Research on health care access for linguistic minorities:
Focus on language

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Minority Communities.
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Linguistic __minorities__

1. Demographics

Health issues related to:
age, education, lifestyle,
socio-economic issues, etc.

<u>Linguistic</u> minorities

2. Communication

Health issues related to:
Linguistic barriers
Cultural competence

Linguistic barriers

62%+ minority Francophones
75%+ minority Anglophones
Most First Nation, Métis & Inuit
75% doctors cannot speak both Eng & Fr
Foreign trained doctors
Growing problem world-wide

Bélanger, 2003; Bowen, 2001; Canadian Medical Association, 2006

Linguistic barriers

"When I'm sick I'm not bilingual"
Draft position paper on the planning of French language mental health services for adults between the ages of 16 to 65

«Quand je suis malade, je ne suis pas bilingue»
Projet d'énoncé de politique sur la planification des services de santé mentale en français pour les adultes de 16 à 65 ans

Pettey, 1987

Linguistic barriers

"Conversation is at the heart of all human relationships, and is the foundation of the physician-patient relationship."

O'Neill, 2005, p. 179

Linguistic barriers

"Conversation is at the heart of all human relationships, and is the foundation of the physician-patient relationship."

Legal & ethical implications!

Rapport building - informed consent - death
bad news - suicide - mental health - pain
sexual health - palliative care - etc.

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7

Linguistic barriers

"Conversation is at the heart of all human relationships, and is the foundation of the physician-patient relationship."

Consequences!

Avoidance (by both patient & caregiver)
Less thorough examination
Miscommunication

Linguistic barriers

"Conversation is at the heart of all human relationships, and is the foundation of the physician-patient relationship."

Current solutions
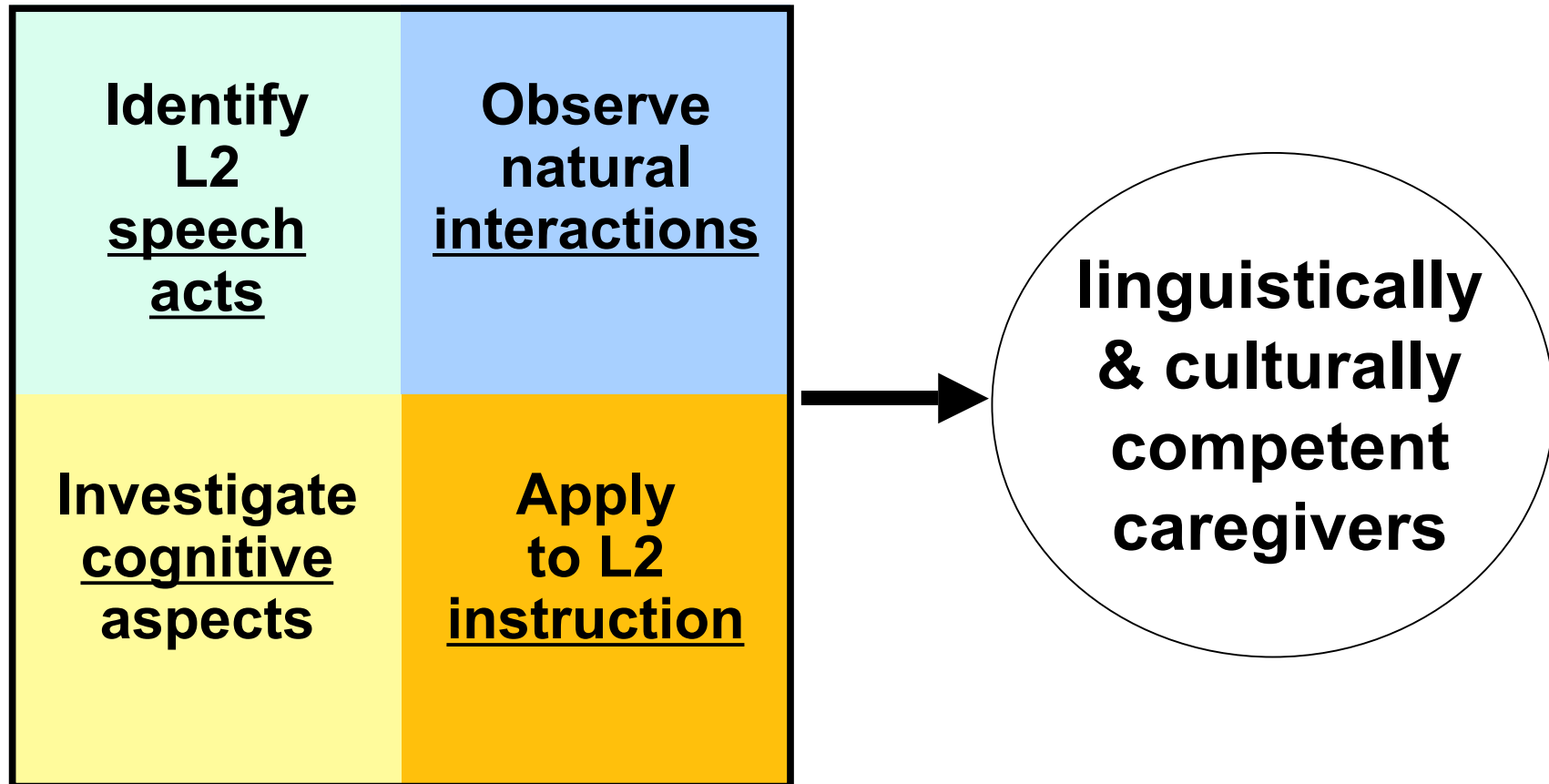
- Patient is forced to use a second language [!];
- Nonprofessional interpretation (by family, staff) [?];
- Professional interpretation [$]

