



Long term effects of social cognitive behaviour therapy for stuttering.

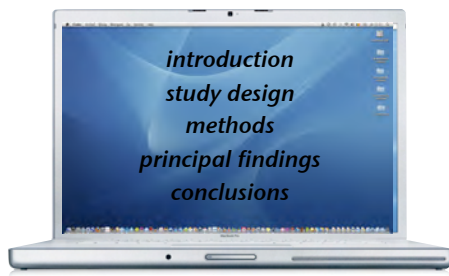
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introduction study design methods principal findings conclusions



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The long term effect study is a longitudinal study with two gulf of data analysed: pre and post condition.

The data of the pre condition have been obtained between 1991 and 2003 and the data of the post condition between 2005 and 2006.

The study is part of the doctoral research of Boey (2008) at the University of Antwerp Faculty of Medicine, Belgium.



Boey, R. (2008) *Stuttering. An epidemiological and phenomenological study. Effects of a social-cognitive behaviour therapy.* Antwerp: University of Antwerp.

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Objectives

- to study the effects of a social cognitive behaviour therapy for stuttering on the long term
- to determine the effect of stratified variables: age category, gender, stuttering severity and temperament.

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Design

- Between and within comparison of outcome for three groups:
 - a therapy group
 - an only-diagnosis group
 - a drop-out group
- The effect study is approved by the Committee of Ethics of the University Hospital Antwerp

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- At random selection of participants meeting the criteria for selection out of a database of clients
- On long term: time since between the pre and post evaluation
 - mean = 10;0 years ($SD = 3;3$)
 - median = 10;8 years
 - range = 2;2 - 14;8 years

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REPONS RATE (%)			
REFERENCE	THER	DIAGN	DROP-OUT
telephone contact/ re-examined	93.5	83.3	70.4
scheduled/ re-examined	97.8	93.8	95.0

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Participants

- *Number.* A group of 122 persons who stutter (PWS) participated, all native Dutch-speaking individuals leaving in Flanders, northern part of Belgium (Europe).
- *Groups.*
 - The therapy group (87 PWS of 619 or 14.1%) has received a social-cognitive behaviour therapy for stuttering.
 - The drop-out group has been recommend to engage in therapy but did not do so (19 PWS of 139 or 13.7%).
 - The only-diagnosis group has been advised *not* to take therapy (16 PWS of 98 or 16.3%)

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- **Stratification**
 - *Age categories:* 1-6 years, 7-12 years, 13-18 years, > 18 years.
 - *Gender:* target ratio 50% males and 50% females
 - *Temperament:* 50% high temperamental and 50% not high temperamental for 2 youngest age groups
 - *Stuttering severity:* 50% mild-moderate (\leq median score) and 50% moderate-very severe ($>$ median score)

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- **Duration of therapy**
 - Ref. sessions of 30 minutes:
 - For the age category 1-6 years:
 $M = 63 (SD = 31)$
 - For the age category group 7-12 & 13-18 years: $M = 80 (SD = 34)$
 - For the age category group > 18 years (adults): $M = 94 (SD = 39)$.

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Procedure

Evaluation at intake in a standard clinical setting.

Standardized, reliable and validated procedures, instruments and tests have been used. Parent/clinician rater reliability have been calculated for reported and observed stuttering characteristics.

Reported and observed variables have been obtained concerning stuttering and related variables.

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stuttering-like disfluencies (SLD)
type, frequency, duration, tension

onset
age, manner, factors

stutter associated behaviour (SAB)
avoidance
physical
contingents

precipitating factors

consciousness

speech attitude

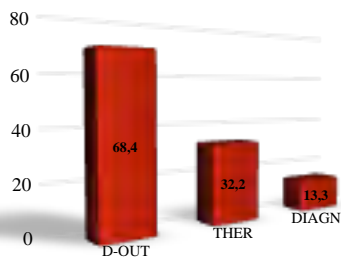
listener reactions

Personality characteristics

Quality of Life

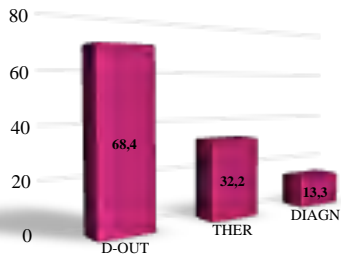
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● **Diagnosis of stuttering.**

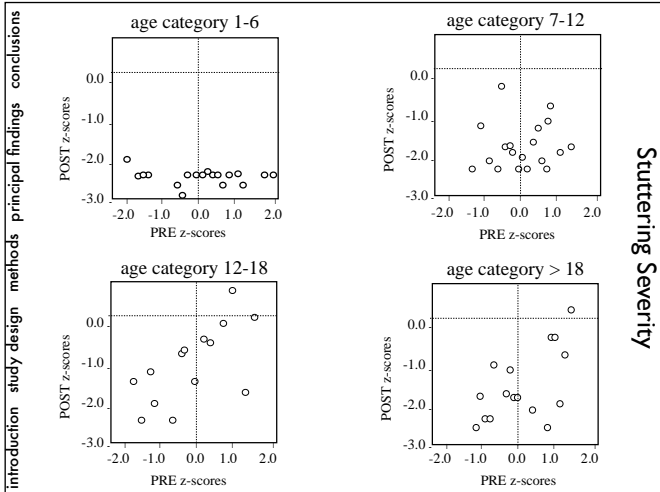


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● **Self-report of stuttering.**



