

Assessing Longitudinal Change in Rehabilitation Needs of Older People with Hearing Impairment



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Background

- Why look at changing rehabilitation needs of older people with HI?
 - Eriksholm workshop on "*Candidature for and delivery of audiological services: special needs of older people*" (2001)
 - ICRA Working Group on Rehabilitation for Older Adults (2003 ICRA meeting)
- Aim = to evaluate change in goals subsequent to initial rehabilitation (e.g., education program, hearing aid fitting, ALD)



Why is this important?

- Rehabilitation for older adults typically takes a 'single shot' approach which involves assessment, intervention and a single short-term follow up (at which time outcomes of the intervention are assessed)
- Does this approach meet the needs of older people with hearing impairment?



Method: Initial session

1. Tell me about the problems that you have with your hearing in everyday life – any particular circumstances, any particular people? *e.g., can't hear when my wife speaks to me from 3 rooms away*
2. Ask the client to consider each of the problems and discuss with them whether or not they would like these problems to be goals for rehabilitation. *e.g., would you like to hear what your wife is saying?*
3. Look at goals and prioritise – so which of these is most important for you at the moment? *e.g., is hearing your wife better the most important thing for you at the moment?*



Method: Follow-up 1

2-4 weeks post rehab

- Participants asked to rate outcomes for the goals identified at the initial session



Method: Follow up 2 3 to 6 mths post-rehab

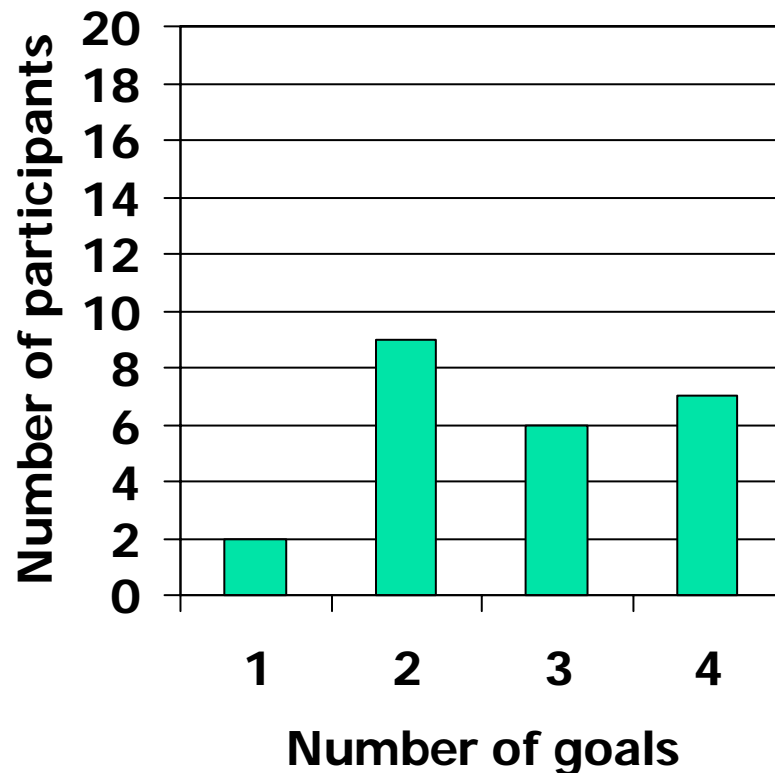
1. Tell me about the problems that you have with your hearing in everyday life NOW...go through the same process as initial session
2. Go through original goals – are any of them still a problem for you? If so, include them.
3. Rate outcome in relation to original goals using the COSI outcome measures.
4. Prioritizing **all** goals



Australian participants (n=24)

- Mean age 71.9 yrs (SD = 6.7)
- 12 males and 12 females
- Mean Better ear PTA_{ave} (.5,1,2,4kHz) 45.15dB (SD = 14.7)
- Mean years of education 10.9 (SD = 3.1)
- 10 with no previous rehab, 14 fitted with aids (10 using aids now), 4 had ALDs
- All were participating in Active Communication Education program (5 x 2 hour group sessions)

Goals at Initial Session



- Total number = 66
- 79% general eg "Learning ways to overcome hearing difficulty"
- 21% specific eg "To hear my grandchildren during conversations without having to ask them to repeat something or speak louder"
- Mean = 2.75



Rehabilitation

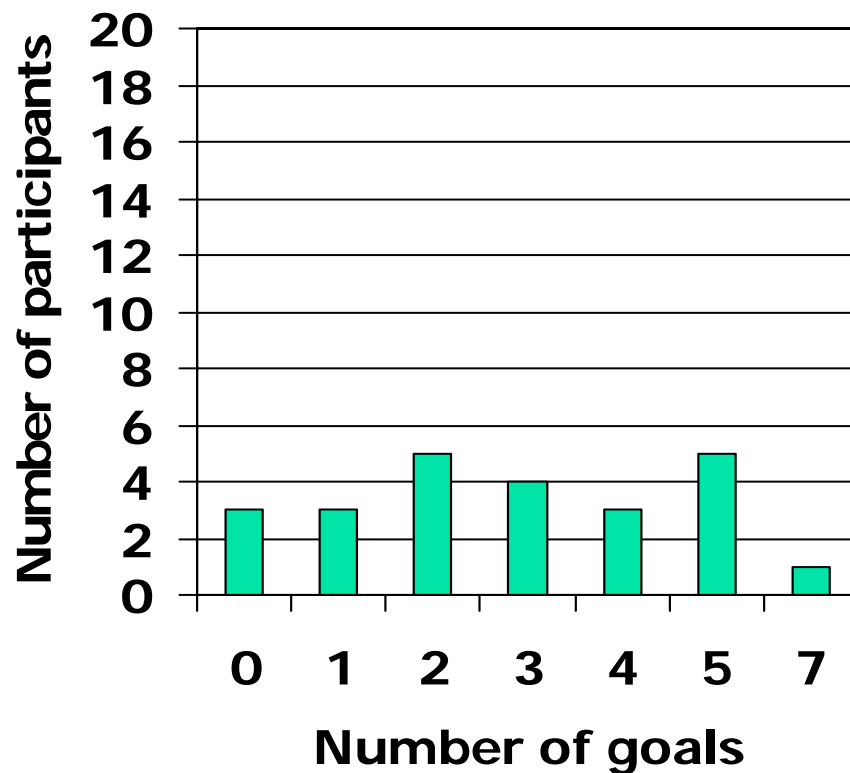
In addition to ACE...

2 fitted with hearing aids for the first time

2 fitted with new hearing aids

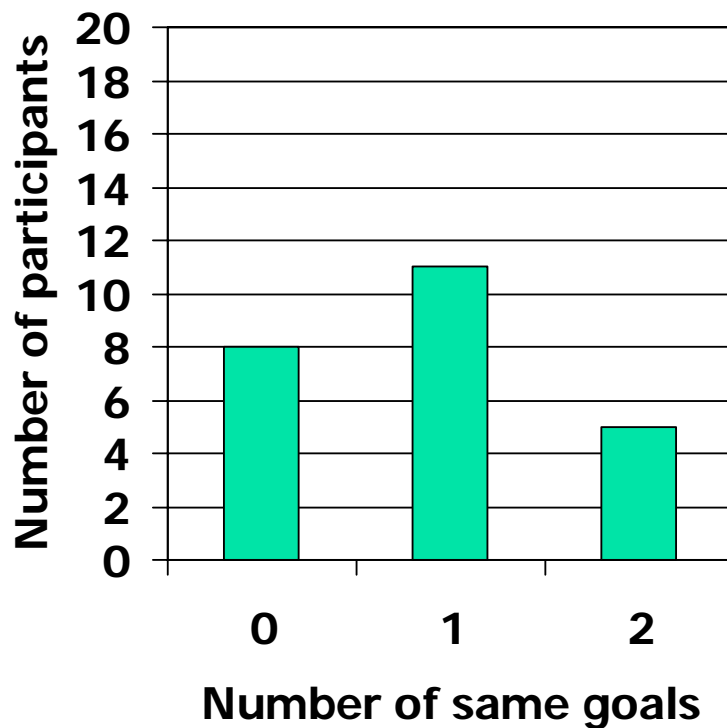
3 obtained headphones for TV

Goals at second follow-up



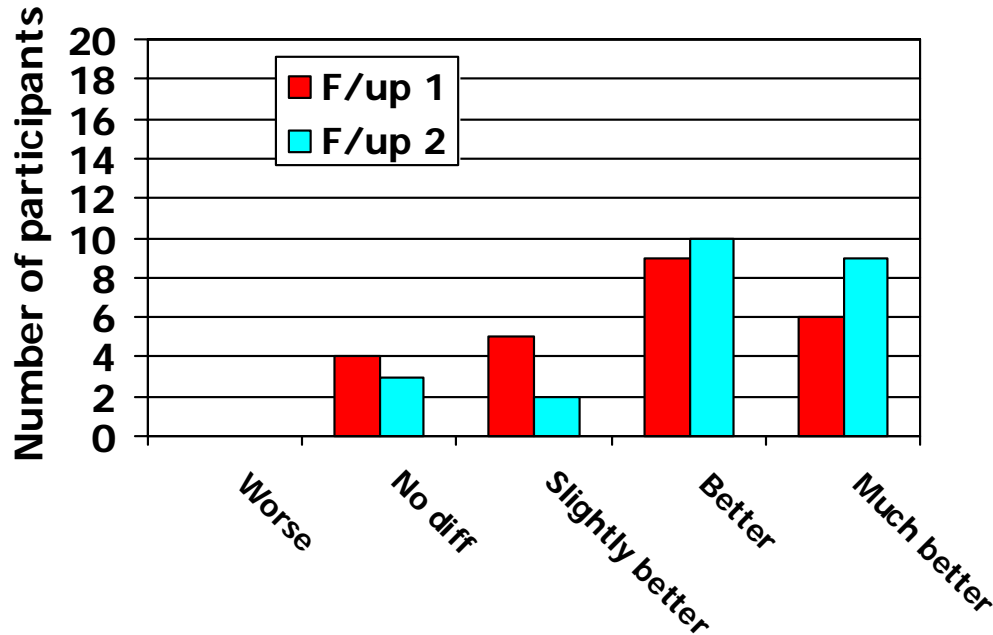
- Total number = 72
- Nature of goals reversed with 25% general and 75% specific
- Mean = 2.88

Were goals the same at both sessions?



