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

Kathy Pichora-Fuller

Professor, Psychology, University of Toronto
Adjunct Scientist, Toronto Rehabilitation Institute, University Health Network
Guest Professor, Linneaus Centre HEAD, Linköping University, Sweden

Funded by CIHR, NSERC, & Hearing Foundation of Canada

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

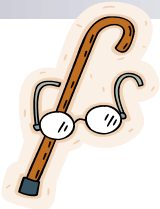
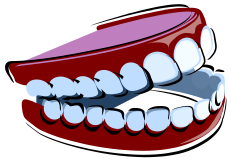
(Jake Harwood; Mary Lee Hummert, Angie Williams & Jon Nussbaum)

- "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

    (Schmader, T., Johns, M., & Forbes, C. (2008). An integrated process model of stereotype threat effects on performance. *Psychological Review, 115,* 336-356.)
  - Reduced walking speed

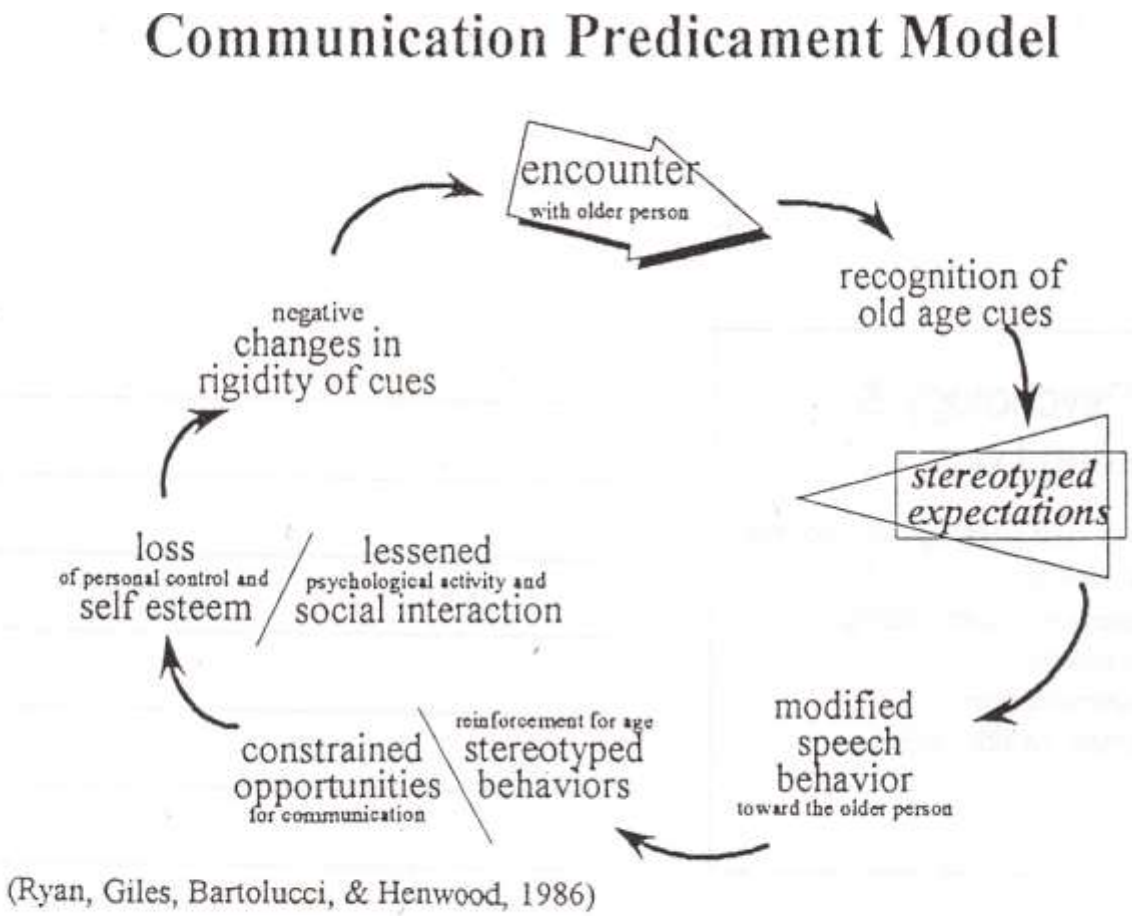
    (Bargh, J.A., Chen, M., & Burrows, L. (1996). The automaticity of social behaviour: Direct effects of trait concept and stereotype activation on action. *Journal of Personality and Social Psychology, 71*, 230-244.)
  - Working memory

