Social psychology and new frontiers in audiologic rehabilitation: Stigma, stereotypes and self-efficacy

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Perspective of an Older Adult who Lives with Hearing Loss

“When you are hard of hearing you struggle to hear; When you struggle to hear you get tired; When you get tired you get frustrated; When you get frustrated you get bored; When you get bored you quit.

-- I didn’t quit today.”

Avoid by withdrawal from social interaction!
Health is....

“...the capacity of people to adapt to, respond to, or control life’s challenges and changes.” (Frankish et al., 1997)
Social Factors in AR

- Stereotype threat
  - Stigma (self and other)
- Stress and Coping
- Self-efficacy
- Caregiver burden
Self-presentation & Stereotypes
(Jake Harwood; Mary Lee Hummert, Angie Williams & Jon Nussbaum)

- “SOCIAL OCTOPUS”
- Self-censorship to minimize problems
  - Whether youth or elder
- Present as being competent member of advantaged group
  - Teens want to appear older
  - Elders want to appear younger
- Gain/maintain control of self/other
Stigmatization by Self and Other

- Denial of hearing loss
- Help-seeking
- Adherence to treatments
Stereotype Threat

Risk of confirming a negative stereotype of a group with which one identifies

- Self or other stereotype

- Reduced walking speed

- Working memory

- Hearing thresholds
Predicament Model

- Ageist stereotypes fuel communicative incompetence.

- Dependent behaviours are reinforced and independent behaviours are ignored by nurses in residents of care facilities (Margaret Baltes).

Enchancement Model

- Ageist stereotypes fuel communicative incompetence.

- Dependent behaviours are reinforced and independent behaviours are ignored by nurses in residents of care facilities (Margaret Baltes).

Negative Views of Aging & Memory

Chasteen, Pichora-Fuller, Dupuis, Singh, & Smith, in preparation

Negative View of Aging → -.42 → Metamemory

Age → -.17 → Metamemory

Metamemory → Recall Performance → .20

Age → -.27 → Recall Performance
Negative Views of Aging & Hearing
Chasteen, Pichora-Fuller, Dupuis, Singh, & Smith, in preparation

![Diagram showing the relationship between Negative View of Aging, Age, Self-perceived Listening Ability, and Hearing Behavior with correlation coefficients: -0.17, -0.20, -0.44, and 0.30.]
Social Factors in AR

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  - Stigma (self and other)
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Stress Defined

- A negative emotional experience accompanied by predictable biochemical, physiological, cognitive, and behavioural changes that are directed either toward altering the stressful event or accommodating to its effects.

- Stressors are what “cause” the stress.

- Individual Differences are huge factors.

- Most definitions of stress emphasize the relationship between the individual and the environment.

- Stress is the consequence of a person’s appraisal processes: the assessment of whether personal resources are sufficient to meet the demands of the environment.

- Stress is determined by PERSON-ENVIRONMENT fit.
Psychological Appraisal and the Experience of Stress

- Lazarus = psychological view of stressors
  - Primary Appraisal
    - The perception of a new or changing environment as beneficial, neutral, or negative in its consequences
  - Secondary Appraisal
    - The assessment of one’s coping abilities and resources and judgment as to whether they will be sufficient to meet the harm, threat, or challenge of a new or changing event

- Stress
  - Appraising events as harmful, threatening, or challenging, and assessing one’s capacity to respond to those events: events perceived to tax or exceed one’s resources are perceived as stressful.
Stress

Direct physiological effects
- Elevated lipids
- Elevated blood pressure
- Decreased immunity
- Increased hormonal activity

Health habit efforts
- Increased smoking, alcohol use
- Decreased nutrition
- Decreased sleep
- Increased drug use

Health behaviour effects
- Decreased compliance
- Increased delay in seeking care
- Obscured symptom profile
- Decreased likelihood of seeking care
Key points!

- **Reactivity:**
  - Change that occurs in body from stress
  - Genetically based predisposition
  - Higher reactivity related to poorer immune function

- **Allostastic load:**
  - Physiological systems in the body fluctuate in response to stress (called allostasis)
  - Over time the load can build up
  - Premature physiological aging
  - Aggravated by poor health behaviours related to coping
Assessing Stress

- Self-reports of perceived stress
- Life change Scales
- Emotional distress
- Behavioural measures
  - Task performance under stress
- Physiological measures of arousal
  - Skin conductivity, heart rate, BP
- Biochemical markers
  - Blood levels

Each type has its own problems, so use of multiple measures is the norm!
What Makes Events Stressful?

