A Family-School Partnership to Improve Deaf Children's Education

Terezinha Nunes
Diana Burman
Deborah Evans
Rossana Barros

National Deaf Children's Society

The problem

- Some deaf children are very successful but the majority find literacy learning a challenge
- A study of 971 deaf and hard-of-hearing students compared to a norm based on about 4,800 hearing students in the USA (Traxler, 2000) showed that:
  - The mean achievement for deaf 18-year-olds was lower than what was considered a basic level of reading for 14-year-olds
  - Even deaf students in the top 20% did not show a level of achievement considered as proficient for 14-year-olds

What can be done beyond current practice?

- What deaf children need to know about English to make progress in literacy
  - written language is a notation system for oral language – letter-sound correspondences
    - pen, clock, happiness
  - understanding written English also requires understanding grammar and morphemes
    - word order
    - words that represent morphemes and not simple letter-sound correspondences (magician, confession)

Morphemes and reading fluency

- We need to use larger units when decoding some words: mishandle, uniform, penknife

- Children's ability to analyse words into morphemes relates to their fluency in reading and to their reading vocabulary

Morphemes and reading comprehension

- Readers need to use information from grammar and morphemes to make sense of the text
- Single word reading is the best predictor of reading comprehension up to about age 10-11
- After that, children's knowledge of morphemes is a better predictor of reading comprehension (Nagy et al., 2006)

How much do deaf children know about morphemes?

1. These are w.in.dow.....

2. Now Sophie wa.l.K..... home.

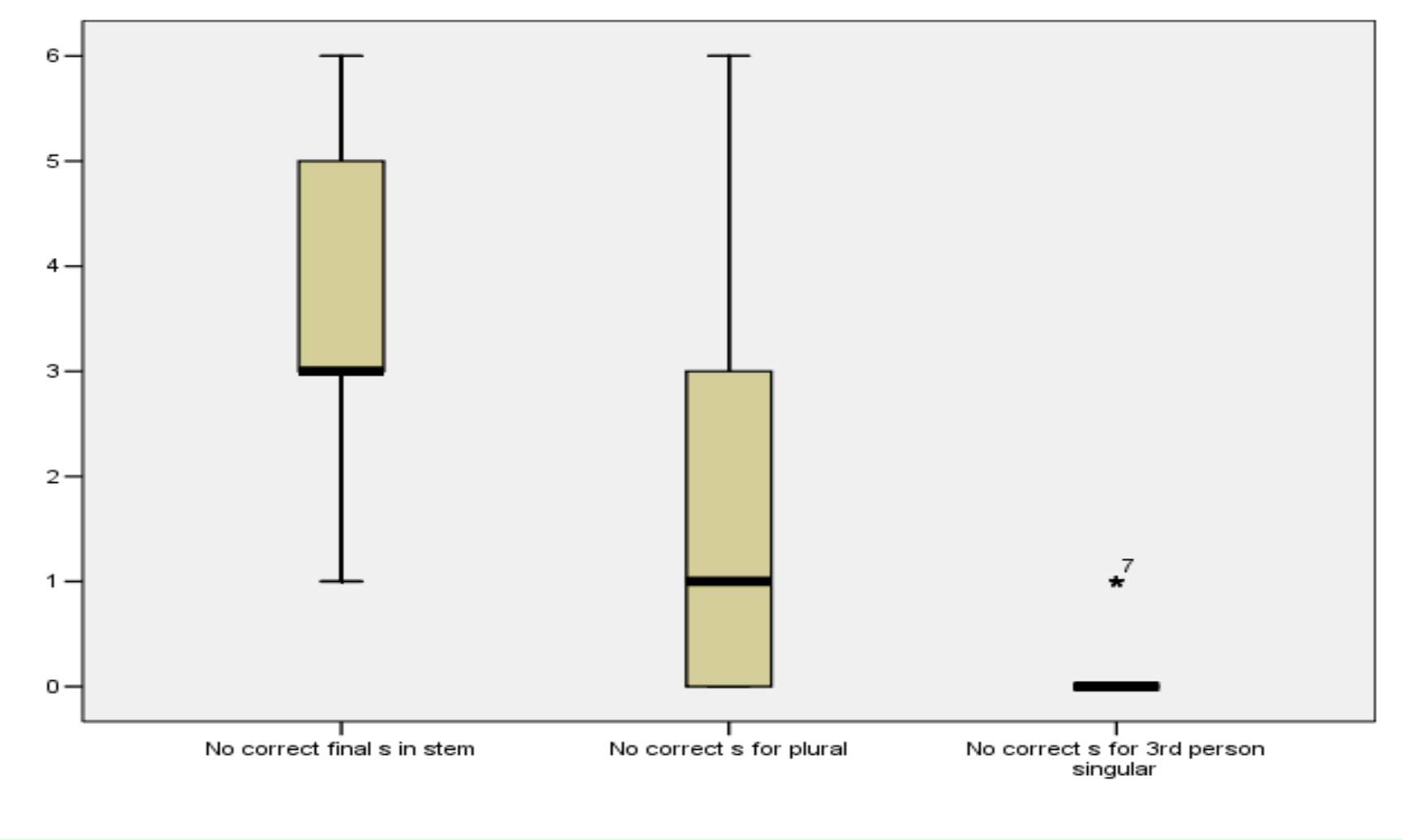
3. Yesterday this man ju.mp..... over the babies.