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9

Alternative solution

***Teach caregivers
the patient's language***

Research Program

Research program

| Identify L2 **speech acts** | Observe natural **interactions** |
| Investigate **cognitive** aspects | Apply to L2 **instruction** |

→ **linguistically & culturally competent caregivers**

Health-Care Access for Linguistic Minorities: H-CALM

Interdisciplinary, inter-institutional research program that addresses potential language barriers faced by linguistic minorities

Speech acts	*Interaction*	*Cognitive*	*Instruction*

H-CALM is a research team that is part of McGill University's Training and Human Resource Development Project, funded by Health Canada.

L2 speech acts: Nurse-Patient

Can we identify which L2 communicative tasks are most difficult for nurses?

How do nurses rate their own L2 skills?

Where should L2 training training for nurses focus?

Isaacs, Laurier, Turner, & Segalowitz (2009, submitted)

L2 speech acts: Nurse-Patient

- checking patient's identity over phone
- rephrasing/confirming a patient's description of pain
- managing a patient's anger or impatience
- summarizing/rephrasing a patient's feelings in
  reaction to diagnosis
- showing empathy towards a patient
- refusing unreasonable request from a patient

Isaacs, Laurier, Turner, & Segalowitz (2009, submitted)

L2 speech acts: Nurse-Patient

Method

- final sample = 133 Quebec nurses
- final list of 19 speech acts (literature; focus gps)
- Nurses rated each act on scale from 1-7 on
    - level required
    - own level

Isaacs, Laurier, Turner, & Segalowitz (2009, submitted)

L2 speech acts: Nurse-Patient

Analyses

- Rasch analysis: refine data; relevance; align
     with Canadian Language Benchmarks
- Factor analysis (exploratory & confirmatory):
     underlying structure

Isaacs, Laurier, Turner, & Segalowitz (2009, submitted)

L2 speech acts: Nurse-Patient

Results & Conclusions

- Exploratory factor analysis: 3 factors
- Confirmatory factor analysis:
  - retained all 19 items
  - 1st order factor + three 2nd order factors
- Interpret speech acts that cluster together

Isaacs, Laurier, Turner, & Segalowitz (2009, submitted)

L2 speech acts: Nurse-Patient

Results & Conclusions

3 subconstructs:
- EMOTIONAL aspects of caregiving
- FACTUAL aspects related to health
- ROUTINE aspects (not health related)

Isaacs, Laurier, Turner, & Segalowitz (2009, submitted)