- Participants identified an average of 2 new goals at the final session (Range = 0 to 6)
- New goals were more specific

Outcomes at follow ups for goal 1 from initial session



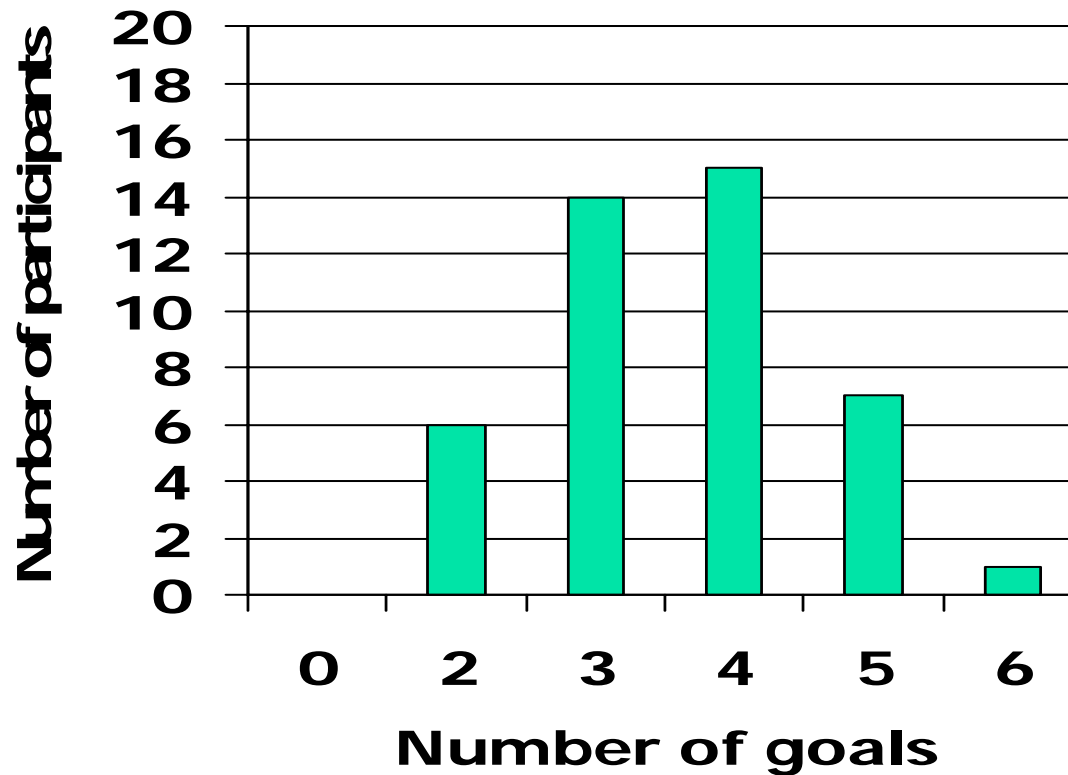
- Mean at F/up 1 = 3.71
- Mean at F/up 2 = 4.04
- No significant difference over time



Cardiff participants (n=43)

- Mean age 69.7 yrs (SD = 12.3)
- 24 males and 19 females
- Mean Better ear PTA_{ave} (.5, 1, 2, 4 kHz)
38.1 dB (SD = 12.6 dB)
- Social Class Non-manual 18, Manual 15, HW or not specified 10
- 30 with no previous rehab, 11 fitted with aids
2 had ALDs, 2 not known
- Median duration initial assessment to F/up 1
10.5 months (range 3-41 months)

Goals at Initial Session



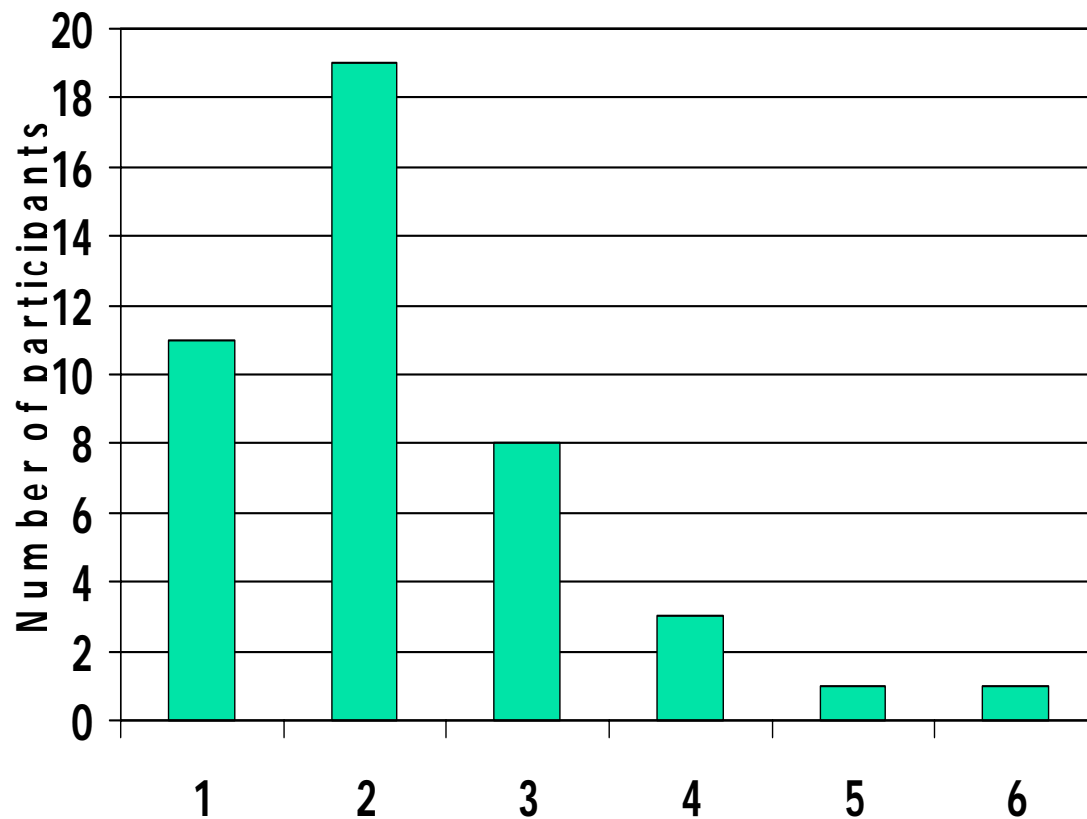
- Total number = 155
- Mean = 3.6
- Median = 4



Rehabilitation

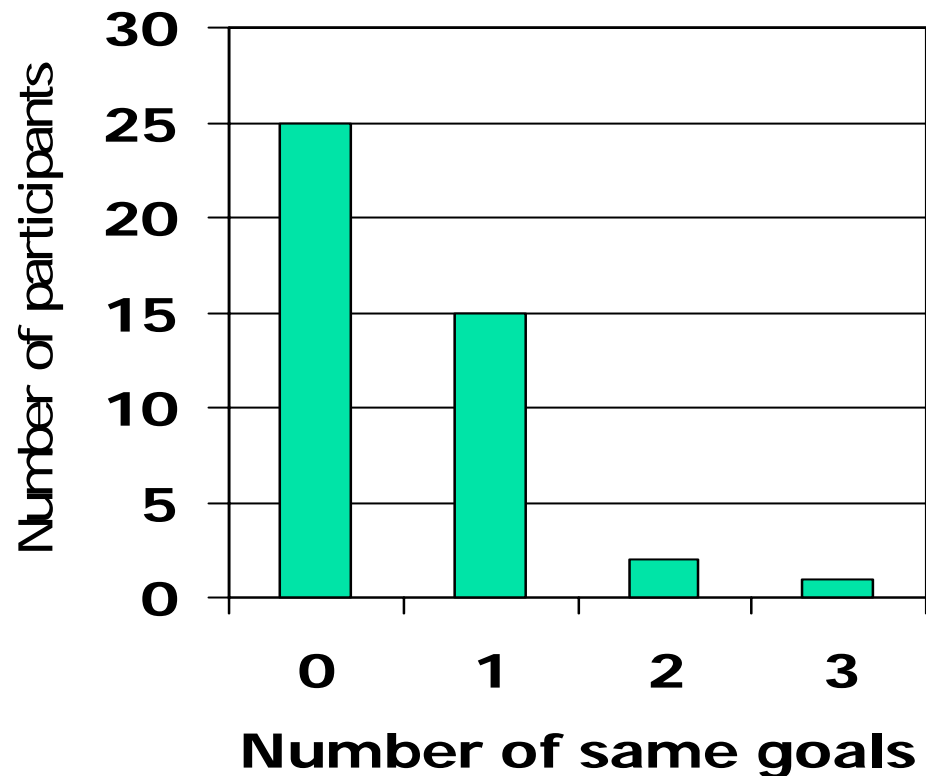
- Hearing aid fitting with digital BTE aids, one or two as appropriate
- Hearing tactics and ALDs supplementing this and alone in those refusing HAs or with King Kopetzky Syndrome.

Goals at 'second' follow-up



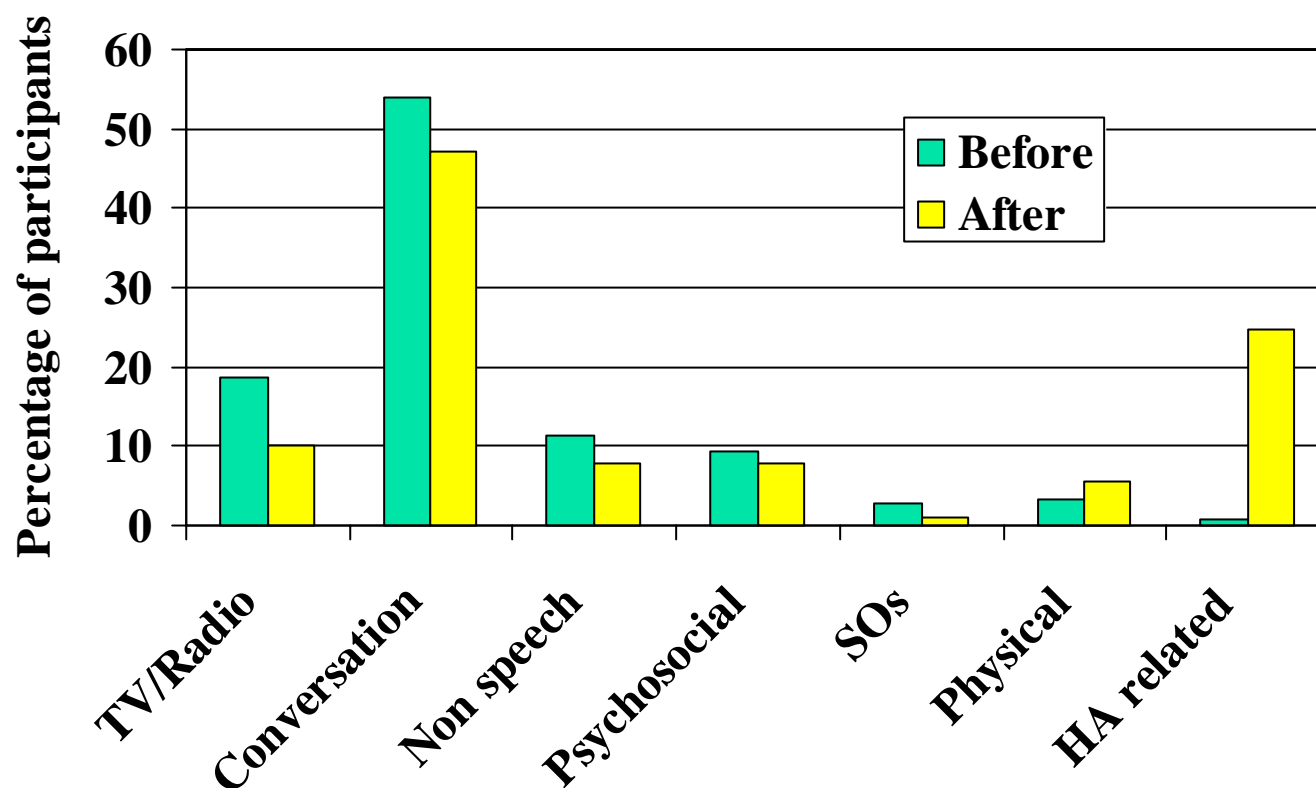
- Total number = 96
- Mean = 2.23
- Median = 2

Were goals the same at both sessions?