    (Hess, T.M., Hinson, J.T., & Hodges, E.A. (2009). Moderators of and mechanisms underlying stereotype threat effects on older adults' memory performance. *Experimental Aging Research*, *35*, 153-177.)
  - Hearing thresholds

    (Levy, B. R., Slade, M. D., & Gill, T. (2006). Hearing decline predicted by elders' age stereotypes. *Journal of Gerontology B-Psychological Sciences*, *61*, 82-87.)

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).

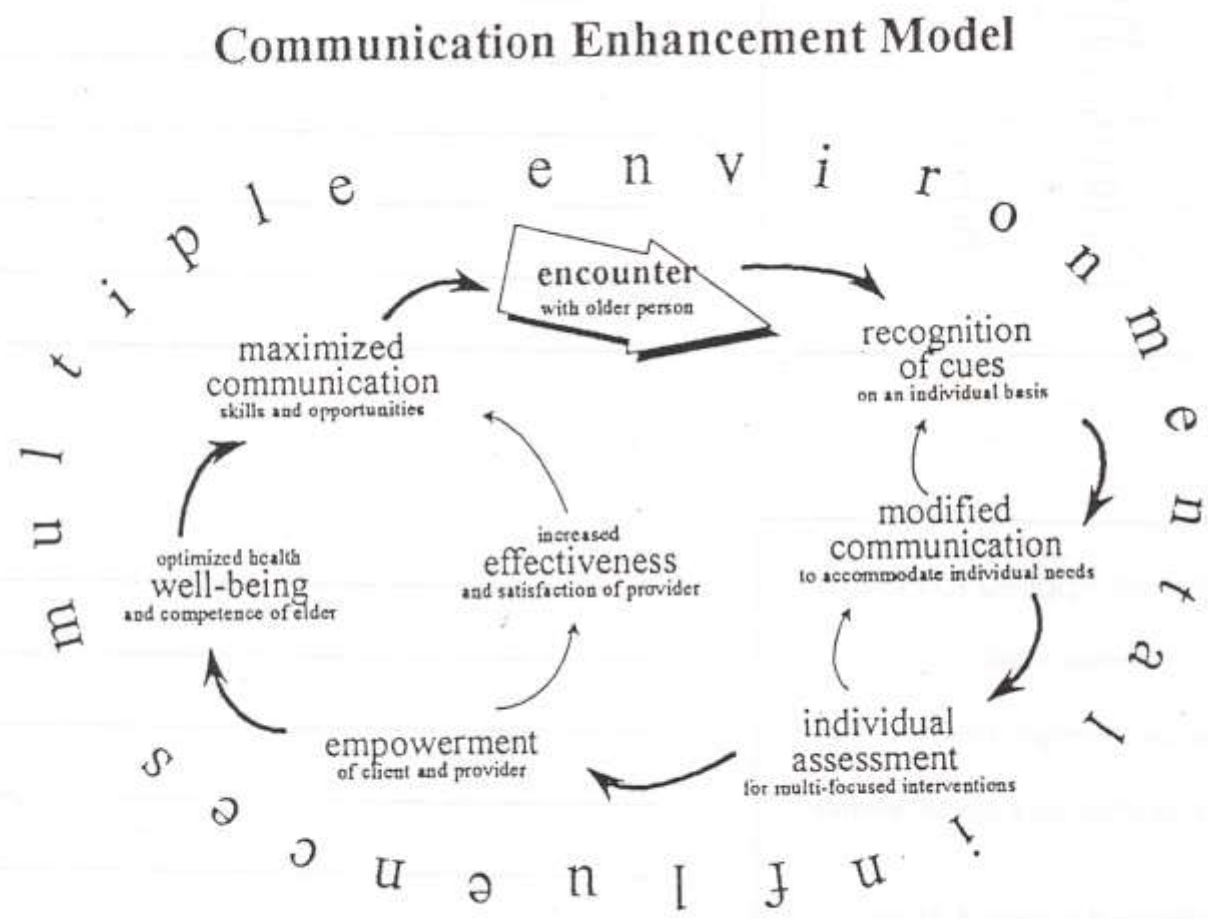


(Ryan, Giles, Bartolucci, & Henwood, 1986)

- Ryan EB, Giles H, Bartolucci G, Henwood K. Psycholinguistic and social psychological components of communication by and with the elderly. Language and Communication 1986;6:1-24.