L2 speech acts: Nurse-Patient

Results & Conclusions

Pedagogical implications:
- Aligned 19 speech acts with
  Canadian Language Benchmarks (levels 5-9)
- Focus on EMOTIONAL, FACTUAL aspects
- Teaching modules; Assessment tools
- Model for other domains (e.g., mental health)

Isaacs, Laurier, Turner, & Segalowitz (2009, submitted)

Interaction: Talking about Pain

Nurse-Patient communication

- Hospital setting in Laval, Québec
- Pain assessment interviews recorded
- Nurses: $N = 36$; Patients: $N = 72$
  - English, French
  - Each nurse in L1 & L2 (20+ tested already)
  - Proficiency in L2 (& L1)

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Interaction: Talking about Pain

In progress

- transcriptions: nurses speaking in L1 & L2
- interactions: flow; content; rapport building
- fluency: oral samples, cognitive tests, cloze
- debriefing: nurses' experiences

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Cognitive: Pain words in the L2

The problem

- Language of pain very subjective
- Cross linguistic differences
- How are pain descriptors mentally represented?
- Same in English & French? In L1 and L2

Segalowitz, Christian, Trofimovich, & Kehayia (in progress)

Cognitive: Pain words in the L2

The problem

- Melzack Pain Questionnaire - English, French
- For diagnosis
- But talking empathetically about pain?

___

Segalowitz, Christian, Trofimovich, & Kehayia (in progress)

Cognitive: Pain words in the L2

Method

- 24 Anglophone students, Fluency data
- 11 pain descriptors in English & French
  e.g., shooting, throbbing, sharp, stabbing, …

Segalowitz, Christian, Trofimovich, & Kehayia (in progress)

Cognitive: Pain words in the L2

Method

- similarity judgments:

   e.g., **a shooting pain**   vs.   **a throbbing pain**

- semantic differential:

   e.g., **throbbing**:   **strong** _ _ _ _ _ _ _ **weak**

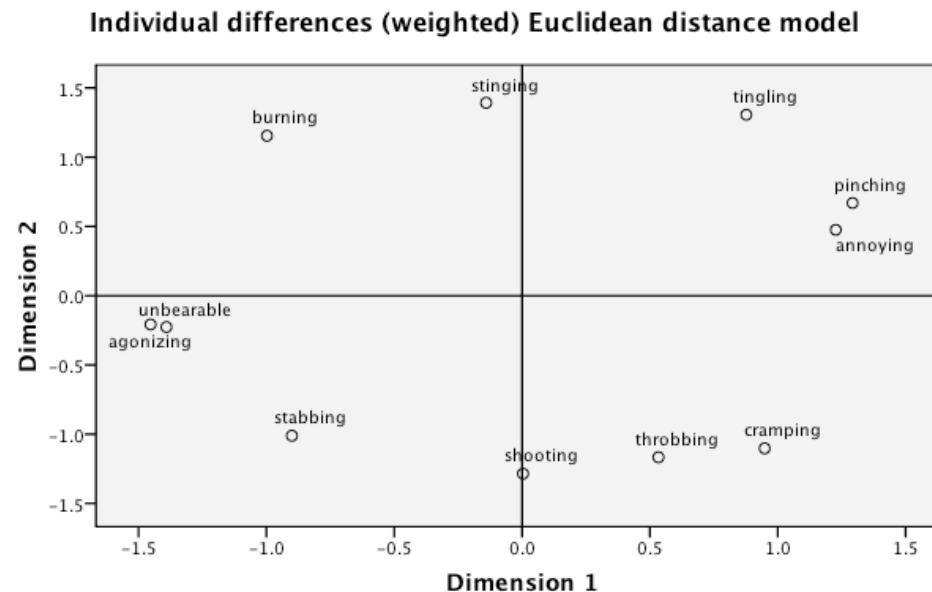**Segalowitz, Christian, Trofimovich, & Kehayia (in progress)**

Cognitive: Pain words in the L2

Dissimilarity judgments: Use Multidimensional Scaling to derive semantic spaces for L1 and L2 speakers

Example:

Eng L1

Derived Stimulus Configuration

Individual differences (weighted) Euclidean distance model

Segalowitz, Christian, Trofimovich, & Kehayia (in progress)

