

**Generating Fluent Speech:  
A Comprehensive Speech  
Processing Approach**  
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# General Overview

- Generating Fluent Speech (GFS) is a holistic approach to stuttering intervention focusing on the three “speech processes” including linguistic, neuromotor, and cognitive.
- GFS is based on the fluency shaping model (Webster, 1974).
- However, Dahm identifies GFS as “speech processing therapy,” emphasizing
  - “Internal processes”
  - Automatic and comfortable speech
  - Cause and effect between speech processes and production of fluent speech
  - Fundamental speech activities

# GFS Therapeutic Process

Client chooses therapy structure based on personal preference:

- Stage One
  - Client understands the speech processes and the importance of using these processes to generate fluent speech
  - Client works toward a five minute “correct” speech sample
- Stage Two
  - Client works independently via speech workbook and minimal clinical guidance
- Intensive Method
  - 6-7 hours/day for 5 days/week over a 3+ week period
  - 100 total clock hours
  - Stage one in group setting and stage two is individual self-help therapy
- Less-Intensive Framework
  - Number of sessions vary based on client’s needs
  - Dahm encourages regularly scheduled sessions that are as long and frequent as possible.
  - Stage two includes 30 minute maintenance sessions in conjunction with independent work between sessions.

# Measuring Success

- Within Therapy Success
  - Achieving activity-specific goals such as allowing articulators to move without conscious control
  - Achieving personal goals determined before intervention
- Overall Therapy Success
  - Measured via percent stuttered words, rate of speaking measured in syllables per minute (SPM), length of speech utterance, self-rating questionnaire, S-24 scale (Andrews & Cutter, 1974), and completion of the *Perception of Stuttering Inventory (PSI)* (Woolf, 1967) evaluated pre-, post-, and six months post-intervention.

# GFS Generalization Principles

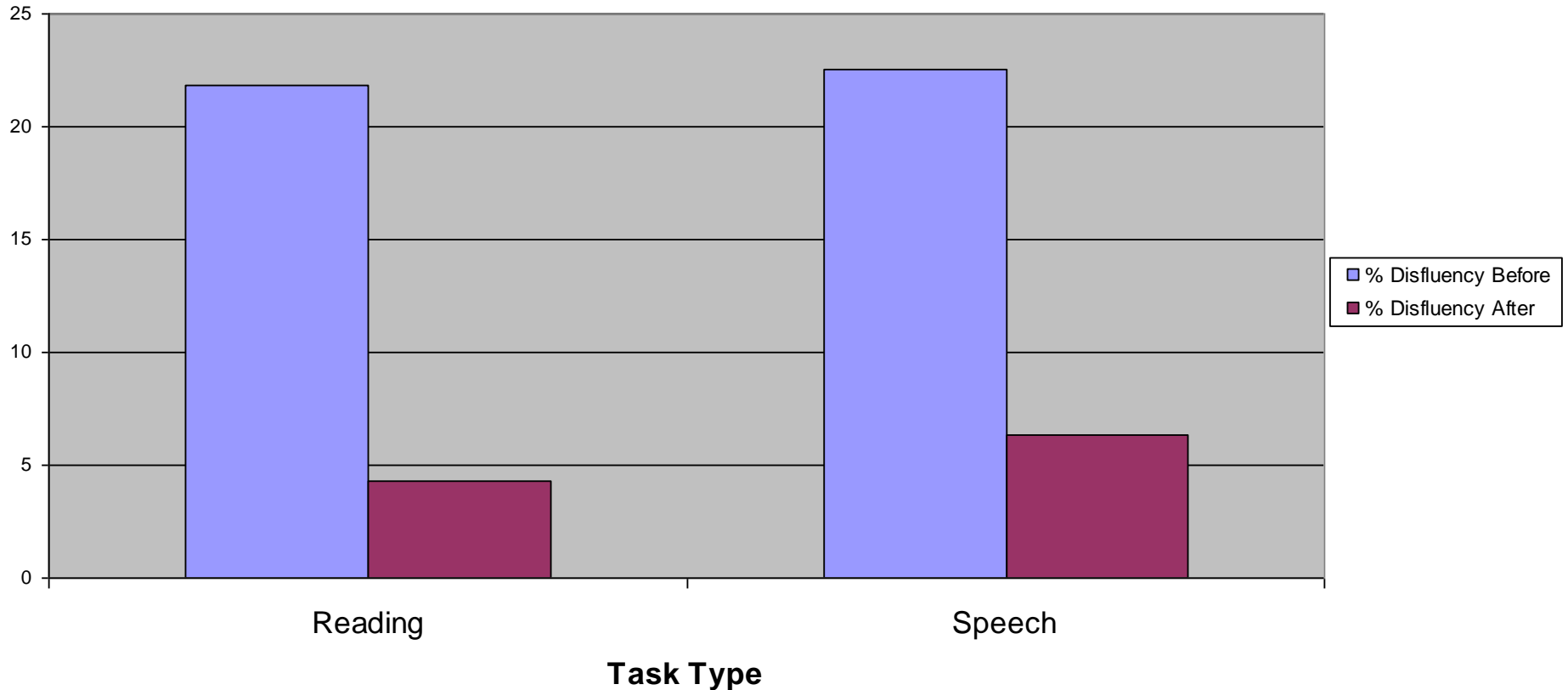
- Generalization is the focus of Stage Two Intervention, as the client:
  - Works independently in the home environment toward personally relevant goals including conversation and reading tasks (30-60 mins/day).
  - Takes responsibility for using “fluent speech” in a variety of daily situations including telephone conversations, attending group therapy sessions, sending audio/video samples to the clinician
  - Maintains written self-evaluation reports submitted to the clinician weekly and then monthly.