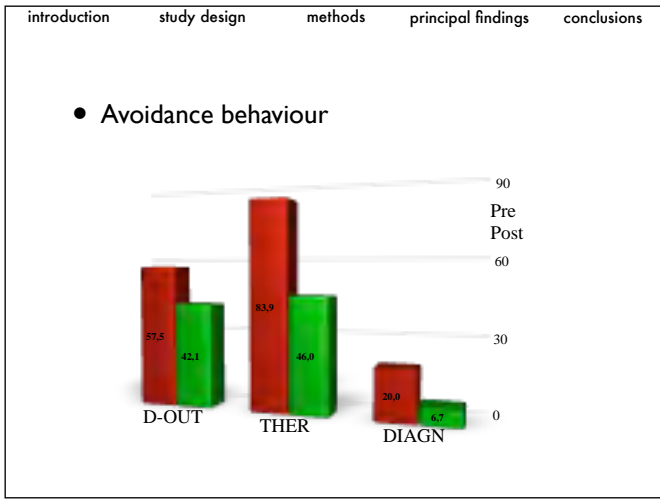
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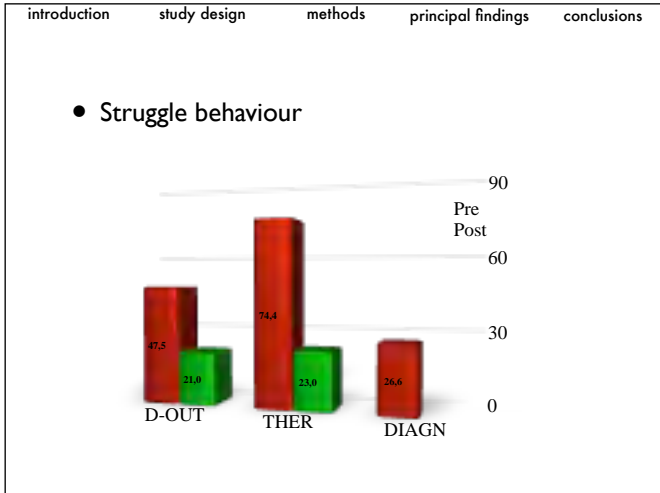
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- **Stuttering characteristics.**
- For the therapy-group all of the following stuttering characteristics have been *reduced* in frequency or intensity:
 - (a) stuttering-like disfluencies
 - (b) stuttering-associated behaviour (physical concomitants, avoidance behaviour)
 - (c) precipitating factors
 - (d) speech-related cognition (negative thoughts)
 - (e) emotion related to speech
 - (f) listener reactions
 - (g) speech attitude (measures normalised).

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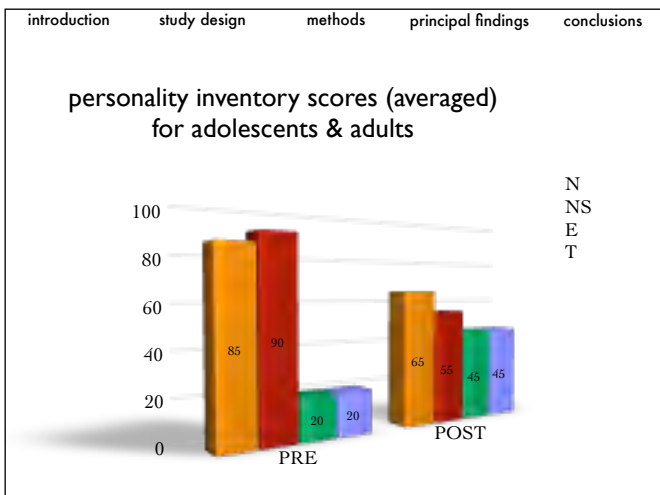
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- introduction study design methods principal findings conclusions
- **Personality characteristics**
- Largest improvement of personality characteristics for *the therapy group*:
 - reduced neurotic scores
 - increased extraversion
 - increased self-confidence scores; higher motivation to perform, reduced anxiety of failure

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- *Drop-out group*
 - increased neuroticism post condition for all persons except for one who stayed stable
 - extraversion scores remained stable pre versus post condition
 - social desirability scores are *extremely high* (> decile 8) post condition compared to pre condition except for 2 persons scoring extremely low (decile 1)

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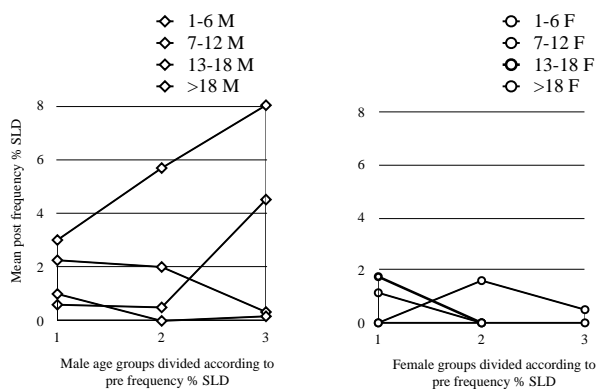
- *Only-diagnosis group:*
 - low to average neuroticism score post condition (between decile 1 and 6)
 - very high extraversion scores post condition (> decile 8)
 - wide spread of social desirability scores post condition

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Stratified variables

- Effect of initial age group in favour of younger children (1-6 y. and 7-12 y.)
- Effect of gender in favour of females
- Interaction effect between age and gender (males 13-18 years obtained the worst results)
- No longer effect of temperament post therapy

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• Conclusions

- the findings suggest on the long term *reduced stuttering characteristics* and an *improved quality of life* for persons who stutter and received a social cognitive behaviour therapy
- the amount of effects in favour of the youngest ages groups and girls
- compared to the drop-out group (74% persistence of stuttering with the worst results)
- and the only-diagnosis group (73% recovery)