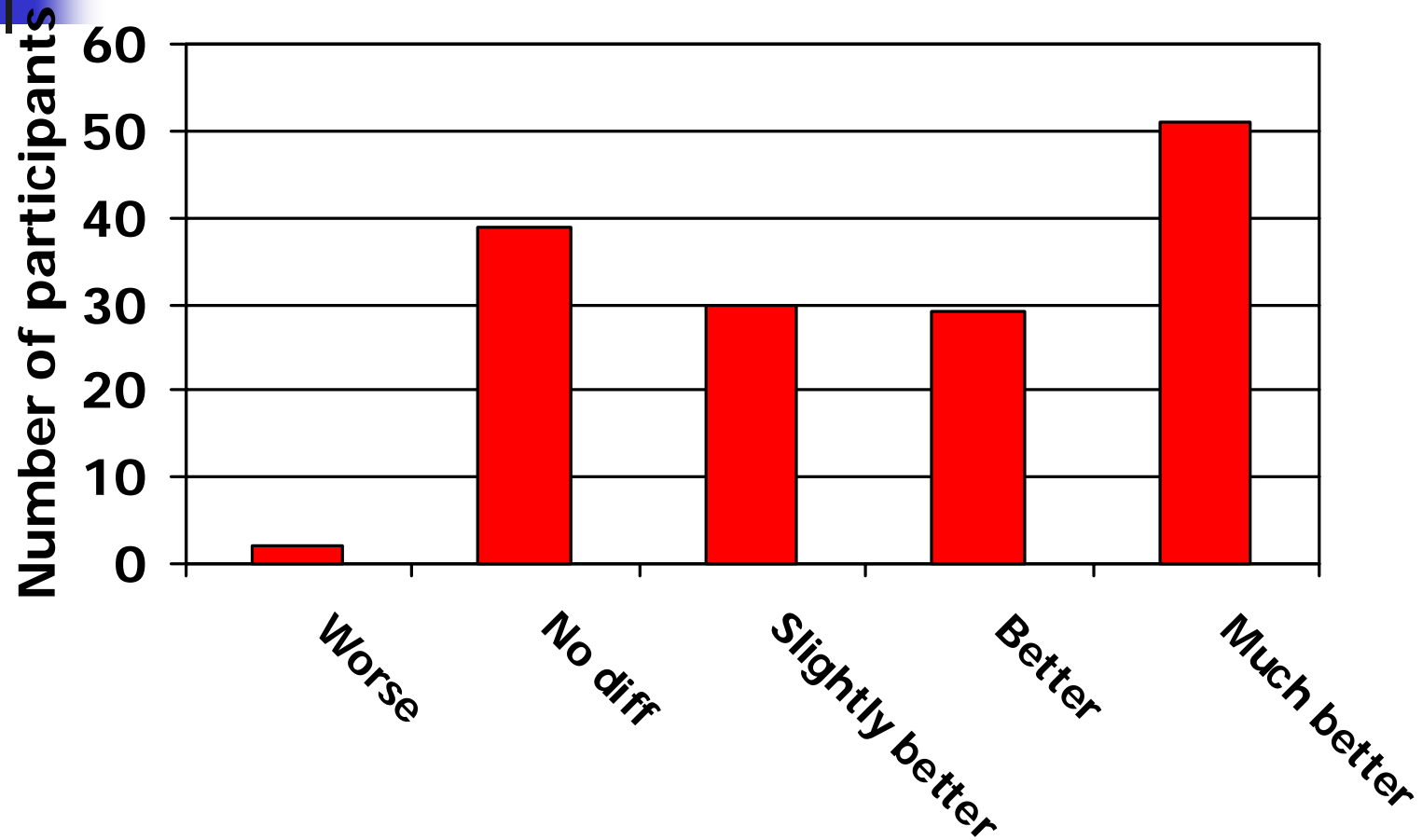


- Participants identified an average of 1.8 new goals at the final session (Range = 0 to 5)
- Nature of goals changed

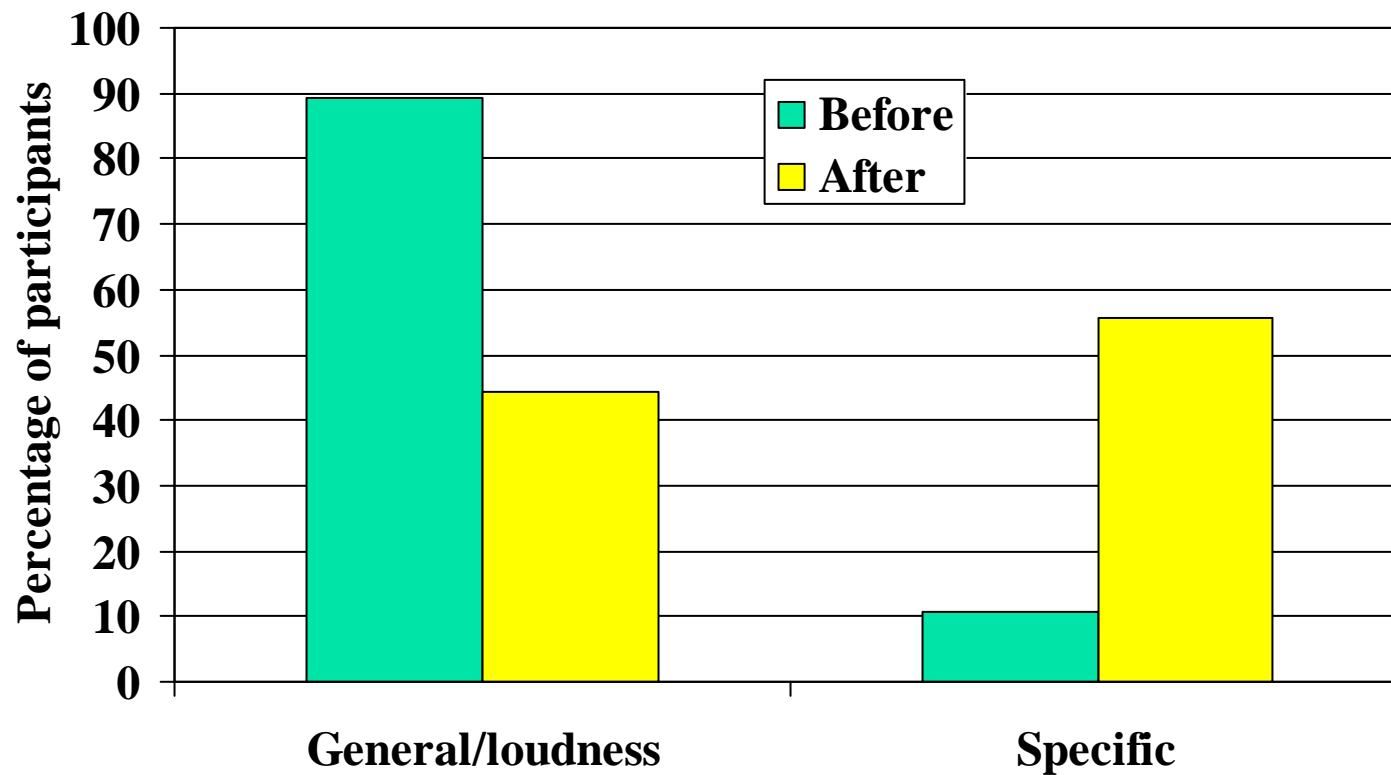
Complaint categories before and after intervention