- **Negative** events more likely to produce stress than positive events.
- **Uncontrollable** or unpredictable events are more stressful than controllable or predictable events.
- **Ambiguous** events are often perceived as more stressful than are clear-cut events.
- **Overloaded** people are more stressed than people with fewer tasks to perform.
- People may be more vulnerable to stress in **central** life domains than in peripheral ones (threat to self).

- **NUTS**: New, unpredictable, threat to self, loss of self control.
Must a Stressor be Ongoing to be Stressful?

- Do not have to be exposed to a stressor to suffer stress!

- Stress can result while the event is happening, in **anticipation** of it happening, or as an aftereffect!
  - These can be more devastating than stress itself.
  - Performance, social behaviour, learned helplessness, depression, PTSD

- Chronic strain.
Can People Adapt to Stress?

- If a stressful event becomes a permanent or chronic part of a person’s environment, will the person eventually get used to it or will they develop CHRONIC STRAIN?

- Depends of the type of stressor, the subjective experience of stress, and which indicator of stress is considered!

- Studies of stress in humans suggests evidence for both habituation and chronic strain

- Most adapt well but it may be impossible to adapt to highly stressful situations that are chronic
## Changes in Life Events Scaling across 30 Years

<table>
<thead>
<tr>
<th>Life Event</th>
<th>1965 Rank</th>
<th>LCU</th>
<th>1995 Rank</th>
<th>LCU</th>
</tr>
</thead>
<tbody>
<tr>
<td>Death of spouse</td>
<td>1</td>
<td>100</td>
<td>1</td>
<td>119</td>
</tr>
<tr>
<td>Divorce</td>
<td>2</td>
<td>73</td>
<td>2</td>
<td>98</td>
</tr>
<tr>
<td>Marital separation from mate</td>
<td>3</td>
<td>65</td>
<td>4</td>
<td>79</td>
</tr>
<tr>
<td>Detention in jail or other institution</td>
<td>4</td>
<td>63</td>
<td>7</td>
<td>75</td>
</tr>
<tr>
<td>Death of a close family member</td>
<td>5</td>
<td>63</td>
<td>3</td>
<td>92</td>
</tr>
<tr>
<td>Major personal injury or illness</td>
<td>6</td>
<td>53</td>
<td>6</td>
<td>77</td>
</tr>
<tr>
<td>Marriage</td>
<td>7</td>
<td>50</td>
<td>19</td>
<td>50</td>
</tr>
<tr>
<td>Being fired at work</td>
<td>8</td>
<td>47</td>
<td>5</td>
<td>79</td>
</tr>
<tr>
<td>Marital reconciliation with mate</td>
<td>9</td>
<td>45</td>
<td>13</td>
<td>57</td>
</tr>
<tr>
<td>Retirement from work</td>
<td>10</td>
<td>45</td>
<td>16</td>
<td>54</td>
</tr>
<tr>
<td>Major change in the health or behaviour of a family member</td>
<td>11</td>
<td>44</td>
<td>14</td>
<td>56</td>
</tr>
<tr>
<td>Pregnancy</td>
<td>12</td>
<td>40</td>
<td>9</td>
<td>66</td>
</tr>
<tr>
<td>Sexual difficulties</td>
<td>13</td>
<td>39</td>
<td>21</td>
<td>45</td>
</tr>
<tr>
<td>Gaining a new family member (e.g., through birth, adoption, oldster moving in, etc.)</td>
<td>14</td>
<td>39</td>
<td>12</td>
<td>57</td>
</tr>
<tr>
<td>Major business readjustment (e.g., merger, reorganization, bankruptcy, etc.)</td>
<td>15</td>
<td>39</td>
<td>10</td>
<td>62</td>
</tr>
<tr>
<td>Major change in financial state (e.g., a lot worse off or a lot better off than usual)</td>
<td>16</td>
<td>38</td>
<td>15</td>
<td>56</td>
</tr>
<tr>
<td>Death of a close friend</td>
<td>17</td>
<td>37</td>
<td>8</td>
<td>70</td>
</tr>
<tr>
<td>Changing to a different line of work</td>
<td>18</td>
<td>36</td>
<td>17</td>
<td>51</td>
</tr>
<tr>
<td>Major change in the number of arguments with spouse (e.g., either a lot more or a lot less than usual regarding child rearing, personal habits, etc.)</td>
<td>19</td>
<td>35</td>
<td>18</td>
<td>51</td>
</tr>
<tr>
<td>Taking out a mortgage or loan for a major purchase (e.g., for a home, business, etc.)</td>
<td>20</td>
<td>31</td>
<td>23</td>
<td>44</td>
</tr>
<tr>
<td>Foreclosure on a mortgage or loan</td>
<td>21</td>
<td>30</td>
<td>11</td>
<td>61</td>
</tr>
<tr>
<td>Major change in responsibilities at work (e.g., promotion, demotion, lateral transfer)</td>
<td>22</td>
<td>29</td>
<td>24</td>
<td>43</td>
</tr>
<tr>
<td>Son or daughter leaving home (e.g., marriage, attending university, etc.)</td>
<td>23</td>
<td>29</td>
<td>22</td>
<td>44</td>
</tr>
<tr>
<td>Trouble with in-laws</td>
<td>24</td>
<td>29</td>
<td>28</td>
<td>38</td>
</tr>
<tr>
<td>Outstanding personal achievement</td>
<td>25</td>
<td>28</td>
<td>29</td>
<td>37</td>
</tr>
<tr>
<td>Spouse beginning or ceasing work outside the home</td>
<td>26</td>
<td>26</td>
<td>20</td>
<td>46</td>
</tr>
</tbody>
</table>
Life Cycle Model of Stress