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).

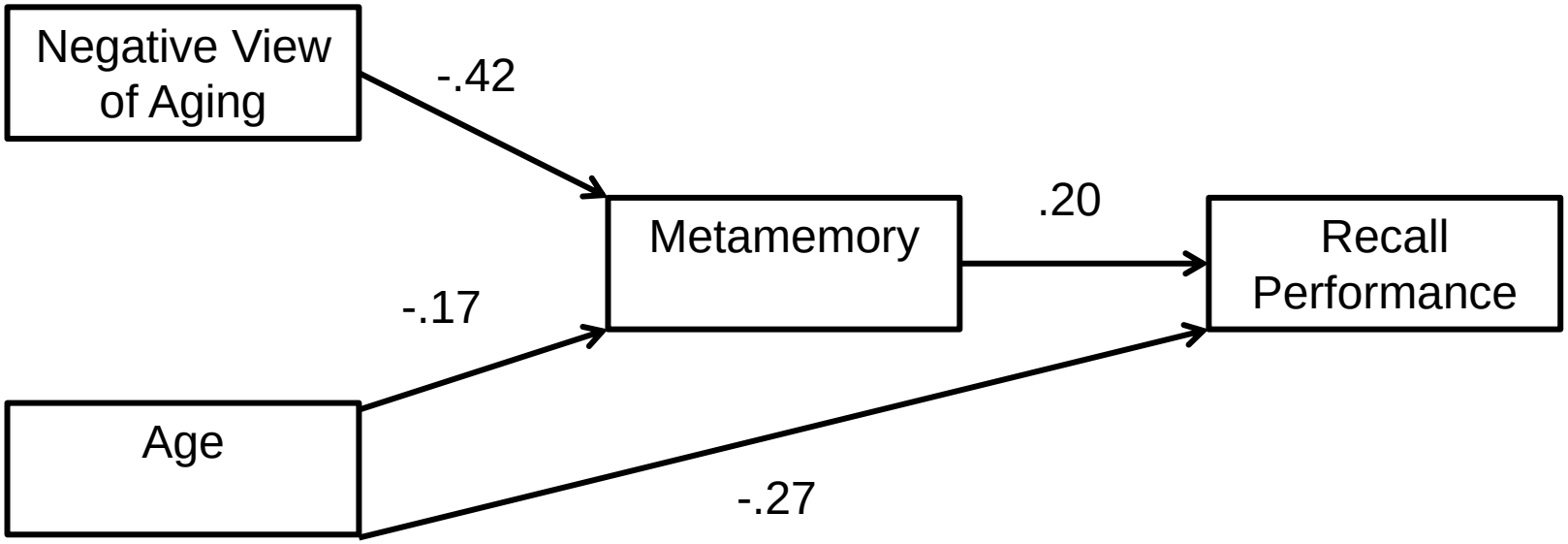


(Ryan, Meredith, MacLean, & Orange, 1995)

- Ryan EB, Meredith SD, Maclean MJ, Orange JB. Changing the way we talk with elders: Promoting health using the Communication Enhancement Model. International Journal of Aging and Human Development 1995;41:89-107.