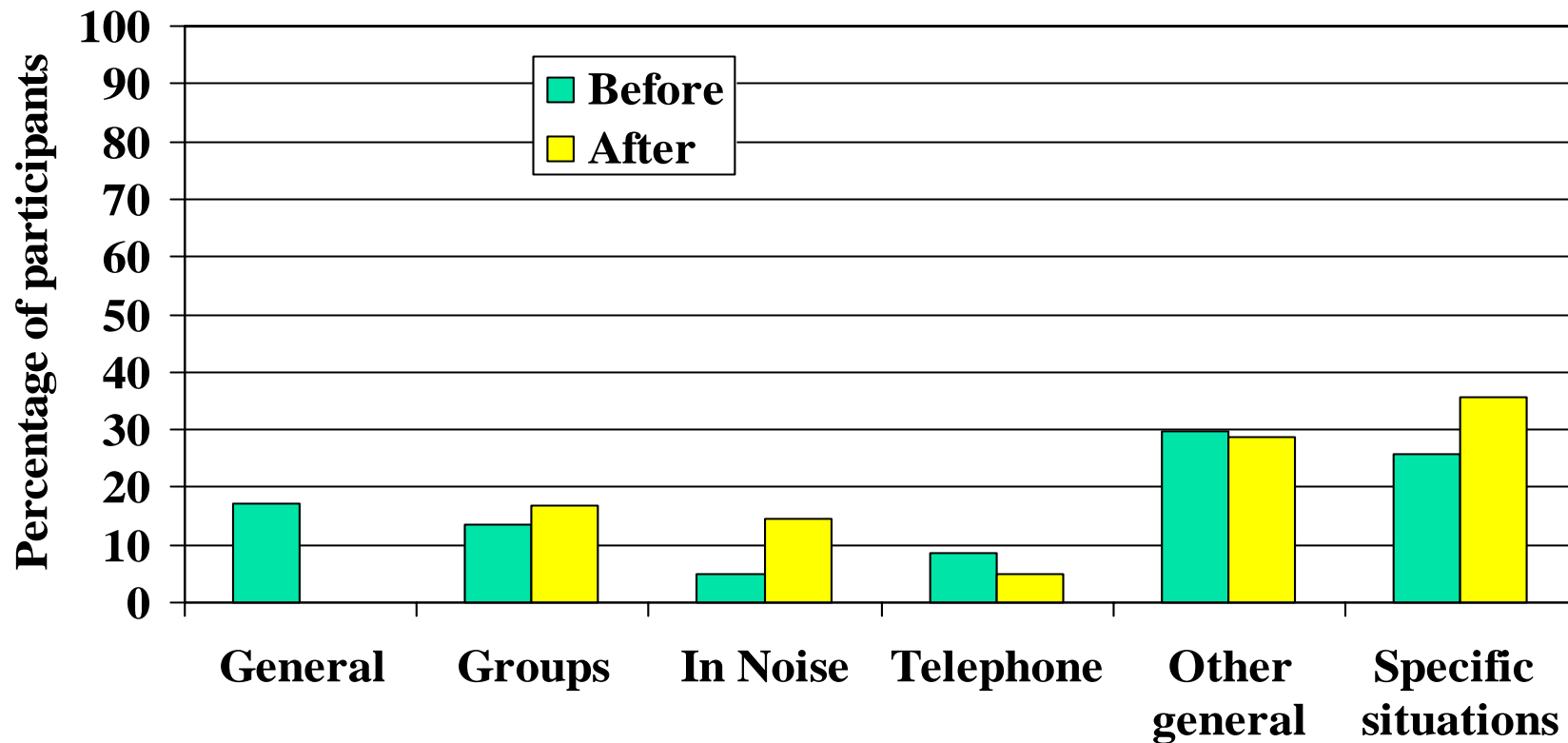
Outcomes at follow up for initial goals



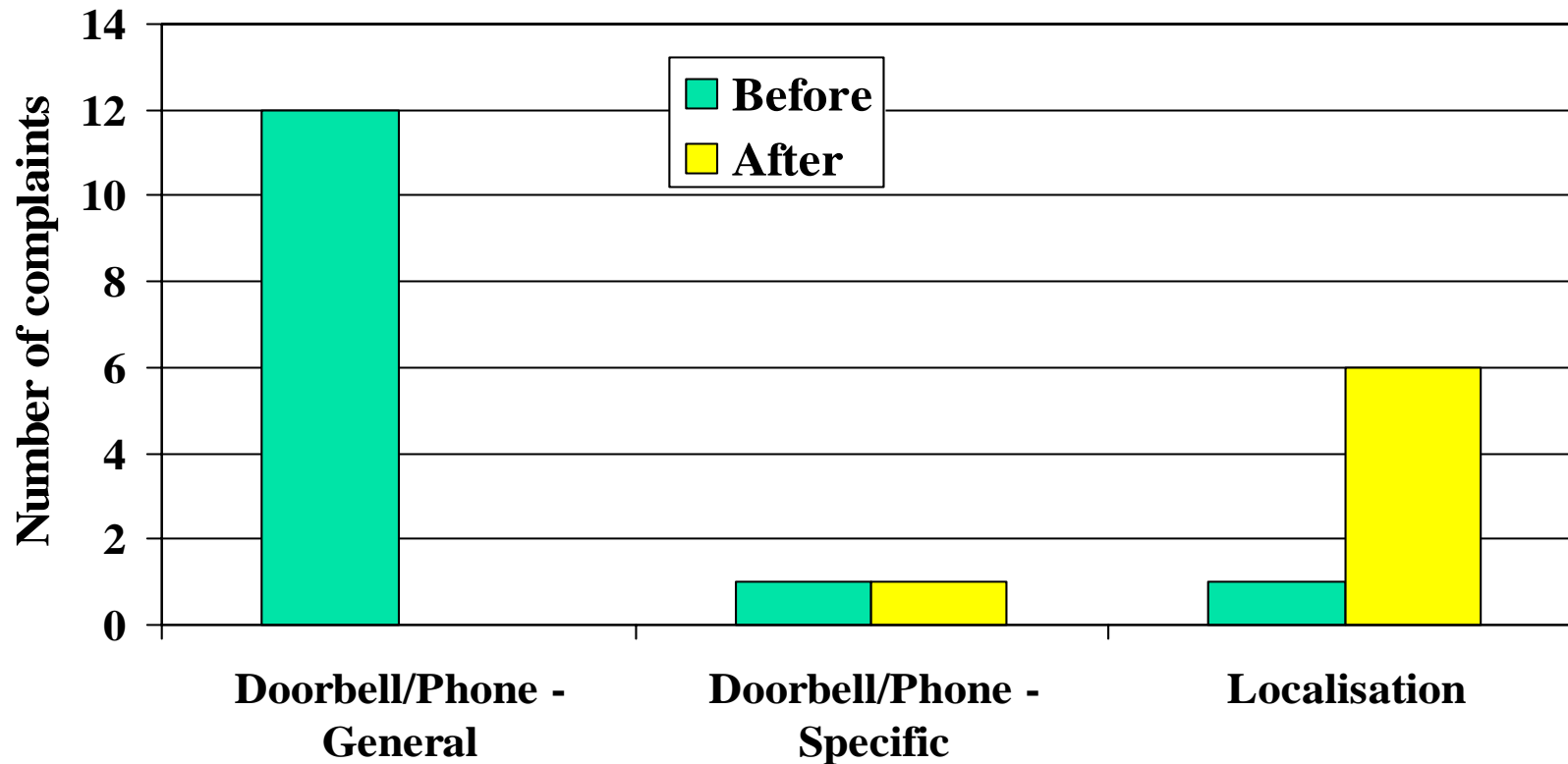
Complaint categories before and after intervention – TV/radio



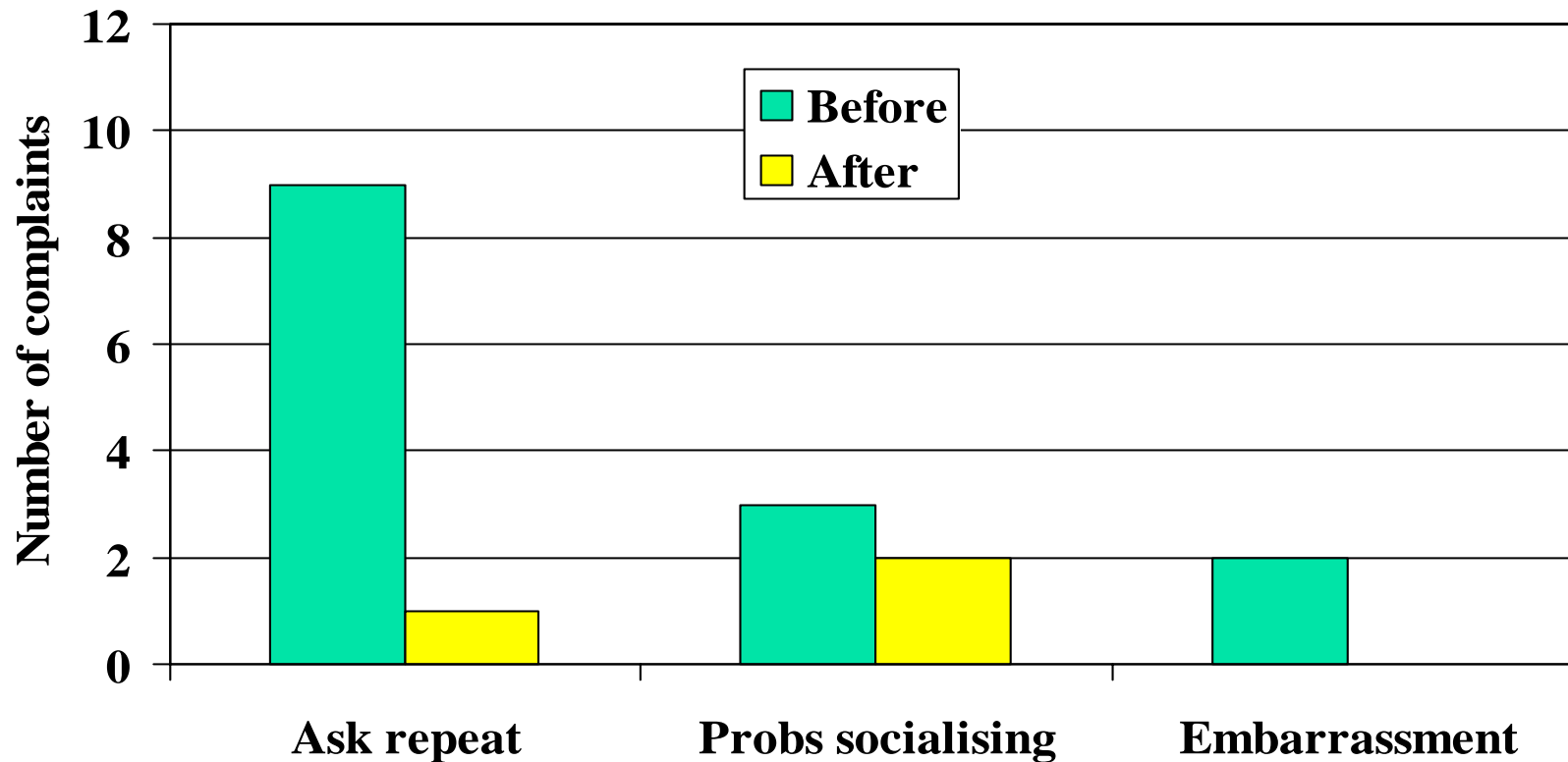
Complaint categories before and after intervention – Conversation