4. A person who arranges flowers is a f.lo.we.rs.....

5. There are lots of c.loc.K.....

Perhaps the children just don’t hear the final ‘s’

- Comparison between words whose stems end in final /s/ sound (bus, miss, kiss, less) and words where the “s” is a morpheme (plural and third person singular for verbs in the present)
- If this were just a matter of not hearing the final /s/ sound, there should be no difference between the functions of the final “s”



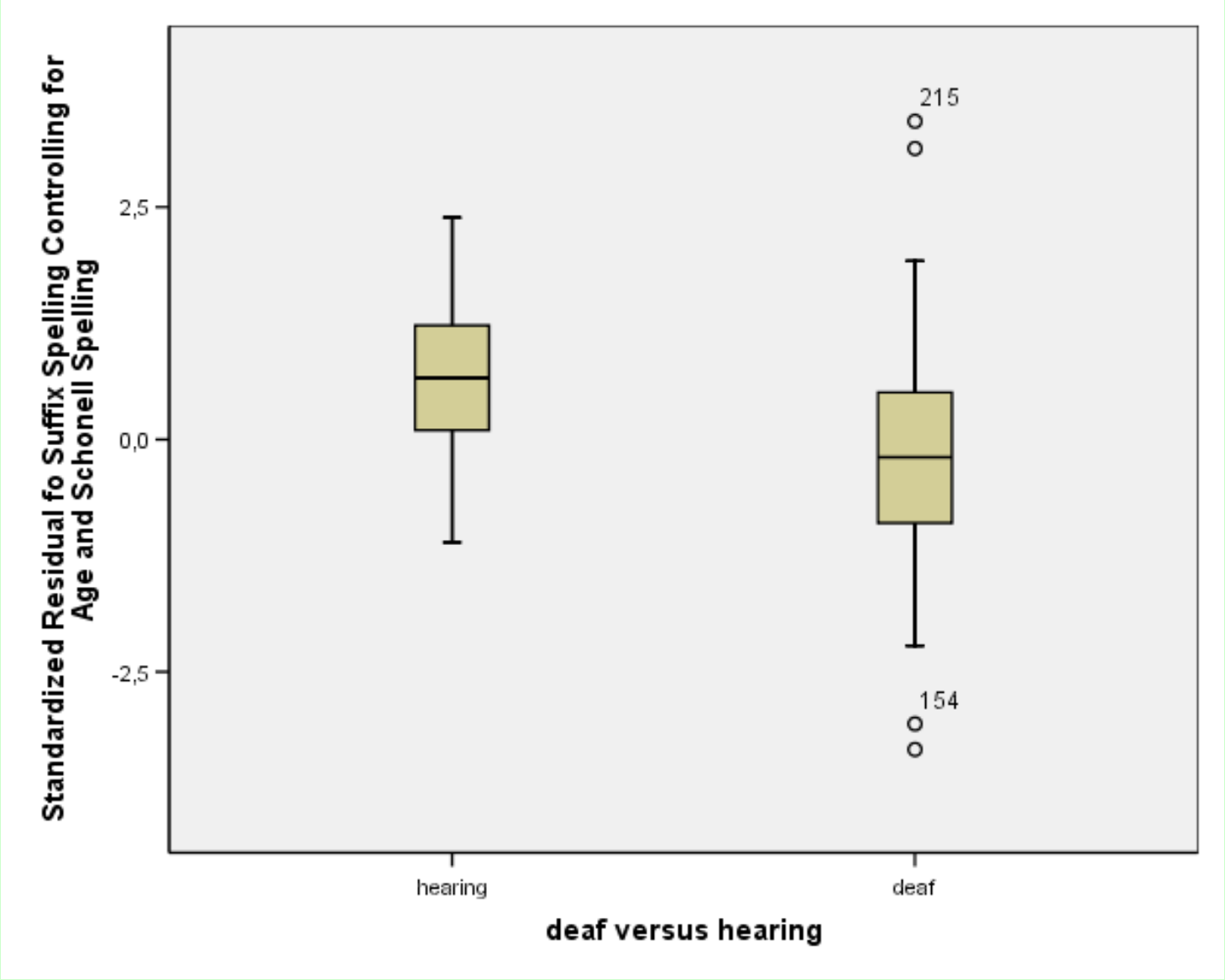
F (2,27)=74.65; p<.001; both morphemes differed significantly from stem at .001 level