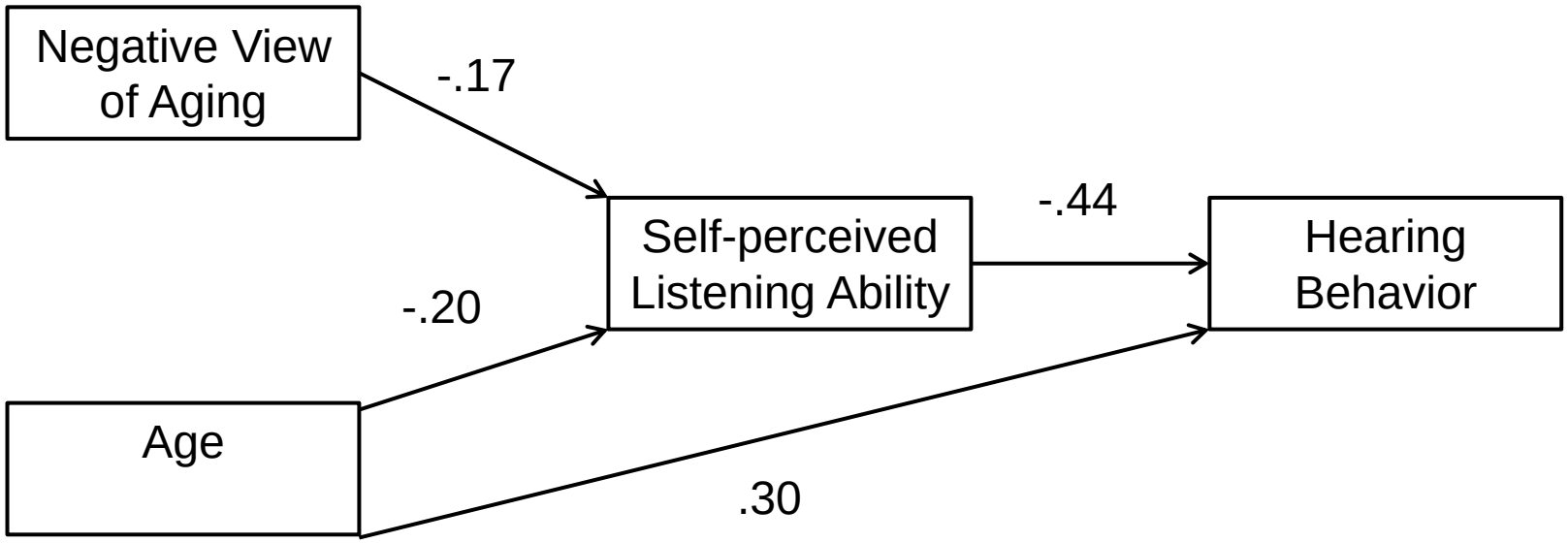
Negative Views of Aging & Memory

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



Negative Views of Aging & Hearing

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



Social Factors in AR

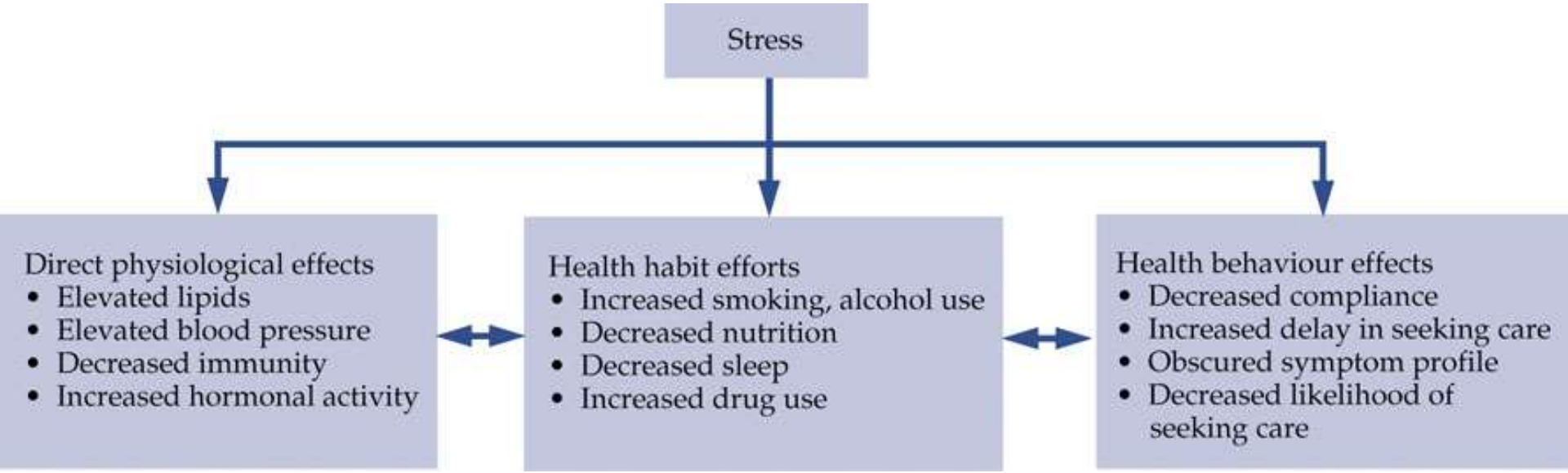
- Stereotype threat
  - Stigma (self and other)
- Stress and Coping
- Self-efficacy
- Caregiver burden

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

- Allostatic 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 that are 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

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

Life Cycle Model of Stress
Lupien et al., (2009). Nature, 10, 434- 445.