# Statistical Rationale for GFS

- Preliminary Study Findings
  - 40 clients enrolled in intensive GFS from June 1994-August 1994
    - Age 11-42
    - 7 females, 33 males
  - Speech samples (reading, spontaneous) analyzed via:
    - Percent of disfluency
    - Rate of speaking (SPM)
    - Length of speech utterance (SPU)
  - Clients completed
    - Perception of Stuttered Inventory (PSI)
    - S-24 Scale
    - Questionnaire regarding their ability to speak

# Preliminary Study Results

**Mean Percent of Disfluency of All Clients in Reading and Spontaneous Speech**



Source: Dahm (1997)

# Preliminary Study Results

- All participants showed marked improvement in speech measures and attitude scales.
- Percent of stuttered words decreased in both reading and speech tasks for all clients.
- Potential Caveats
  - Small sample size (40)
  - Data only represents intensive approach
  - Speech samples analyzed directly after intervention but no speech samples were analyzed at the six month post-intervention mark.
  - Lack of follow-up
  - Participant bias in completing survey
  - Possible skewed analysis, as author completed study and analysis procedures



# Strengths and Weaknesses

- Strengths

- Actively involves participants
- Systematic approach reduces therapy prep time
- Analyzes “internal processes” and holds client responsible
- Provides ample opportunity for client reflection
- Client works toward program goals AND personally relevant goals
- Allows client to choose intensity level

- Weaknesses

- Systematic approach doesn't address individual needs or clinician creativity
- Does not explore the psychosocial factors
- Time intensive
- Statistical evidence lacks validity and reliability
- Program doesn't account for external demands
- Not appropriate for children under age 9
- Program explanation written in complex language
- Guarantees “fluent speech”