Do deaf readers use the plural information from spelling?

- Helen Breadmore (2007) compared deaf high-school students with primary school children of the same reading level
- The deaf children (N=19) were all profoundly deaf from at least age 3
- Two tasks of identifying the picture that best matched:
  - a word (horse – one picture with one horse, the other with more horses)
  - a sentence (the apples grow on the tree – one picture with apples on a tree and another with a single apple on a tree)

- Deaf high-school students were at chance level on the sentence tasks (50% chance of correct responses)

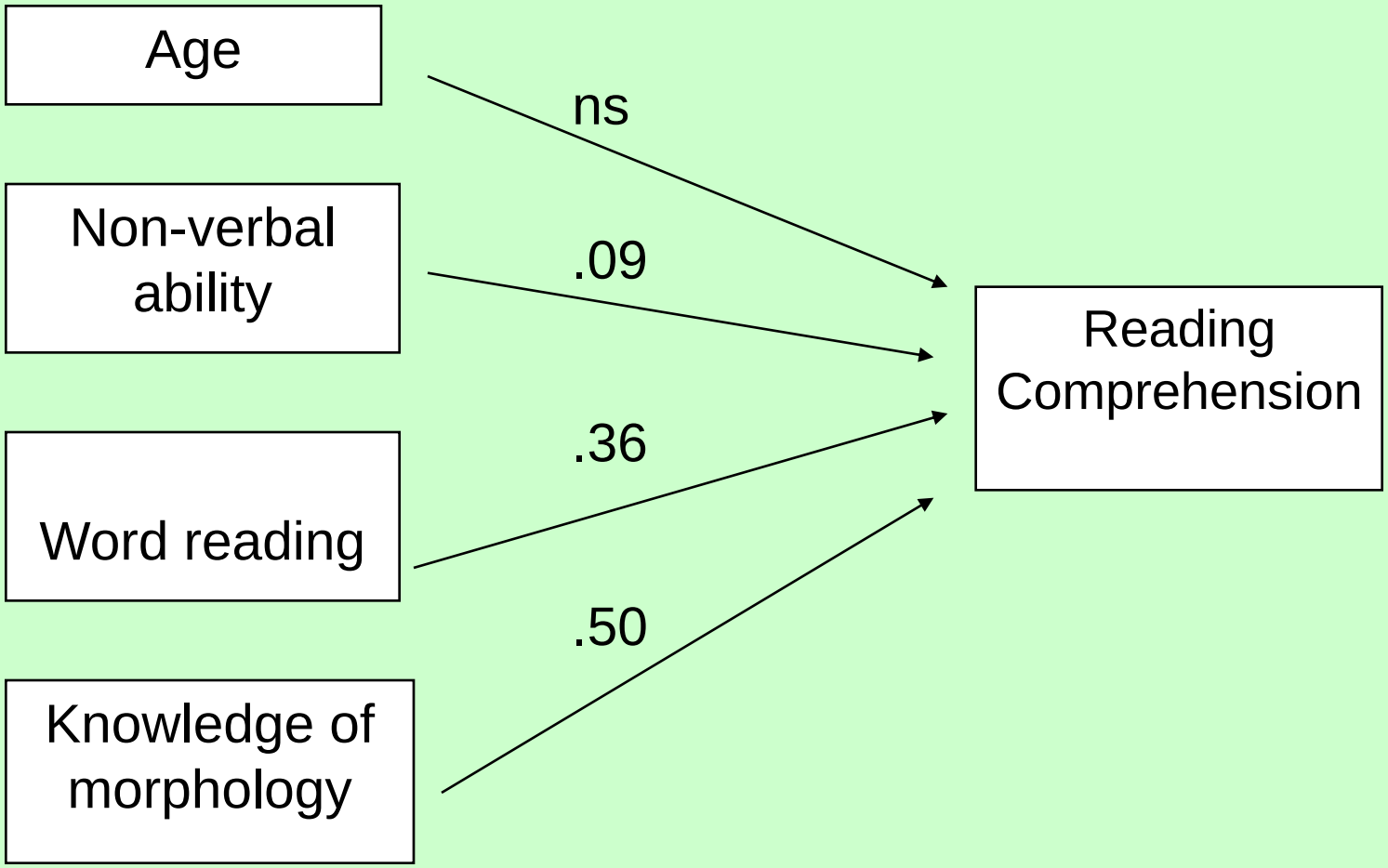
Deaf and hearing children of the same spelling age