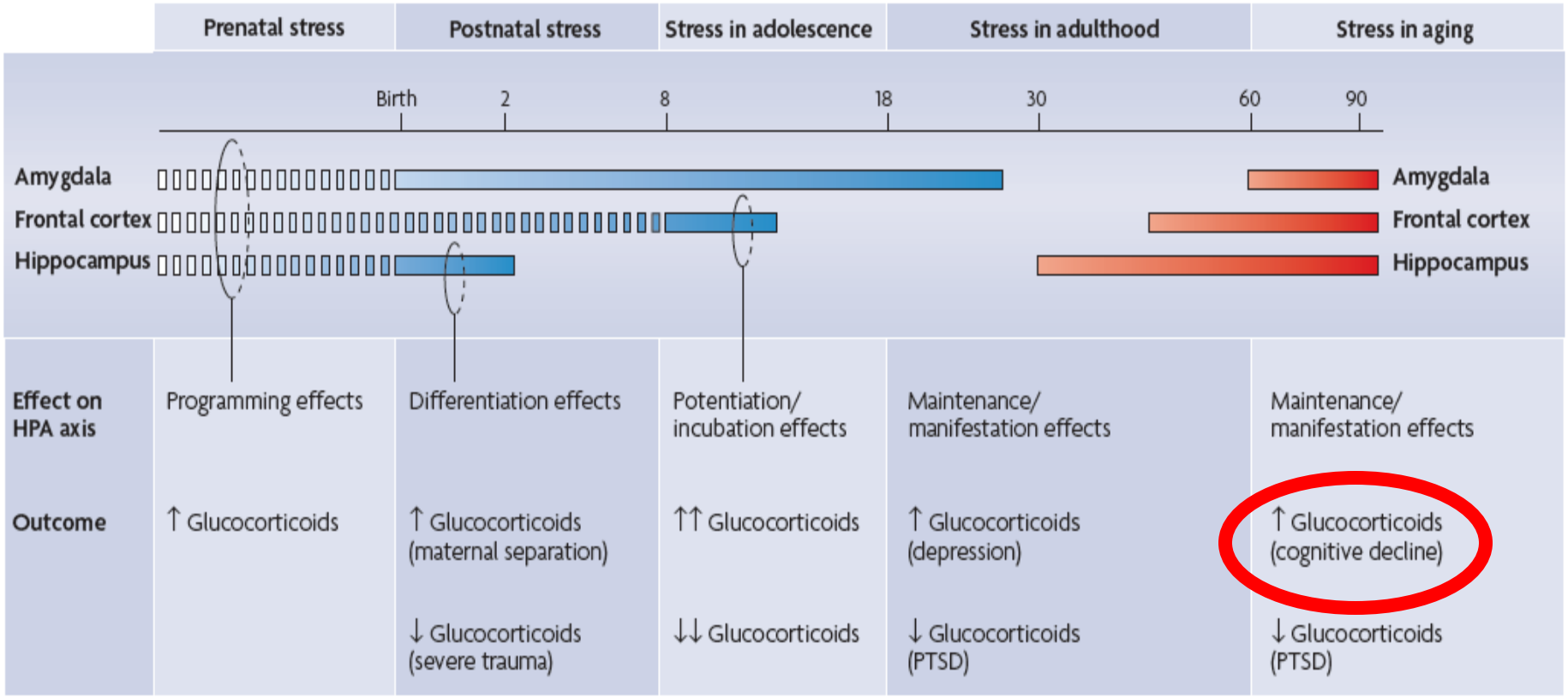


Figure 2 | **The life cycle model of stress.** **How the effects of chronic or repeated exposure to stress (or a single exposure to severe stress) at different stages in life depend on the brain areas that are developing or declining at the time of the exposure.** Stress in the prenatal period affects 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?
  - (Smith, S. L., Pichora-Fuller, M.K., Watts, K. L., & La More, C. (online April 2011). Development of the Listening Self-Efficacy Questionnaire (LSEQ). *International Journal of Audiology.)*