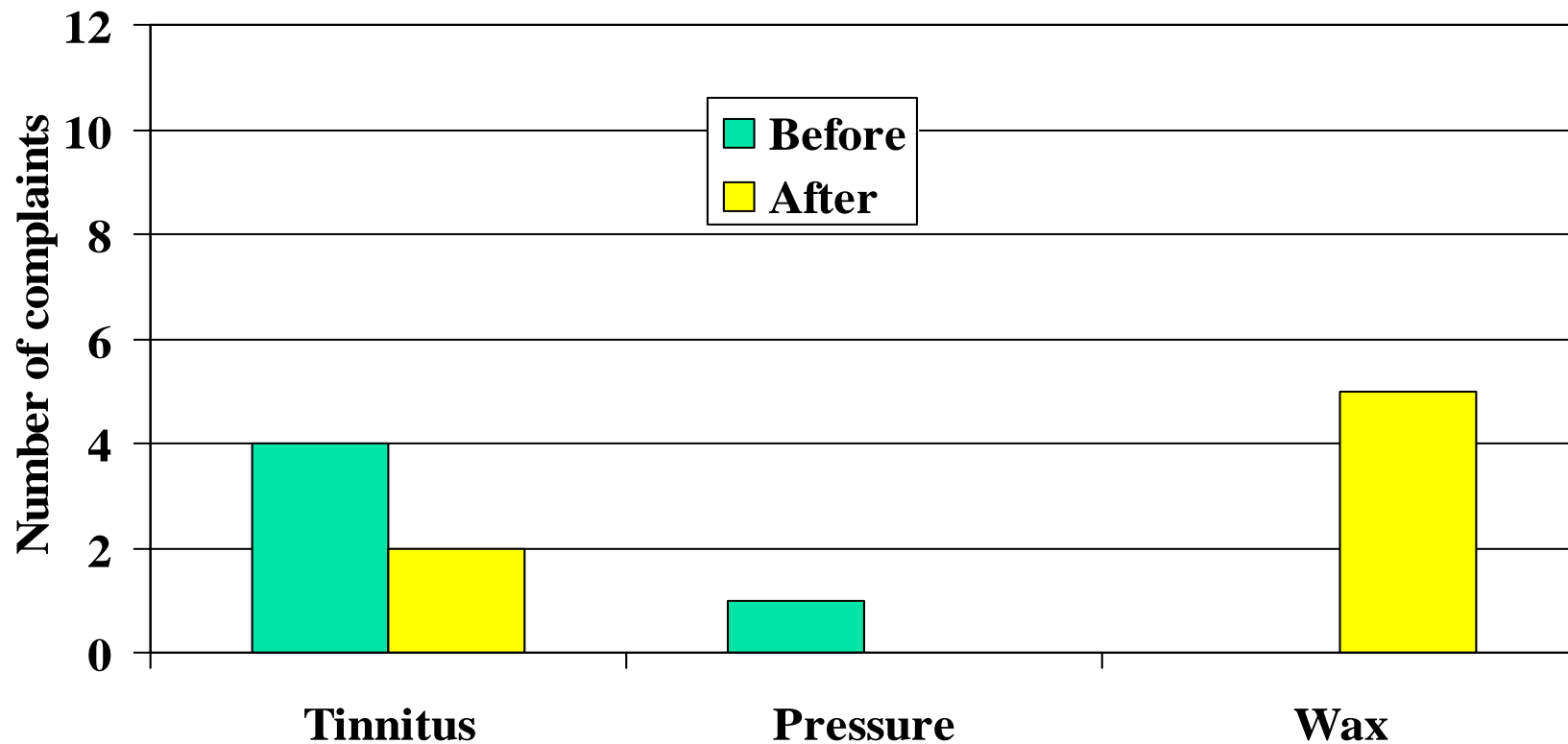
Complaints before and after intervention – Non-speech



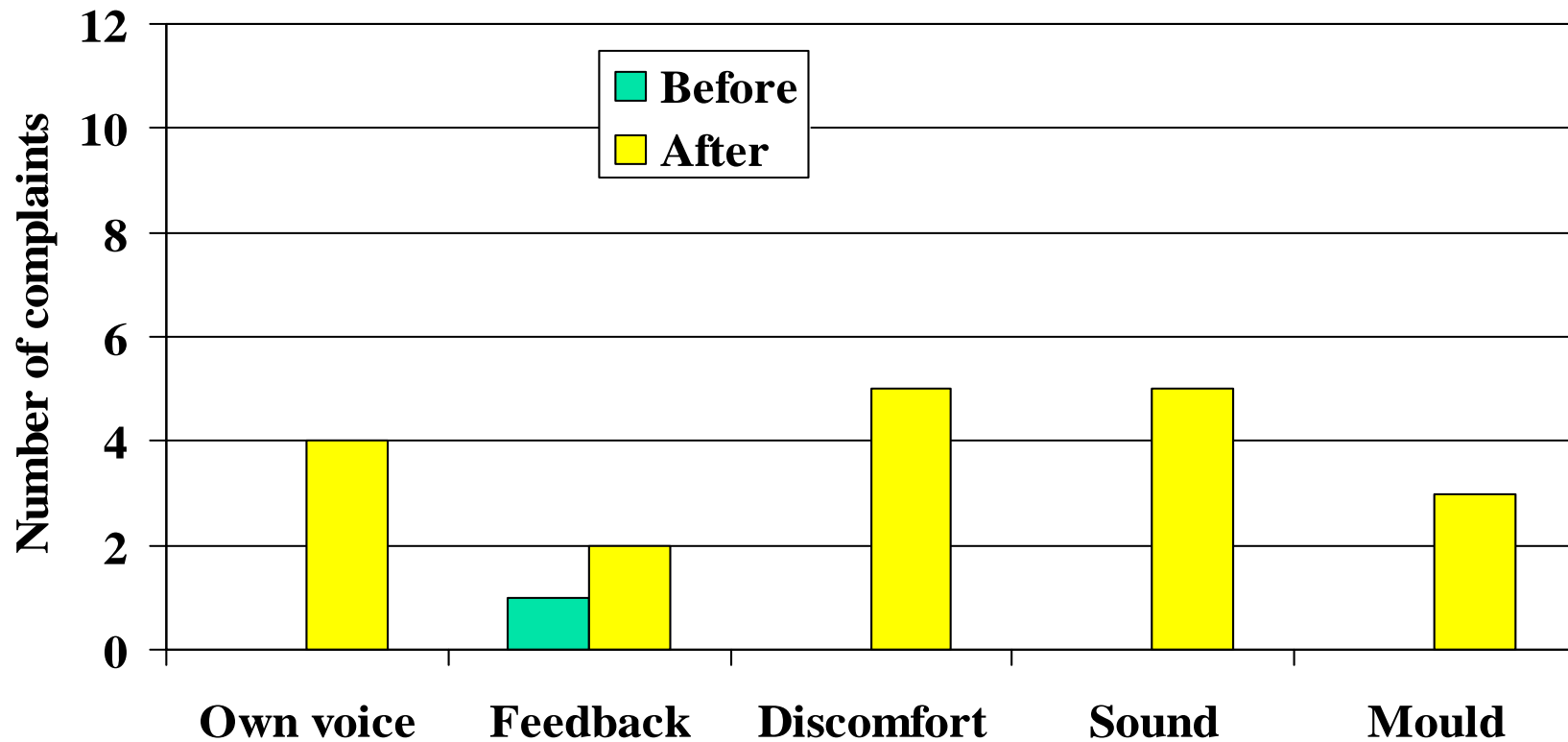
Complaints before and after intervention – Psychosocial



Complaints before and after intervention – Physical



Complaints before and after intervention – Hearing aid related





Amsterdam Participants

Sophia E. Kramer
Sanne van Kordenoordt
Jojanneke Meloen
S. Theo Goverts

VU University medical center, Dept. of Audiology
Amsterdam, The Netherlands

VU medisch centrum





Amsterdam participants (n=20)

- Mean age 69.0 yrs (SD = 9.9)
- 10 males and 10 females
- Mean Better ear PTAvg_e (0.5,1,2,4kHz) 47.7 dB (8.7)
- 86% SNHL, 15% mixed
- Mean years of education 13.2 (SD = 2.9)
- No previous rehabilitation
- 20 fitted with two digital hearing aids
- 90% 2 digital bte, 10% 2 digital ite

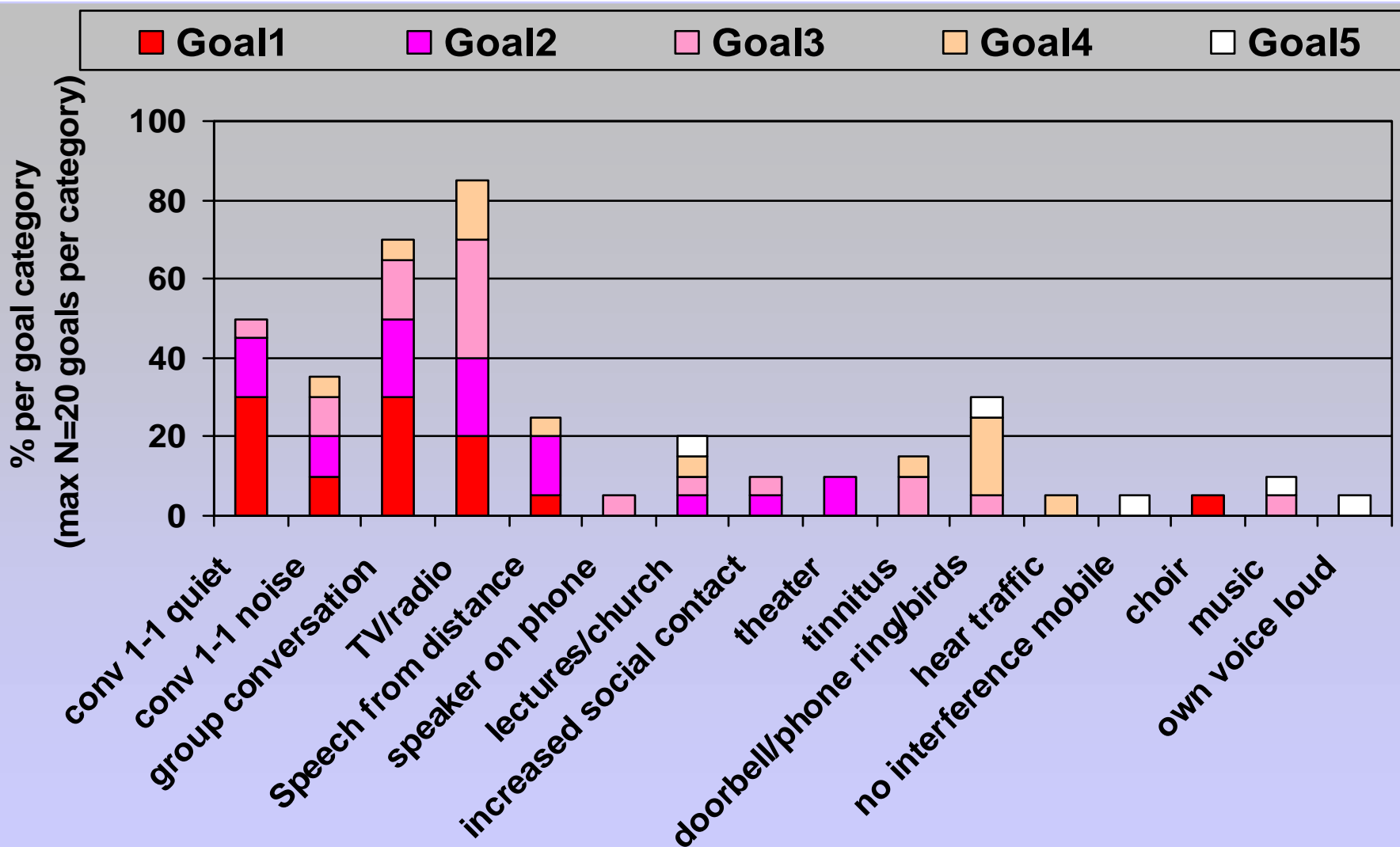
Number of Goals at Initial Session



Mean = 3.9(0.9)