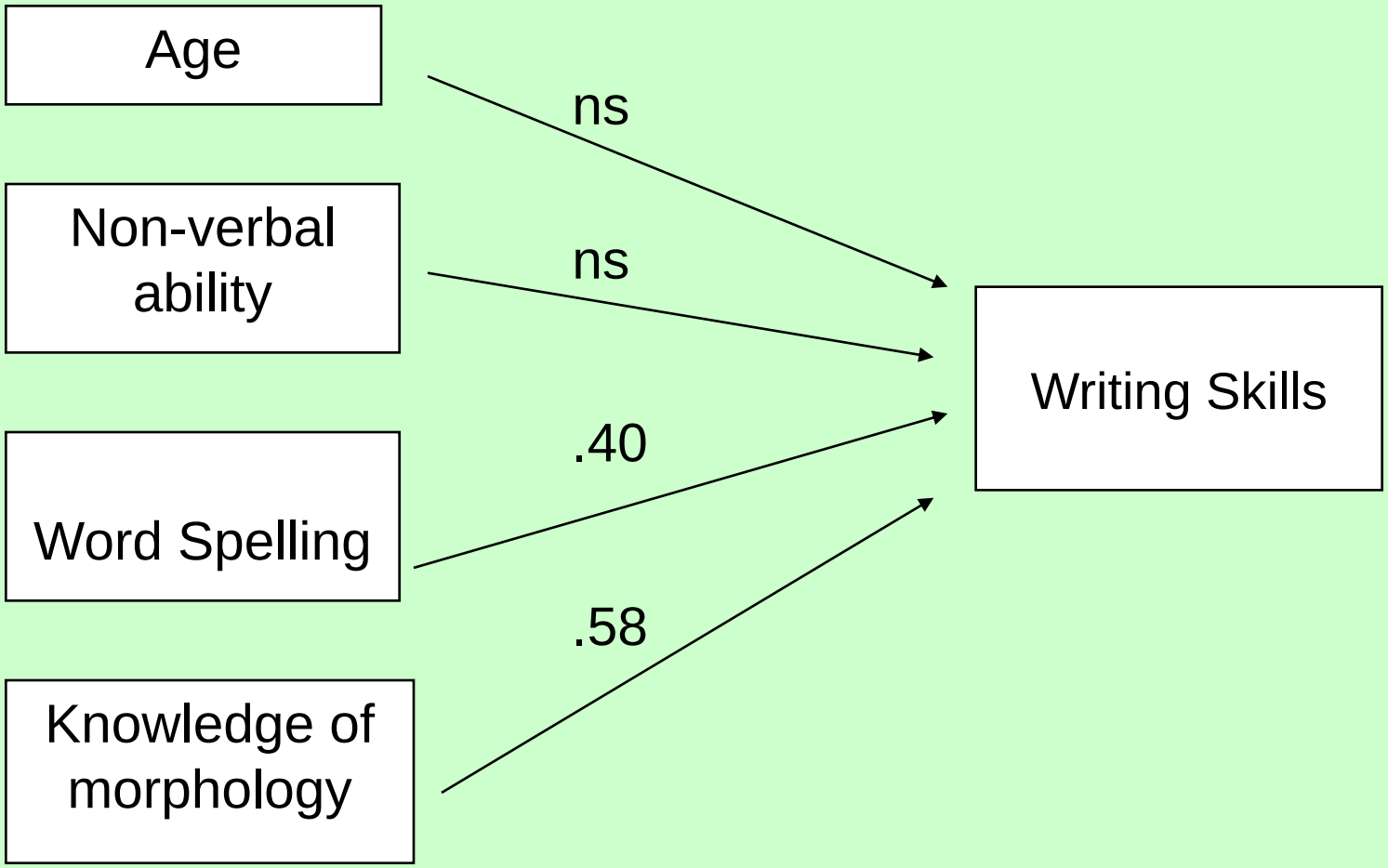
Difference significant at .001 level

Cohen's *d* = 0.85 SD

Predicting reading comprehension



Predicting writing skills



The NDCS intervention programme

- Pre-test
- Programme delivered by teachers
