

# Relationship of the CPHI and Other Global Measures with Hearing Aid Outcomes

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# Global Measures

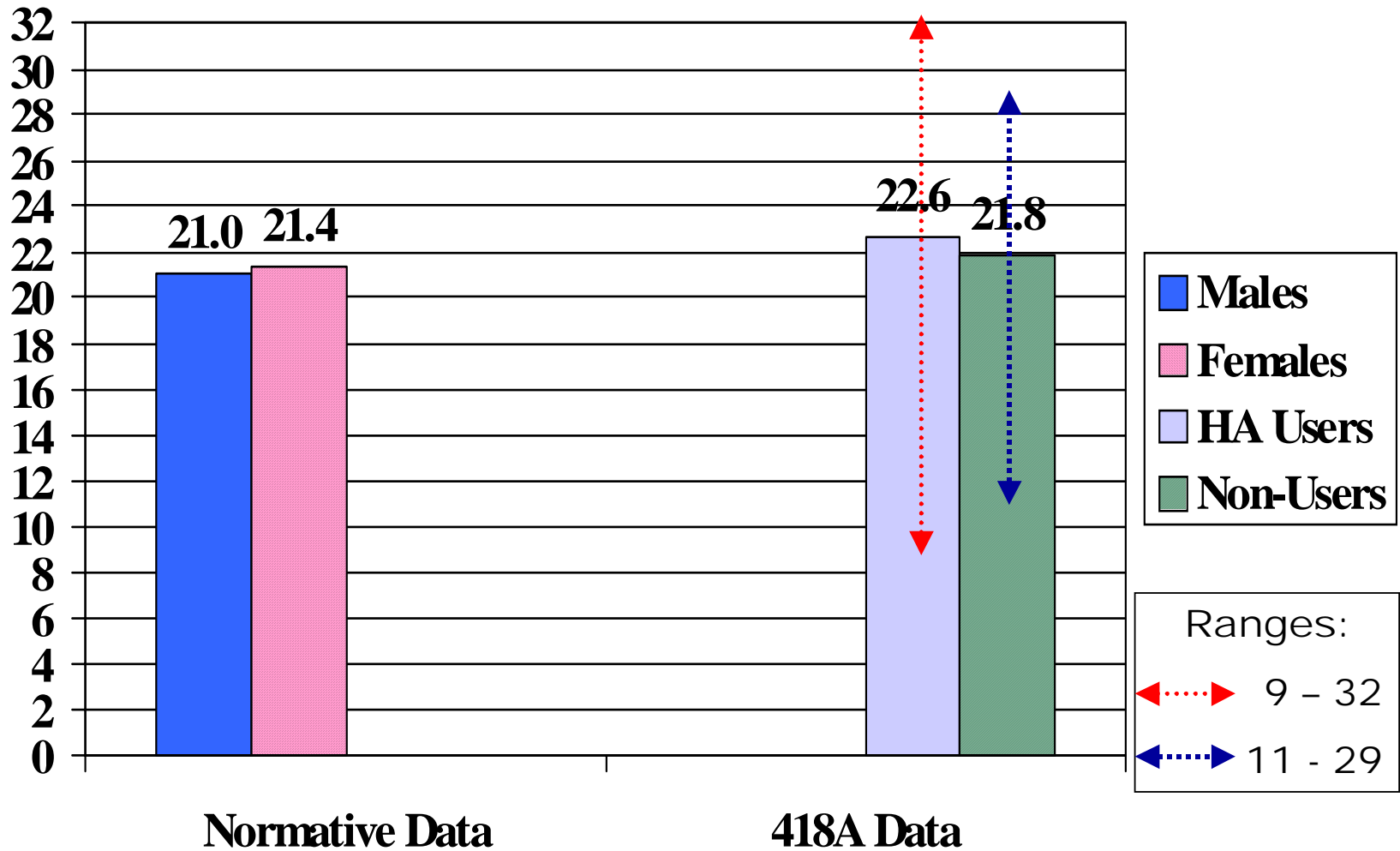
- LOT *Life Orientation Test* (Scheier & Carver, 1985)
- CLE *Checklist of Life Events* (Kricos & Erdman, 2002)
- CPHI *Communication Profile for the Hearing Impaired* (Demorest & Erdman, 1987, 1998)

# LOT (Scheier & Carver, 1985)

- EXAMPLE:

“Do you generally think things will go well for you or that bad things will happen?”