# Case Study with GSF



## BACKGROUND INFO

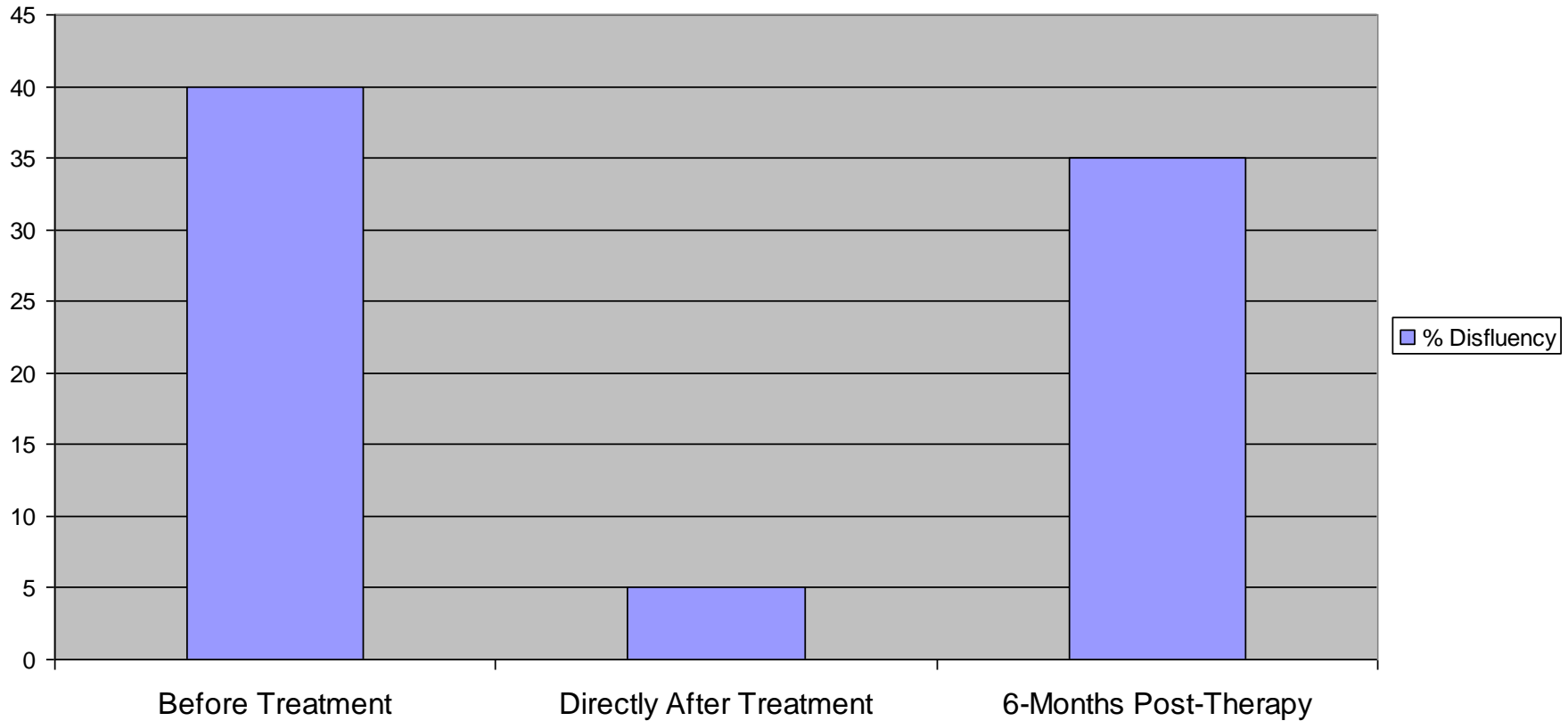
- Mr. Jones
- Middle school science teacher
- Reports stuttering for his entire life
- Has been in a variety of therapies for 12 years but none have been successful.
- Enrolled in intensive 3+ week GSF program during his summer break

## RESULTS

- Directly after the three week program, Mr. Jones reported increased fluency and more self-confidence.
- However, at the six month post-treatment conference, Mr. Jones expressed his frustration with maintaining fluent speech strategies during his hectic school year schedule.

# Mr. Jones' GSF Results

Mean Percent of Disfluency in Reading and Spontaneous Speech



# References

Andrews, G., and Cutter, J. (1974). Stuttering therapy: The relation between changes in symptom level and attitudes. *Journal of Speech and Hearing Research*, 39, 312-319.

Dahm, B. (1997). *Generating fluent speech: A comprehensive speech processing approach*. Eau Claire, WI: Thinking Publications.

Webster, R.L. (1974). *Precision fluency shaping program: Speech reconstruction for stutters*. Roanoke, VA: Communications Development.