- Post-test

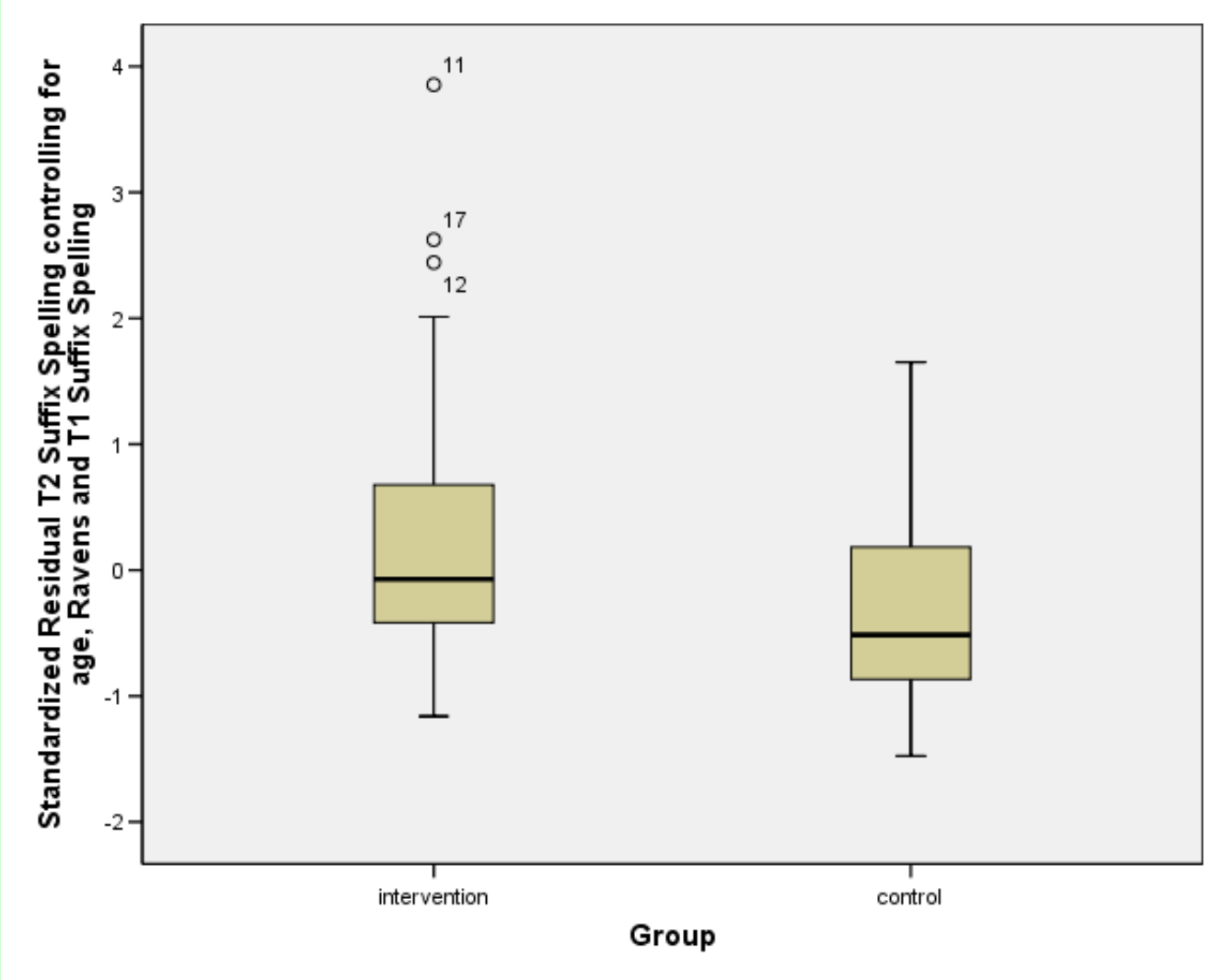
Participants

- 45 children in the intervention group and 42 in the control group completed all the pre- and post-test assessments
- Age range 7 to 12