# Life Orientation Test (Scheier & Carver, 1985)



# Checklist of Life Events (Kricos & Erdman, 2002)

- Is hearing aid use affected by stressful life events?
- 12 specific life events (e.g., victim of crime) and did event increase or decrease or not affect hearing aid use?
- Plus any other non-listed events
- Plus any other experiences that may have influenced hearing aid use

# Most commonly reported life events

- Loss of close family member or friend other than husband/wife/partner (63.5%/3.7%)\*
- Serious illness, injury, accident, or health problem (48.7%/9.8%)
- Major health problems in family member or friend (45%/7.1%)
- Change in residence (22.8%/20.9%)
- Change in financial status (20.6%/10%)

\* (% total participants/% of these indicating effect on hearing aid use)

# Most often reported as decreasing hearing aid use:

- Other experience (7.9%/46.7%)\*
- Job status (18%/26.5%)
- Increased dependence (14.8%/14.3%)
- Illness/health problem (48.7%/8.7%)

\* (% total participants/% of these indicating resulting decrease of hearing aid use)

# Most often reported as increasing hearing aid use:

- Other experience (7.9%/46.7%)\*
- Other major change (11.6%/18.2%)
- Change in residence (22.8%/14.0%)
- Major health problem close family/friend (45%/3.5%)

\* (% total participants/% of these indicating resulting increase of hearing aid use)

# Is hearing aid use affected by life events?

- No significant difference between non-users and users in the total number of life events reported
- Non-users reported a significantly greater number of events that impacted their hearing aid use ( $p < .05$ )
- Non-users reported a mean of .55 events that *decreased* use and users reported a mean of .18 events that *decreased* use ( $p < .05$ )

# CPHI (Demorest & Erdman, 1987, 1998)

- Communication Performance (6 scales)
- Communication Importance (3 scales)
- Communication Environment (4 scales)
- Communication Strategies (3 scales)
- Personal Adjustment (9 scales)

# CPHI overall results:

- Non-users had poorer (lower) scores in 15 of 25 scales, compared to users
  - Significantly lower in:
    - CP: Social
    - CP: Work
    - CP: Home
    - CP: Average Conditions
    - CP: Adverse Conditions

# CPHI overall results:

Non-Users were significantly higher in:

- CE: Physical Characteristics

# CPHI Data for Current Hearing Aid Users

- Seven scales were significantly correlated with the Negative Features scale of the SADL
  - Maladaptive behaviors (.531,  $p < .0001$ )
  - Self-acceptance (.537,  $p < .0001$ )
  - Anger (.560,  $p < .0001$ )
  - Discouragement (.543,  $p < .0001$ )
  - Stress (.525,  $p < .0001$ )
  - Withdrawal (.533,  $p < .0001$ )
  - Denial (-.602,  $p < .0001$ )

# CPHI Data for Current Hearing Aid Users, continued

- Not surprisingly, the Problem Awareness scale of the CPHI was significantly correlated with the Residual Disability portion of the GHABP (.510,  $p < .0001$ )

# CPHI Data for Non-hearing Aid Users

- There were a number of significant correlations between some of the CPHI scales and other measures
- Examples:
  - Communication Need (CPHI) and Proportion of Time Hearing Aids Used (GHABP) (.685,  $p < .05$ )
  - CPHI Personal Adjustment scales and GHABP Perceived Handicap ( (correlation coefficients ranged from to .597 to -.732)

# CPHI Data for Non-hearing Aid Users

- Unaided NU6 scores positively correlated with several Communication Performance and Importance scales, as well as Average and Adverse Conditions (correlation coefficients ranged from .503 to .615)
- Unaided CST results (Q, 74 dB SPL) and several Communication Performance scales, as well as Attitudes of Others and Behavior of Others (correlation coefficients ranged from .540 to .664)

# CPHI Data Compared for Users and Non-Users

- Non-users showed no significant changes in any of the CPHI scales from the first to the second testing
- For hearing aid users, there were significant changes for approximately half of the CPHI scales

# Pre-Post Test Changes in CPHI for Hearing Aid Users

- Significantly increased scores:
  - Communication Performance: Social
  - Communication Performance: Work
  - Communication Performance: Home
  - Communication Performance: Average Conditions
  - Communication Performance: Adverse Conditions
  - Stress
  - Withdrawal

# Pre-post Test Changes in CPHI for Hearing Aid Users, continued

- Significantly decreased scores:
  - Problem Awareness
  - Communication Importance: Social
  - Communication Importance: Home
  - Displacement of Responsibility
  - Denial

# CPHI Results as a Function of Age

- Mean scores on the CPHI scales for respondents 80 years and older were compared to those for respondents younger than 80 years
- Results:
  - $X$  scores for the two age groups for "Communication Importance: Social" indicate that younger respondents put more emphasis on the importance of social communication ( $p < .05$ )

# CPHI Results as a Function of Age, continued

- $X$  scores for the two age groups for the Communication Needs scale and the Physical Characteristics scale suggest that the older respondents perceive fewer communication demands ( $p < .0001$ )

# Summary

- No significant difference in outlook on life (optimism vs. pessimism) between hearing aid users and non-users
- Although there was no significant difference between non-users and users in the total number of life events reported, the non-users reported a significantly greater number of events that they felt negatively impacted their hearing aid use

# Summary, continued

## ■ CPHI Results:

- Mean Communication Performance scores for non-users were significantly poorer than those for hearing aid users for all but one of the scales, the exception being for Problem Awareness (n.s.)
- Non-users showed no significant changes in any of the CPHI scales from the first to the second testing
- For users, there were significant changes for approximately half of the CPHI scales