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

Sherri Smith

- Balance dysfunction/falls (Tinetti et al., 1990)
- Hearing conservation (ear protection)
  (Lusk and colleagues, 1999, 1997; Melamed et al., 1996)
- AR
  - Smith, S.L. & West, R.L. (2006a). The application of self-efficacy principles to audiologic rehabilitation: a tutorial. *American Journal of Audiology*, *15*, 46-56.
- HA
  - Smith, S. L. & West, R. L. (2006b). Hearing aid self-efficacy of new and experienced hearing aid users. *Seminars in Hearing*, *27*, 325-329.
- Communication strategies training (Jennings, 2007)
- Tinnitus management (Smith & Fagelson, 2008)
- Listening
  - Smith, S. L., Pichora-Fuller, M.K., Watts, K. L., & La More, C. (online April 2011). Development of the Listening Self-Efficacy Questionnaire (LSEQ). *International Journal of Audiology.*

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

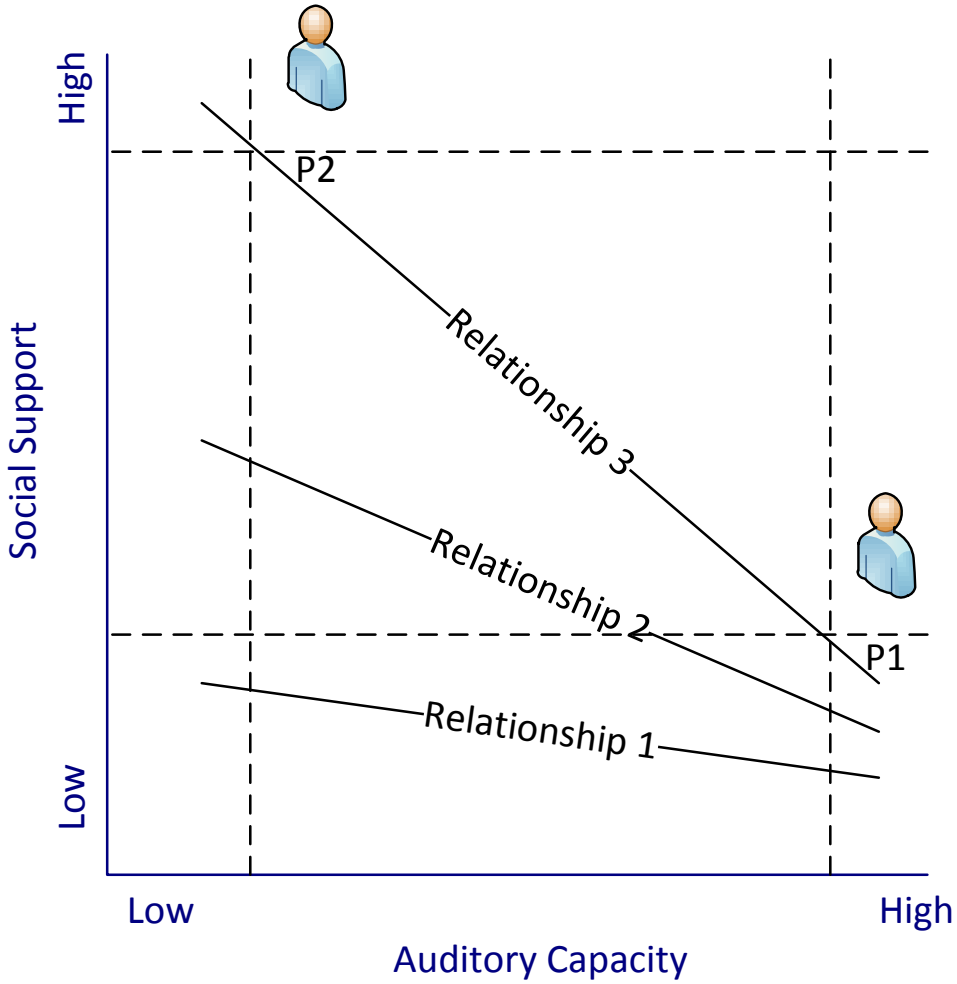
- Multiple levels
  - Behavioural (what person does)
  - Cognitive (what person thinks)
  - Affective (what person feels)
- Self and other
- Predisposing – Enabling - Reinforcing

