇒ urgent need for study due to ageing CALD communities
Language Changes in Bilingual Adults Study

• Bilingual NESB participants from Sydney Memory and Ageing Study
• fluent in English and first language
• cohort aged 70-90 at commencement of MAS, random recruitment from electoral roll
• current age range 78-98 years
• languages: Hungarian, German, French, Italian, - also Greek, Russian, Dutch, Croatian, Latin …
Aims of Study

• to identify changes in the first and second (English) languages associated with cognitive impairment and dementia
• to contribute to improved early diagnosis of dementia in bilingual CALD / NESB individuals
• outcomes to contribute information to assist care and management for bilingual CALD / NESB individuals with cognitive impairment and dementia
Test protocols

• Assessed on language tasks separately in first language and second language (English)

• Language tasks
  – test grammatical structure and vocabulary in each language
  – and translation of words and short sentences
Language Tasks

- tasks include:
  - picture description
  - naming objects
  - generating sentences
  - judging sentence meaning and grammar
  - reading words and sentences
  - translating words and short sentences

book => livre

\[
\text{man... door...} \\
\Rightarrow \text{the man opens the door}
\]
Language Questionnaires

- aim to measure impact of changes on functional language and communication tasks
  - e.g. - using telephone to make appointments
  - asking for prices in shops
  - discussing health concerns with doctor
- completed by participant and/or informant
- 7 point Likert scales: “independent – full assistance”
  “as able as previously – not at all able”
Bilingual Language Questionnaires

- detailed background language history, education,
- current patterns of language use
- changes relative to previous language use
  e.g. availability of conversational partners
Preliminary Findings

• current participants tested are cognitively unimpaired or have mild cognitive impairment
• largely similar results in both languages for these participants
• mild interference on generative naming tasks in second language for MCI
• generally equivalent in naming objects, picture description, sentence judgements, word and sentence reading
Preliminary Findings

• many report English (second) language to be the preferred and stronger language
• but also report some difficulties when undergoing neuropsychological testing in English
• aware of interference on word naming tasks during neuropsychological testing in English – but also in first language
• generally good functional communication abilities
Implications

• need to consider impact of formal testing in second language
• preliminary indications that largely parallel language skills in proficient older CALD bilinguals with mild cognitive impairment
• await further results of study for older CALD bilinguals with conversion to dementia
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