Cognitive: Pain words in the L2

Analyses in progress: Multi-Dimensional Scaling

- use dissimilarity ratings and MDS
- compare L1 English and French "semantic spaces"
- compare L2 spaces as function of fluency
- explore underlying psychological dimensions of pain words - intensity, temporal aspects, etc.
- changes in dimensions as function of fluency
- derive a mental model of "pain lexicon" in L1 & L2

Segalowitz, Christian, Trofimovich, & Kehayia (in progress)

Cognitive: Pain words in the L2

Analyses in progress: Factor Analysis

- use semantic differential ratings
- compare L1 English and French underlying structure
- compare L2 structures as function of fluency
- explore underlying psychological dimensions of pain words - intensity/affective; concrete/sensory
- changes in dimensions as function of fluency
- compare with MDS spaces

Segalowitz, Christian, Trofimovich, & Kehayia (in progress)

Instruction: Virtual Language Patient

The goal: Is the VLP feasible?

- To develop a computer-based tool for medical interview practice
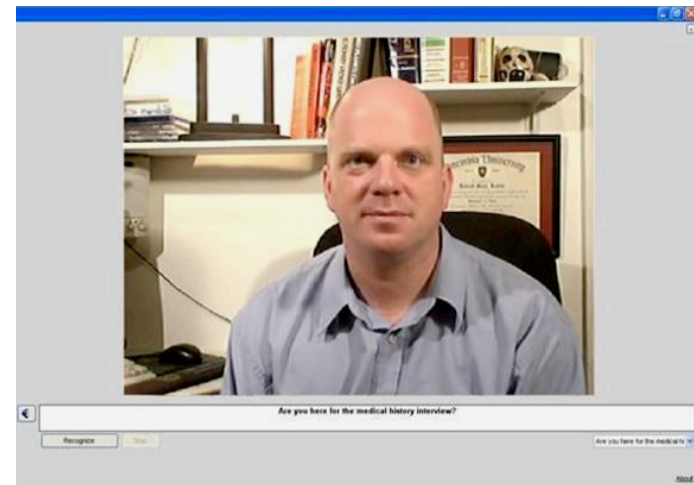- "natural" feel
- instructional feedback

Walker, Cedergren, Trofimovich, Gatbonton, & Mikhail (2009)

Method

- Microsoft Visual Studio
- SRI EduSpeak Speech Recognition System
- Danny—a non-professional actor 'patient'

The virtual patient as seen
on the computer monitor:

Walker, Cedergren, Trofimovich, Gatbonton, & Mikhail (2009)

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30

Instruction: Virtual Language Patient

Method

- Nurse reads a question from a list
- Computer identifies question from nurse's input, plays appropriate video clip in response or request for repetition
- Provides pronunciation (comprehensibility) feedback
- "Comprehension" level can be set on a lax-strict continuum

Walker, Cedergren, Trofimovich, Gatbonton, & Mikhail (2009)

Instruction: Virtual Language Patient

Next step

- Vastly increase the database of possible questions that can be recognized in order to anticipate whatever a learner might say spontaneously
- Arrange more natural repetition (e.g., use more than one virtual patient)
- Evaluate as training tool for training & skill maintenance
- Expand to other domains: pain assessment, etc.

Walker, Cedergren, Trofimovich, Gatbonton, & Mikhail (2009)

Putting it all together

Take home message

- *Linguistic* minority status — We need to study the specific language barriers that can block the "conversation" between patient and caregiver.

- Language barriers can be studied systematically and practical measures can be taken to overcome them.

- Language barriers in health communication is a world-wide phenomenon, growing in scope; L2 abilities are increasingly recognized as an important component of a caregiver's skill set.

Opportunity!

Final thought

- Canada is in a unique position in having official linguistic minority communities and policies to cover their health needs.
- Most Canadians have at least some basic training in the other official language, thus providing a base to build on regarding L2 training for caregivers.
- Canada has the opportunity to become a world leader in L2 training for health professionals because of its experience with OLMCs, the general language skills of its population, and its world-class research expertise in basic and applied language sciences.

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34

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Merci !   Thank you!

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