- At the start of the programme they could write some identifiable words

Results

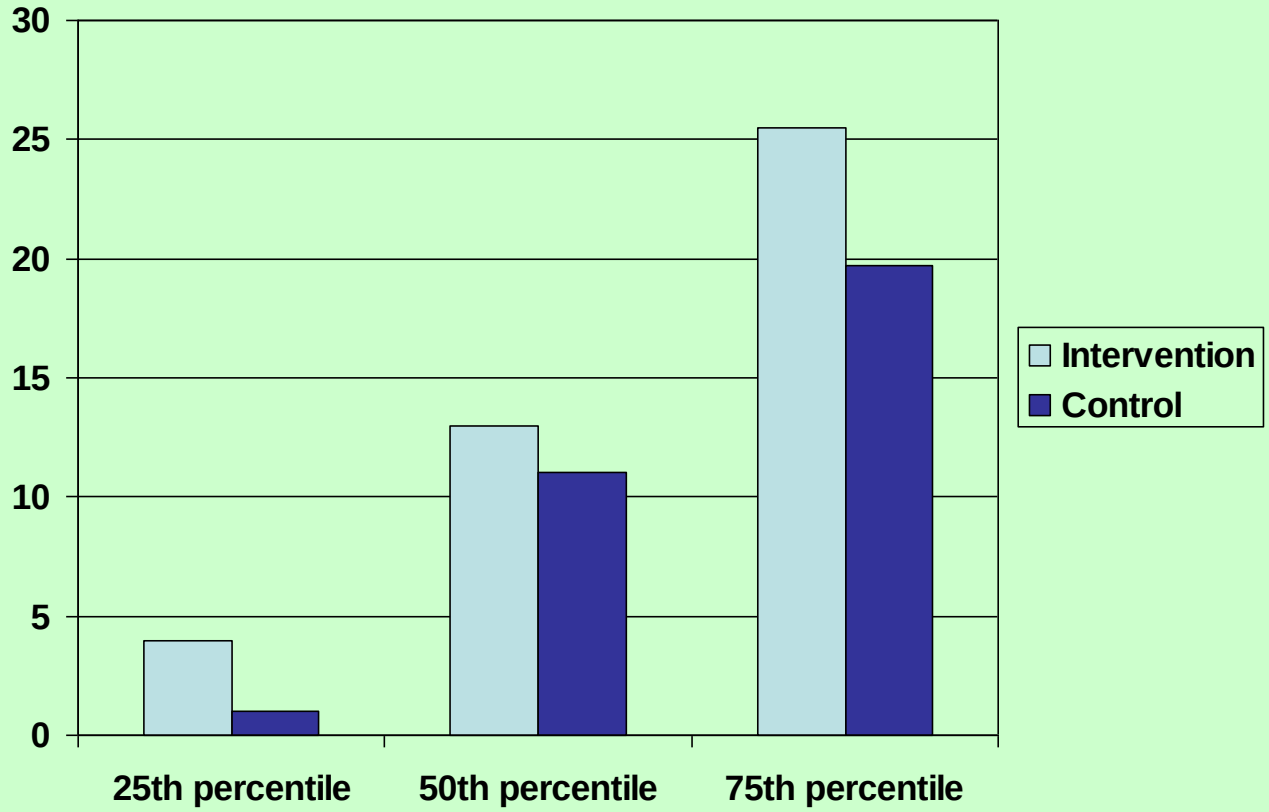
- Graphs show differences in outcome measure controlling for differences in age, non-verbal ability and the children's performance at pre-test

