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Aims
• To describe the WHO ICF, a conceptual framework relevant to speech communication in older people
• To consider how factors aside from the older person’s auditory disability influence successful speech communication
• To describe some interventions that target contextual factors and promote successful speech communication

Conceptual Framework
• World Health Organization International Classification of Functioning, Disability and Health (ICF)
• Emphasis shifted from a more medical model approach to a “biopsychosocial” approach
• Aim = To provide a unified and standard language and framework for the description of health and health-related states

ICF Framework (WHO, 2001)

- Health condition (disorder or disease)
- Body structure and function
  - Activity
  - Participation
- Environmental factors
- Personal factors
Negative terminology (Disability)
- Impairments
- Activity limitations
- Participation restrictions

Applying the ICF to Aging, Speech & Communication
- Aging
  - Bilateral SNHI
    - Problems understanding speech
  - Environmental factors
  - Personal factors
  - Limited engagement in social situations

Usual Rehabilitation Focus
- Health condition (disorder or disease)
- Impairment
  - Activity
    - Limitations
  - Participation
    - Restrictions
- Environmental factors
- Personal factors

Case Examples (Worrall & Hickson, 2003)
Mrs A (aged 67 years)
- Moderate bilateral SNHI
- ALs = has aids but still has problems understanding speech in noisy situations, misses phone ring at times, can’t hear TV at normal volume
- PRs = withdraws from social situations, has resigned as secretary of the local card club

Mrs B (aged 63 years)
- Severe bilateral SNHI
- ALs = minimal problems in noise (uses aids, FM), no problems with phone ring (uses flashing light), some problems with conversation on the phone even with telecoil
- PRs = busy social life, works full-time for a disability support agency giving advice on ALDs

Why the difference between Mrs A and Mrs B?
- Aging
  - SNHI
    - ?
  - Environmental factors
  - Personal factors

Contextual Factors discussed at ASC
Environmental Factors
All aspects of person’s external world consisting of 5 domains:
1. Products and technology
2. Natural environment and human-made changes to the environment
3. Support and relationships
4. Attitudes
5. Services, systems and policies

Relevant Environmental Factors
- Assistive products and technology – hearing aids, ALDs (Chisholm et al., 2007, 2007)
- Acoustic environment – noise, reverberation (Nabelek et al., 2006; Erber, Lamb & Lind, 1996)
- Support and relationships – communication partners, personal carers, living situation (Stark & Hickson, 2004; Mahoney et al., 1996)
- Attitudes – health professionals, community members (Gussekloo et al., 2003)
- Services, systems and policies – availability of technology, cost (Kochkin, 2007)

Personal Factors
- Gender
- Race
- Other health conditions
- Personality
- Lifestyle
- Education
- Etc……

Relevant Personal Factors
- Personality – neuroticism and openness (Cox et al., 2005)
- Locus of control (Cox et al., 2005)
- Cognition
- Educational level
- Communication – pragmatic skills, language ability
- Lifestyle – activities, roles

Why the difference?
Mrs A (aged 67 years)
- Moderate bilateral SNHI, significant ALs and PRs
- Environmental factors = lives alone, little social support
- Personal factors = lacking motivation, introverted personality, poor vision

Mrs B (aged 63 years)
- Severe bilateral SNHI, few ALs and PRs
- Environmental factors = many ALDs available at work and home, positive attitudes of workmates, quiet work environment
- Personal factors = high level of education, internal locus of control

Contextual factors are important – what can be done about them?
Examples of Interventions that Focus on Contextual Factors

- Participation Enablement Program (PEP) (Looi, Hickson et al., 2004)
- Active Communication Education (ACE) (Hickson, Worrall & Scarinci, 2006, 2007)
- Home education video program for older people and their significant others (Kramer et al., 2005)
- Group therapy program for adults with cochlear implants and their significant others (Heydebrand et al., 2005)
- LACE (Sweetow & Sabes, 2006)

What’s PEP?

- An assessment and intervention program for older people living in aged care
- Involves a multidisciplinary team: audiology, speech pathology, social work, nursing, residential care providers.
- Individuals AND the environment are assessed and treated

Features of an Environmental Approach in Aged Care

- ALDs fitted rather than hearing aids (Lewsen & Cashman, 1997)
- Staff training is included as part of the intervention program (Looi, Hickson et al., 2004)
- Ongoing support is provided by clinicians (Lewsen & Cashman, 1997) or volunteers (Carson, 1997)
- Changes to the physical and social environment are part of the intervention

PEP Interventions

Individual
- Medical treatment – wax removal
- Discussion of need for individual rehabilitation with resident and family members
- Checking of current amplification devices

Environmental
- Communication groups for residents
- Training sessions for staff on hearing and communication, hearing aids and ALDs
- Suggestions to Director for systems changes – checking for wax, amplification system for residents
- Meetings, improving environment

What’s ACE?

- A group communication education program for older people with hearing impairment living in the community
- Aims to empower participants to be able to analyse their difficulties with communication and develop skills to change.
- Personal contextual factors addressed = communication style, how to change environment to suit them, assertiveness, motivation

Example Exercise from ACE

The problem…
You are sitting watching TV with another person and they make comments about the program. You cannot hear the comments they make and when they speak you do not hear what is said on the TV. What can be done about this?

The process…
- What are the sources of difficulty here?
- What are some possible solutions?
- What information is necessary to apply the solutions?
- What practical skills are necessary to apply the solutions?
- Participants follow up on solutions they accept
- Practice at home in the real world
Summary of ACE Results
(Hickson, Worrall & Scarinci, 2007, Ear and Hearing)

- ACE reduced participation restrictions and activity limitations and improved well-being (n = 178)
- 74% of participants reported improvement on their first stated goal
- International Outcome Inventory results more positive than studies of hearing aid fitting for satisfaction, impact on others and residual participation restriction

Other possible interventions?

Environmental:
- Communication partner training (Lind)
- Public education campaigns to promote positive attitudes to hearing impairment

Personal:
- Motivational interviewing eg in other chronic conditions
- Assertiveness training
- Physical fitness training (Erickson & Kramer)

Summary

- WHO ICF is a useful framework for considering ways to improve speech communication in older people
- Rehabilitation cannot take a one-size-fits-all approach (Laplante-Levesque)
- Focusing on contextual factors is an effective means of promoting successful speech communication

Where to from here?

STEP 1: both fundamental and applied researchers need to define the contextual factors that significantly influence speech communication disability experienced by older people
STEP 2: interventions to address such factors can then be designed and evaluated

“….identifying issues of clinical importance, translating the problem into a set of tractable experiments and then formulating the results in terms of clinically applicable recommendations”

Stuart Gatehouse

Thank you!

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References