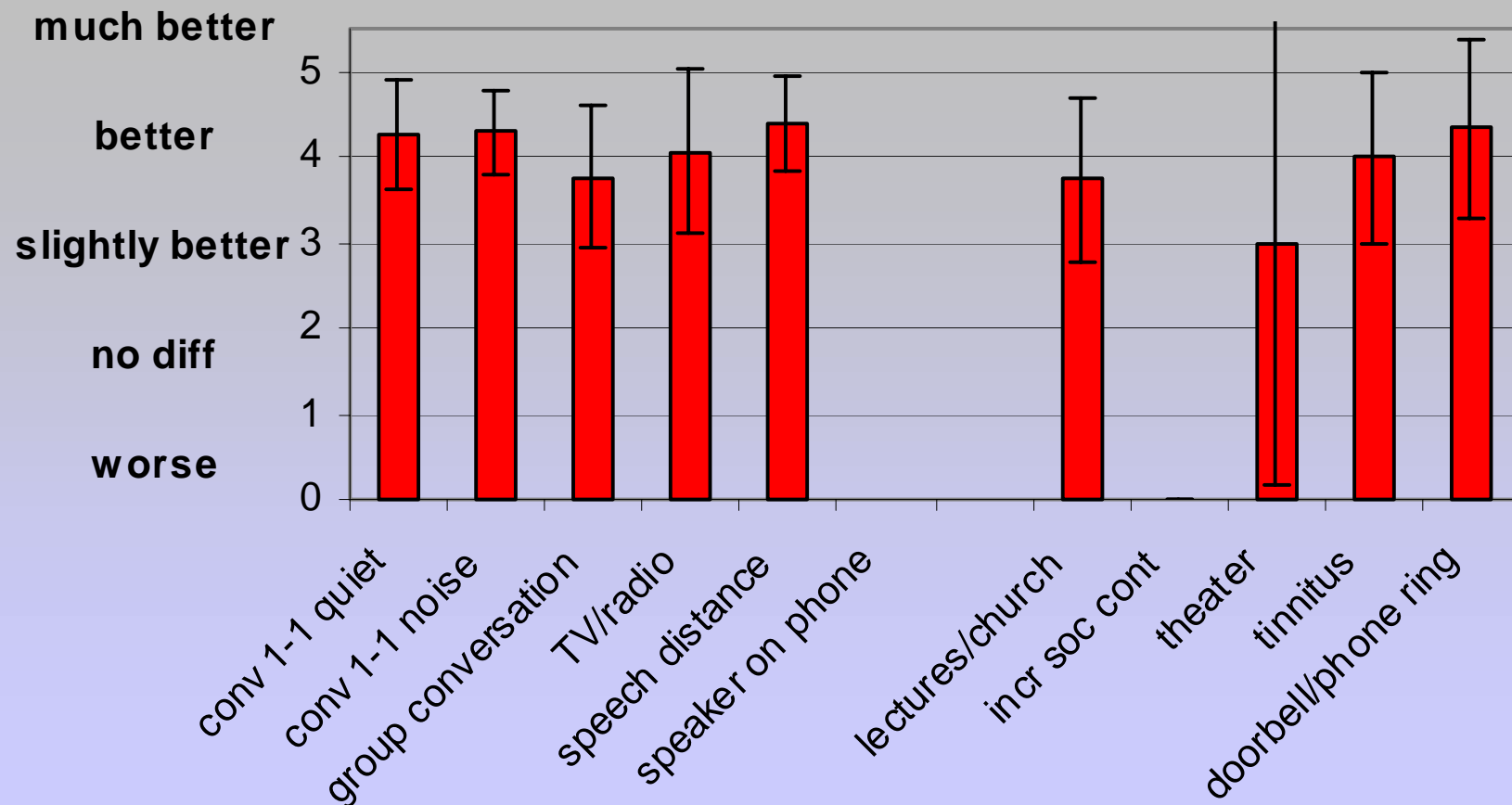
Median = 4

Goals at initial session and priority



Outcomes at follow up 1, mean (sd)

Time interval = 8 – 32 wks, mean = 15.6 (6.2)