Social Factors in AR

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

Social Support

(Pichora-Fuller & Jamieson, 2012)



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

INDEPENDENCE

DEPENDENCE

INTER-DEPENDENCE

DEPENDENCE

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

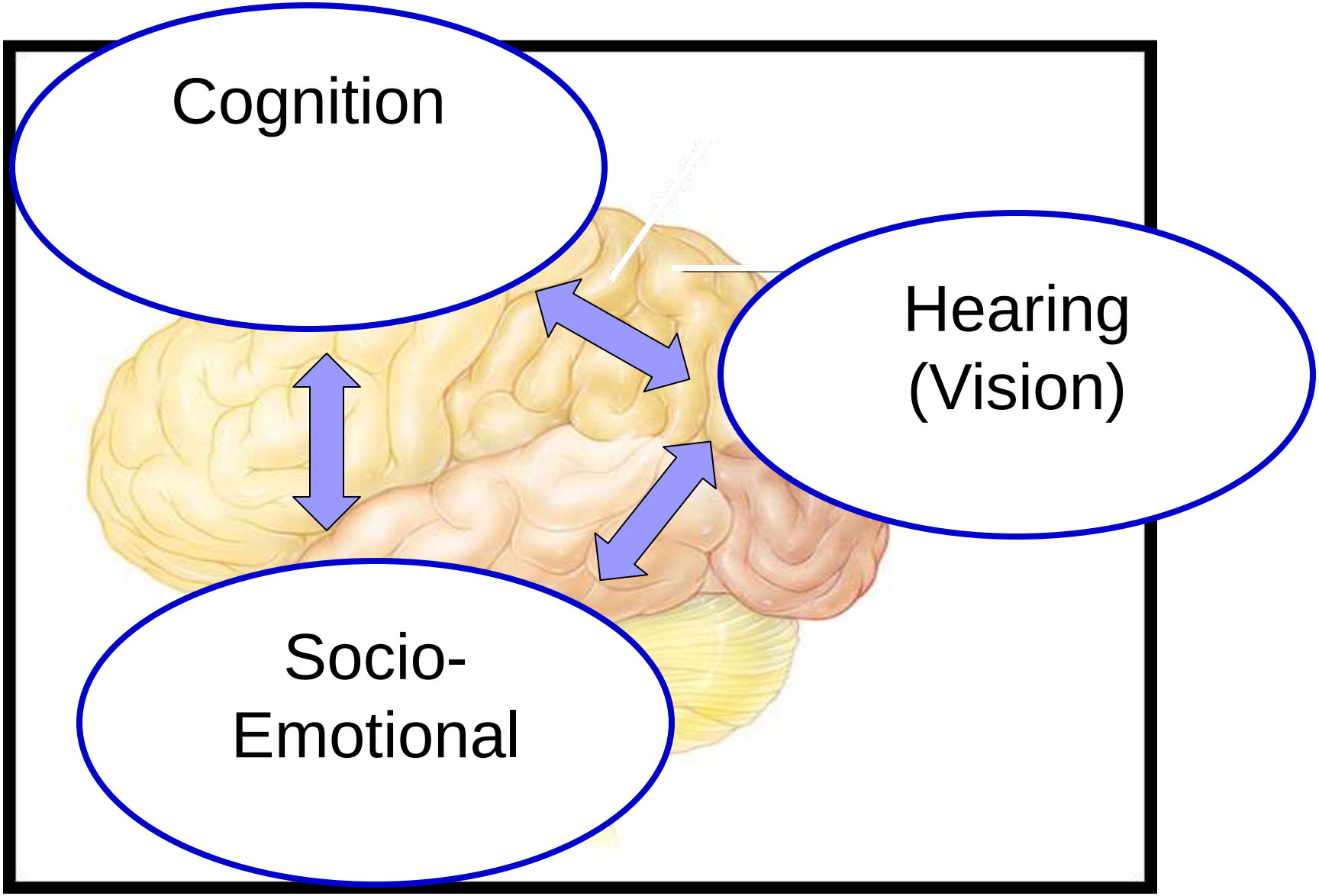
Caregivers of people with dementia & hearing loss

- 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?



Vancouver, British Columbia
World Congress of Audiology
September 18-22, 2016