Outcome: Knowledge of suffixes

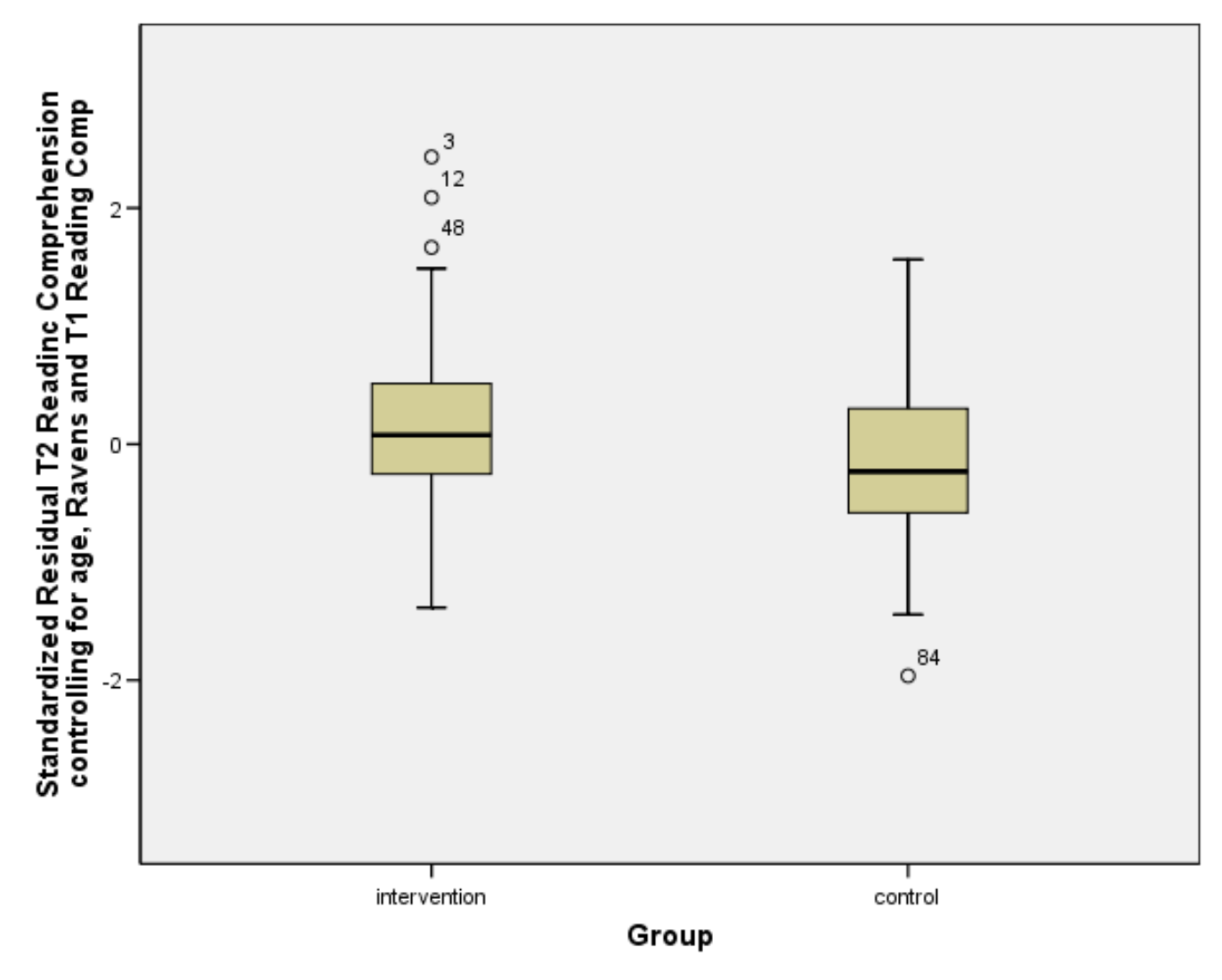


Difference between groups significant at the .01 level. Cohen's d = 0.3 SD

Post-test Suffix Spelling – Number correct by percentile

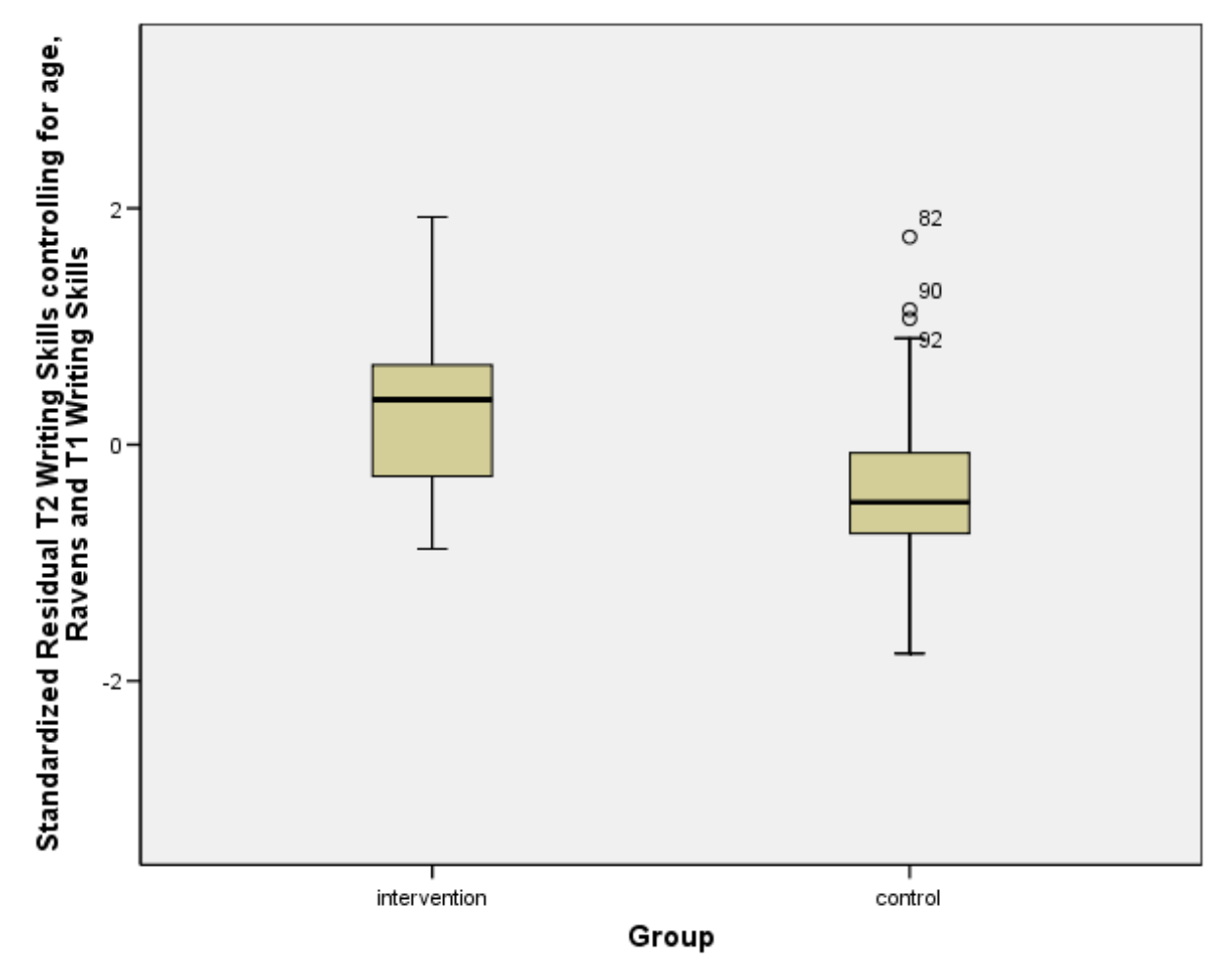


Outcome: Reading comprehension



Difference between groups significant at the .02 level. Cohen's d = 0.3 SD

Outcome: Writing skill



Difference between groups significant at the .01 level. Cohen's d = 0.5 SD

- The teachers have been successful in implementing the intervention.
- We are partners in this research and very grateful for their excellent contributions
- The materials are now available for downloading
- Without the teachers, the parents, the children and the support of the NDCS, this work would not have been possible