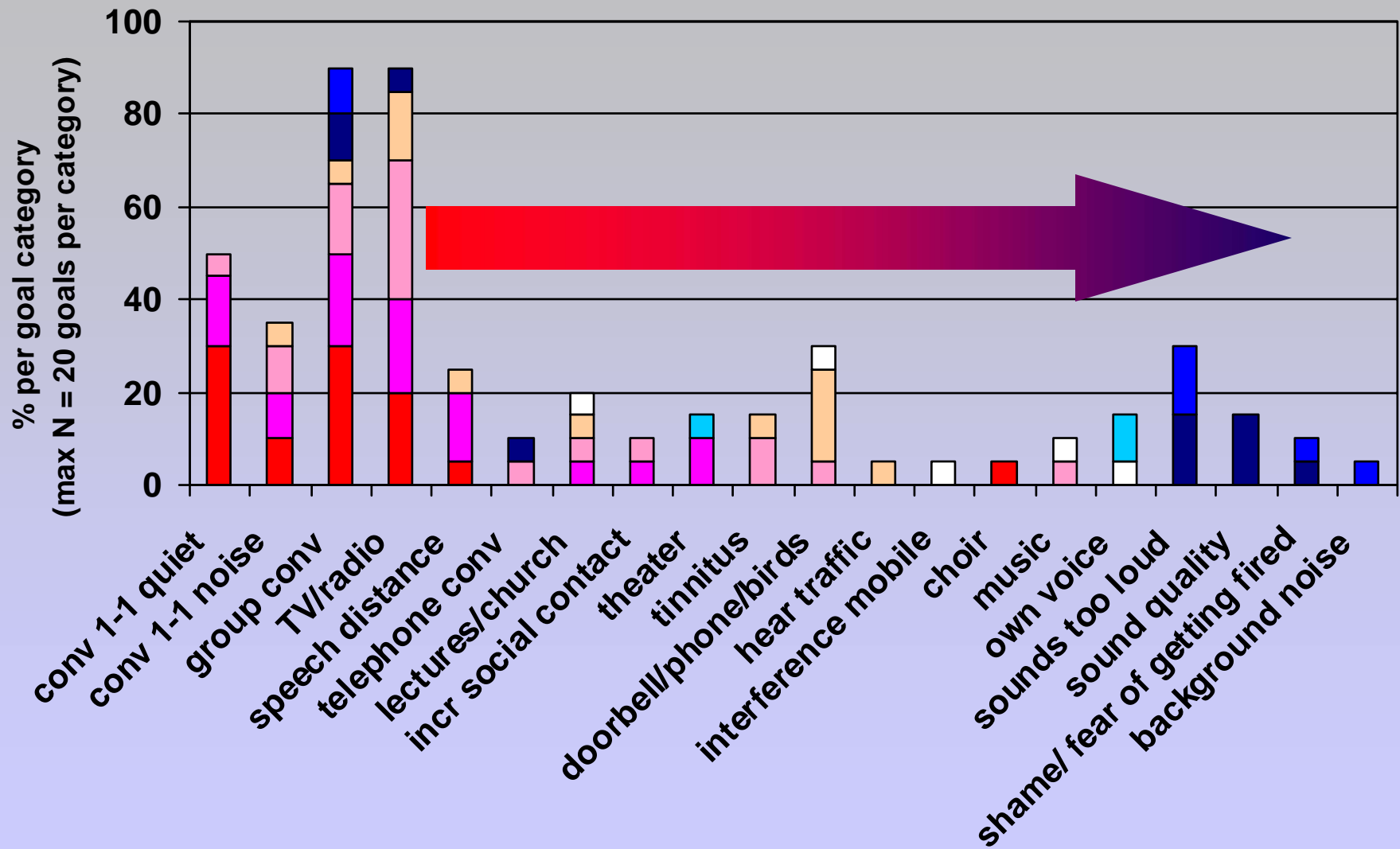


Number of Goals at Follow Up 1



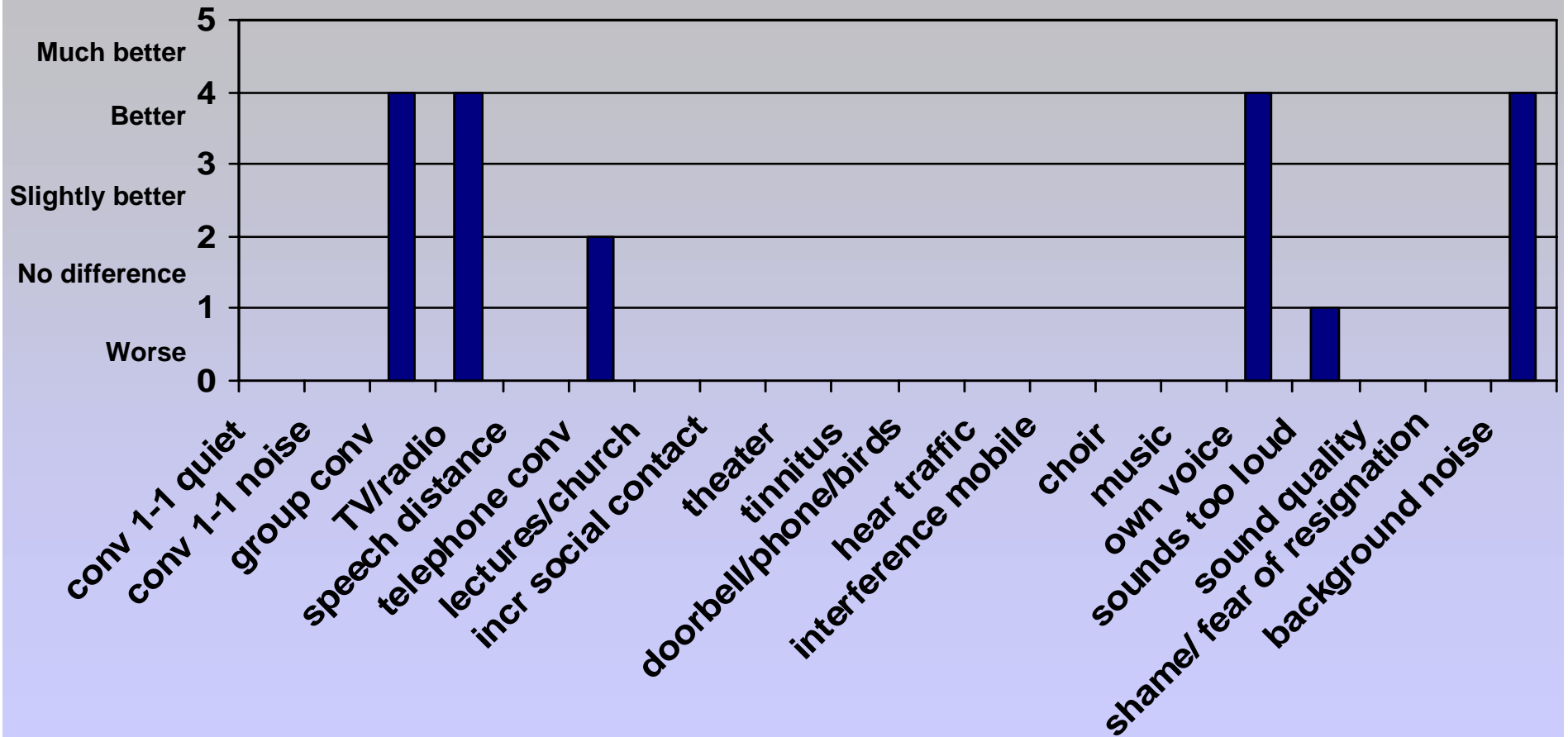
Mean = 1.6

Median = 1

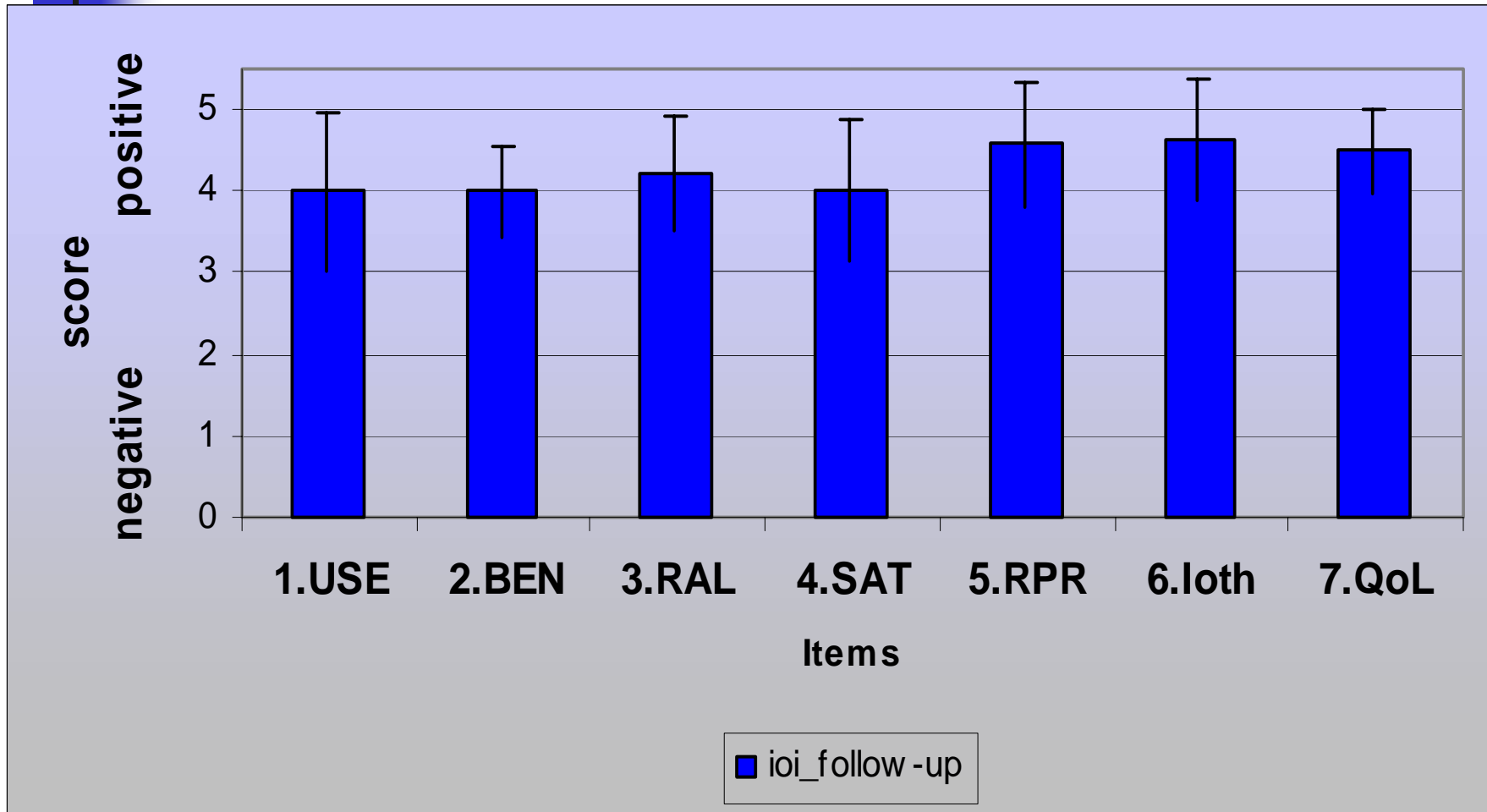


Outcome at follow up 2

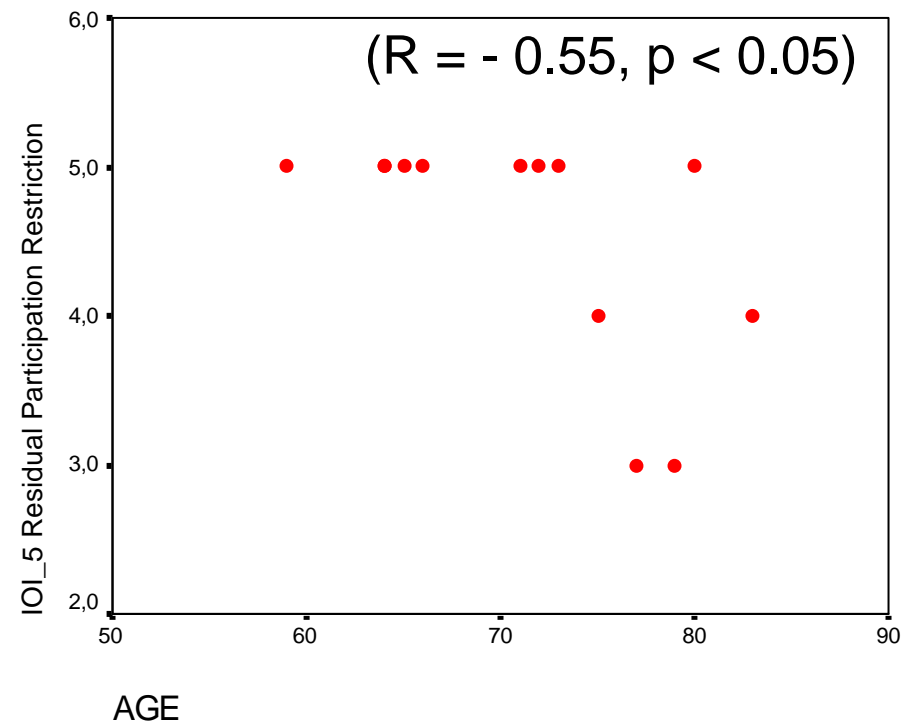
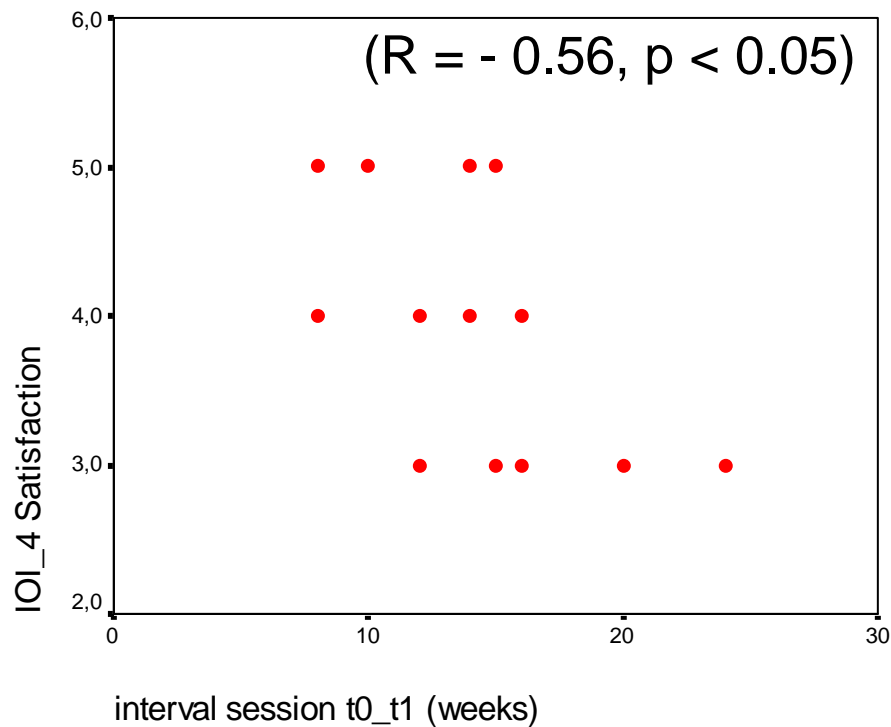
Time interval = 6 – 20 wks, mean = 10.0 (5.7)