Figure 2 | The life cycle model of stress. How the effects of chronic or repeated exposure to stress (or a single exposure to severe stress) at different stages in life depend on the brain areas that are developing or declining at the time of the exposure. Stress in the prenatal period affects the development of many of the brain regions that are involved in regulating the hypothalamus-pituitary-adrenal (HPA) axis — that is, the hippocampus, the frontal cortex and the amygdala (programming effects)… In adulthood and during aging the brain regions that undergo the most rapid decline as a result of aging (red bars) are highly vulnerable to the effects of stress hormones. Stress during these periods can lead to the manifestation of incubated effects of early adversity on the brain (manifestation effects) or to maintenance of chronic effects of stress (maintenance effects). PTSD, post-traumatic stress disorder.
Social Factors in AR

- Stereotype threat
  - Stigma (self and other)
- Stress and Coping
- Self-efficacy
- Caregiver burden
Self-Efficacy Theory

Self-Efficacy

- Belief individuals have in their abilities to accomplish skills to achieve a certain behavior, including health behaviors (Bandura, 1989, 1997)

Patients with high self-efficacy beliefs for skills needed to manage a health condition:

- Increased compliance with treatment
- Improved subjective and objective outcomes
- Higher health-related quality of life
- Persevere and put forth greater effort in managing condition

Listening self-efficacy in everyday situations?

Why Is Self-Efficacy Important?

- Patients with high self-efficacy beliefs for skills needed to manage a health condition:
  - Increased compliance with treatment/management recommendations
  - Improved subjective and objective outcomes
  - Higher health-related quality of life
  - Persevere in face of difficulty
  - Put forth greater effort in managing condition
Self-efficacy in Audiology

- **Balance dysfunction/falls** \( \text{\textsuperscript{}(Tinetti et al., 1990)} \)
- **Hearing conservation (ear protection)** \( \text{\textsuperscript{}(Lusk and colleagues, 1999, 1997; Melamed et al., 1996)} \)

- **AR**

- **HA**

- **Communication strategies training** \( \text{\textsuperscript{}(Jennings, 2007)} \)

- **Tinnitus management** \( \text{\textsuperscript{}(Smith & Fagelson, 2008)} \)

- **Listening**
Intervention Techniques

- Explicitly teaching about stereotype threat
- Blurring inter-group boundaries
- Positive role models
- Reshaping views
- Modifying performance expectations
- Making achievements salient
Self-Efficacy Theory

Individuals make judgments about their self-efficacy beliefs through 4 sources of information

1. Mastery experiences
   - Practicing to achieve success
2. Vicarious experiences
   - Reference to observations of others
3. Verbal persuasion
   - Positive feedback from others
4. Physiologic and affective states
   - Reduce anxiety, stress, negative emotions
Mastery

- Practice, role play
- Set realistic goals
- Grade tasks with easier before harder
- Break complex into component tasks
- Review tasks simpler to more complex
Vicarious Experience

- Model skills
- Teach skills to significant other
- Practice/role play in groups
- Video self-model or peer model
Verbal Persuasion

- Give appropriate feedback
- Recruit social support
- Didactic training
Physiologic and Affective States

- Allow ample time
- Optimize environment
- Take breaks to manage stress
- Focus on simpler tasks
- Use calm, reassuring feedback
- Minimize fatigue (nutrition?)
Summary

■ Multiple levels
  □ Behavioural (what person does)
  □ Cognitive (what person thinks)
  □ Affective (what person feels)

■ Self and other

■ Predisposing – Enabling - Reinforcing
Social Factors in AR

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Relationship 1 depends mostly on auditory capacity (e.g., a relationship between a receptionist and customers), Relationship 2 can be modulated to a greater extent by social support (e.g., a relationship between a person and friends belonging to the same bowling club), Relationship 3 can be modulated even more by social support (e.g., a family relationship between an adult son and his elderly mother with dementia).