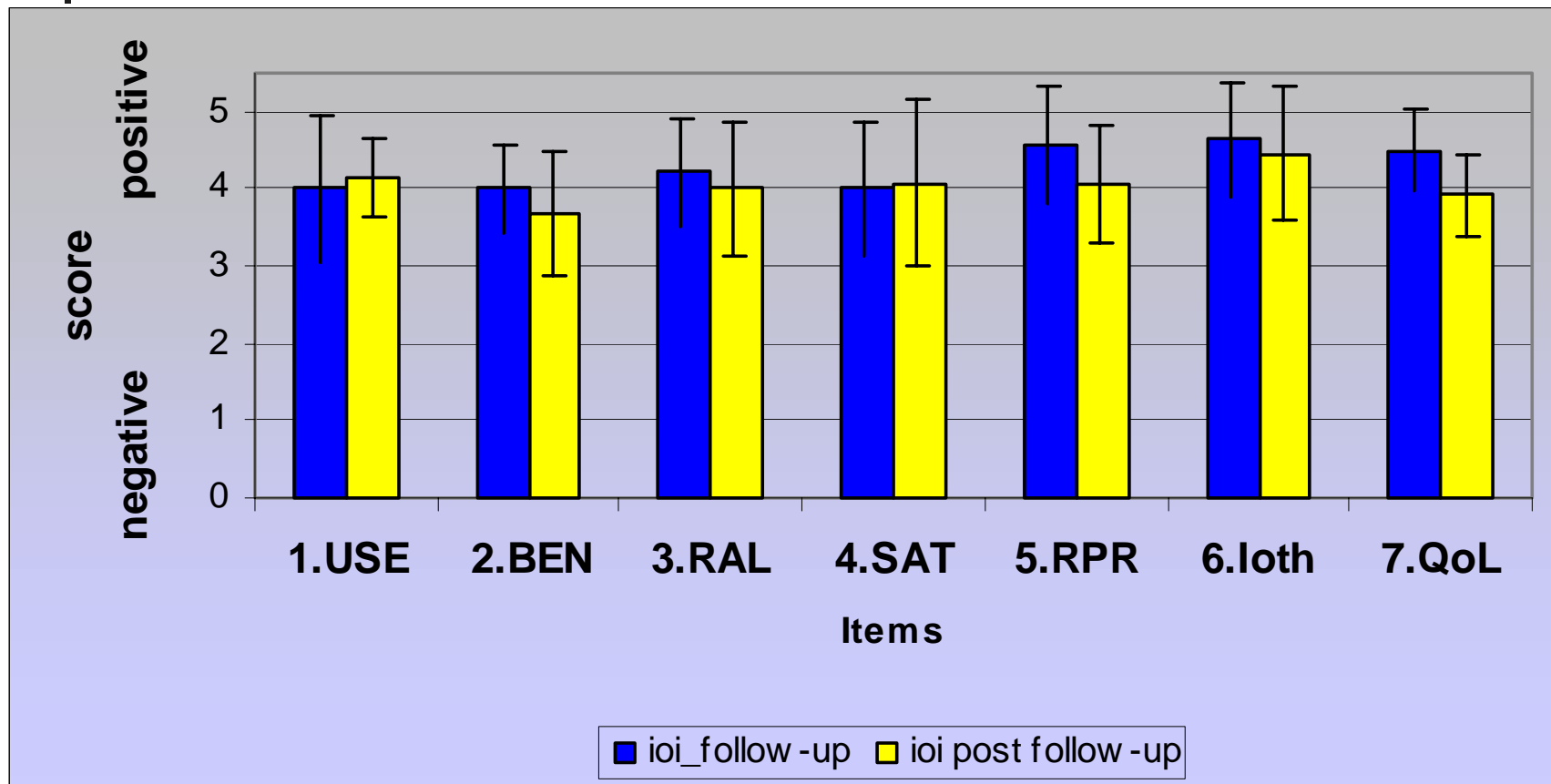
IOI-HA at follow-up 1



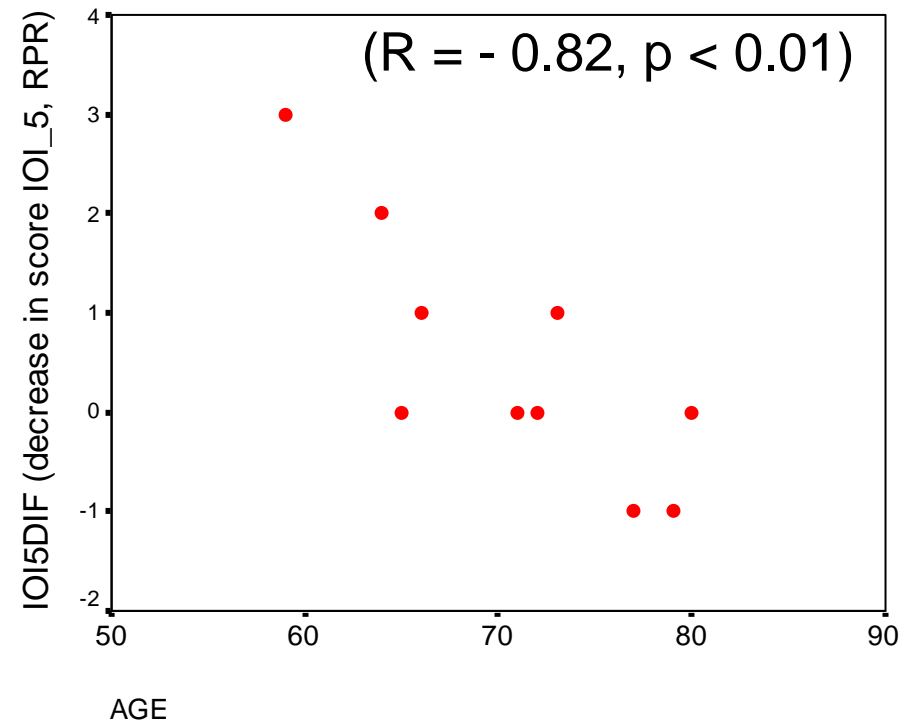
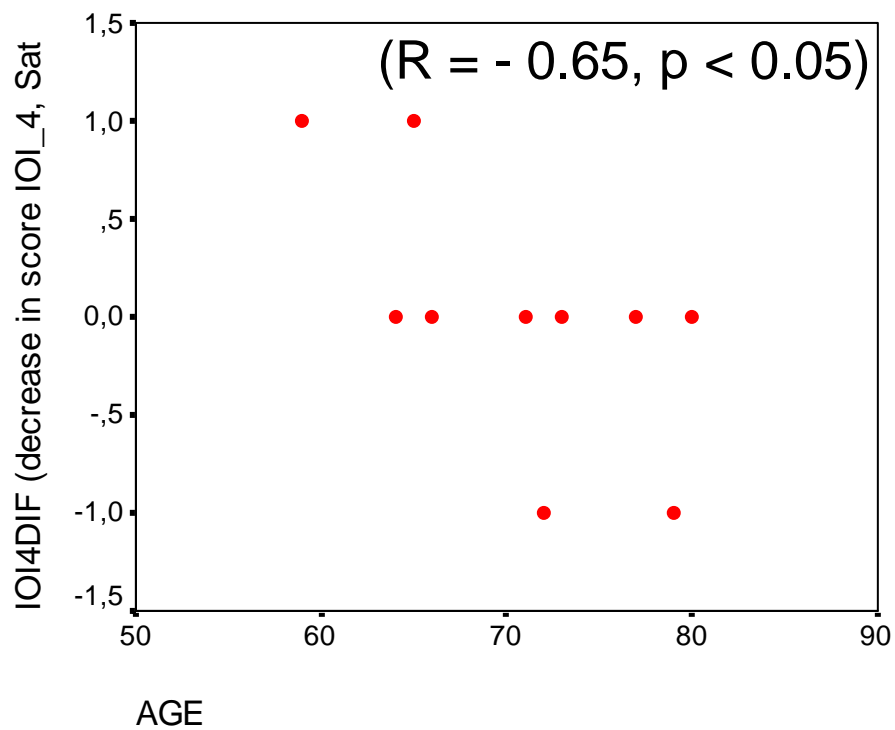
Correlation IOI with demographics (age, gender, educ, pta, t0_t1)



IOI-HA follow up 1 – follow up 2 (interval: 4 – 40 wks, mean 23.0 (12.8))



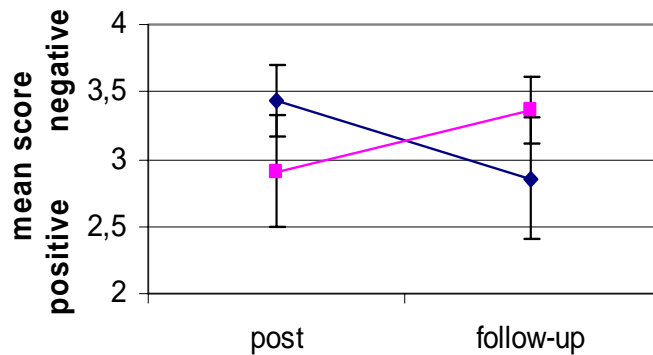
Change in IOI4 and IOI5 follow up – post fu with age



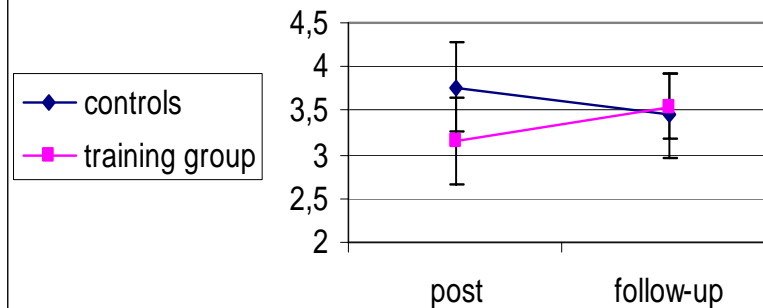
How to increase IOI scores?

How to improve long term satisfaction and QoL?

Considering everything, do you think your present hearing aids / the hearing program is worth the trouble?
(IOI item 4)

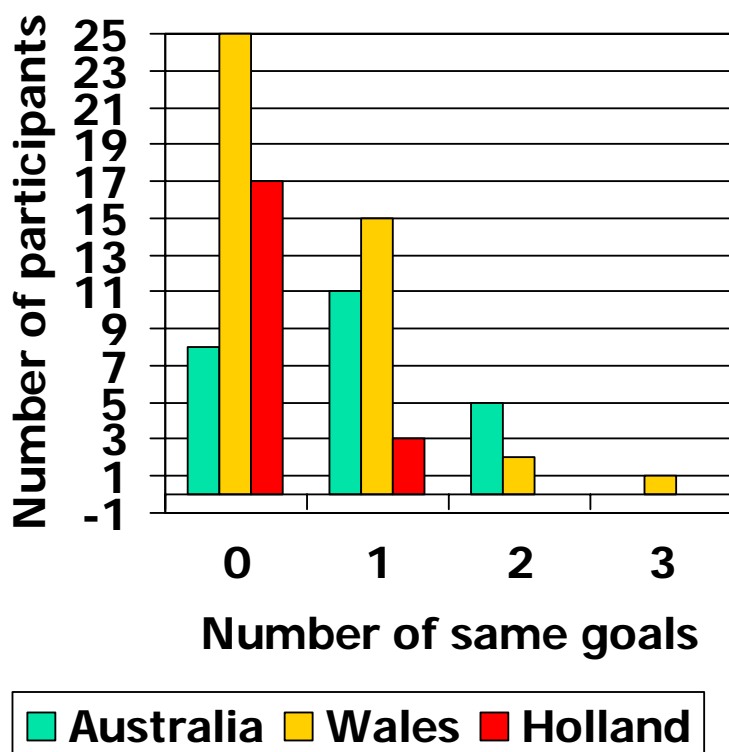


Considering everything, how much has your present hearing aids / training program changed your enjoyment of life?
(IOI item 7)



Kramer et al. (IJA, accepted) A home education program for older adults with hearing impairment and their significant others: a randomized trial evaluating short- and long term effects

Do goals change over time for older clients?



- Yes - participants identify many new goals.
- Some original goals still require further intervention



Conclusions

- Number of goals similar at initial assessment and follow-up for Aust study, fewer at follow-up in Welsh and Dutch data
- Nature of goals changes from general to specific
- New goals due to hearing aid fitting
- Age seems to be a factor in change over time (Dutch data)
- Additional programs are necessary to address changing needs of older clients and ensure longterm satisfaction with rehabilitation



Issues in goal setting

- Tools exist but should we make some efforts to provide guidelines for the process?
- Are goals negotiated with clients or clinician dominated?
- Is there any need to prioritize goals at all?
- Are clients given a chance to reconsider goals subsequent to rehab?