P1 is a person with normal hearing and slightly below average social support who has sufficient combined capacities to be able to succeed in all three relationships. P2 is a person with hearing loss and high social support who is able to succeed on all three relationships because social support (e.g., help of a spouse) is available to help compensate for auditory deficits.
Inter-dependence

- Close relationships
  - Individuals strongly defined by relationships
  - Individual identities may become inseparable
Family

- Spouse, adult children, grandchildren
  - Support: predispose, enable and reinforce

- “Sandwich generation”
  - “Mom are you going to be like grandma when you get old?”
  - “When I get old…..”
Care & Contexts

- Independent living (family vs alone)
- Home care
- Peer and self help groups
- Adult day care
- Residential care
  - Graduated care
  - Levels of care (independence >> dependence)
- Hospital to hotel-like?
Caregiving in dementia

- The majority of individuals with dementia live at home and are cared for by “informal caregivers” (e.g., family members or close friends)

(Alzheimer Society of Canada, 2010)
Caregiver burden

- Extensive literature examining effects of caregiving for someone with dementia on the caregiver’s…
  - Physical functioning
  - Psychological functioning
  - Finances
  - Social engagement
Institutionalization for individuals with dementia

- Home care is 40-75% cheaper than institutional care (Institute for Research on Public Policy, 2011)
- Caregiver burden is a main predictor of institutionalization (Cohen et al., 1993)

- Institutionalization is the largest component of care costs for persons with Alzheimer’s disease (Hux et al., 1998)
- From a health economics perspective, delaying the move from home → long-term care could have significant financial benefits
Communication difficulties as a source of burden

- A breakdown in communication can lead to increased burden on caregivers (Orange, 1991; Savundranayagam et al., 2005)
  - Communication breakdown has been identified as one of the most distressing problems for caregivers of people with dementia (Kinney & Stephens, 1989; Ripich & Honer, 2004)

- Symptoms of dementia can lead to difficulties communicating
  - Memory loss in particular can lead to
    - Repetition of questions
    - Difficulty following conversations
Normal cognition: Burden of HL

- Even for older adults with **normal cognition**... hearing loss can strain relationships (Hallam et al., 2008)
  - Hearing loss in one member of a couple contributes to poorer physical, psychological, and social well-being in the other member (Wallhagen et al., 2004)
  - Wide-ranging effects of individuals’ hearing impairment on their spouses (Scarinci et al, 2008, 2009)
    - Communication difficulties
    - Emotional difficulties
    - Effects on relationships and everyday activities
Caregivers of people with dementia & hearing loss

- Little research in this area
- As cognitive impairment progresses …. burden most likely increases
  - Increased “hearing care” responsibility
    - Organizing audiology appointments
    - Hearing aid/ALD care and management
    - Impact on feelings of competence and self-efficacy in dealing with their care recipient’s hearing loss

→ Additional down-stream effects on caregiver burden?
→ Abandonment of devices and further decline in care recipient's functioning?
Caregivers of people with dementia & hearing loss

- Aiming programs at caregivers ...
  - May help alleviate burden
  - May increase efficiency of homecare, delay care recipient’s move to institutional care
Caregivers of people with dementia & hearing loss

- Involve caregivers in all aspects of their care recipient’s audiologic rehabilitation
  - Individuals who are accompanied by a significant other may experience more improvement in their functioning than their solo counterparts (Preminger, 2003)
  - Spouses of individuals with normal cognition who attend audiologic rehabilitation programs may also experience reductions in their stress and negative affect (Preminger & Meeks, 2010)
Caregivers in long-term care

- Approximately 80-90% of older adults living in LTC facilities suffer from hearing loss that can impact daily function (Health & Welfare Canada, 1998; Schow & Nerbonne, 1980)
  - Many of them most likely also suffer from dementia

- Educational programs…
  - Can teach clients and staff members to generate solutions to common communication problems (Robertson et al., 1997)
  - Can influence clients’ adoption and continued use of hearing aids and assistive listening devices (Hoek et al., 1997; Lewsen & Cashman, 1997; Pichora-Fuller et al., 1997)
More Connections?

Cognition

Socio-Emotional

Hearing (Vision)
Vancouver, British Columbia
World Congress of Audiology
September 18-22, 2016