

## **CHAPTER B: METHOD**

### **1. Participants**

The participants included 26 school-aged children who stutter (6-13;  $M=9.96$  years,  $SD=2.04$ ) and their parents. Twenty-two of the children were boys and four were girls (male-to-female ratio=4.5:1). The children's stuttering was determined by two speech therapists, by the parents and by the children themselves.

All 26 families were recruited from public and private clinics offering therapy for stuttering. All were undergoing stuttering therapy or had undergone at least one round of therapy sessions for their children.

Of the 50 families referred to us, 26 agreed to participate in our project. Some did not agree to take part due to difficulties in speaking with the child about his or her stuttering or reluctance to admit the problem even though they had requested the therapy and were on waiting lists. Others refused to take part in the project because they were angry at the administration of their clinic, usually due to having to wait too long for therapy.

Every family was ensured that the information provided in the interviews and meetings would be used for research purposes only, coded and remain confidential.

Fluency problems were present in 15 of the 26 families. In 12 of these families, the fluency problems were in the immediate family (parents and/or siblings).

Most of the families were of middle-high socioeconomic status, and four were of lower-middle SES. These four families were also the most

religious among the families, while the others were secular or traditional. SES was determined by parents' age, number of rooms in family residence and number of people living at the residence.

Most children in the sample were first-born (46.2%) or second-born (30.8%) children in families of two (50%) or three children (23.1%).

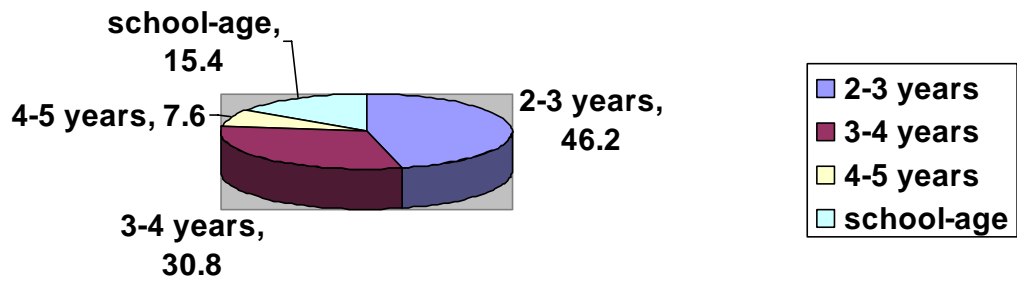
The stuttering severity ratings of the children in the sample were rated subjectively according to parental reports, on a three-point scale (1-mild; 2-moderate; 3-severe). These stuttering severity ratings are summarized in Table 1.

**Table 1: Stuttering severity rated by parents of children in the sample.**

Stuttering severity rated by parents	% of parent rating stuttering	
	Mother	Father
Severe	3.8	3.8
Moderate	30.8	38.5
Mild	50	50
Unable to rate	15.4	7.7
Total	100	100

The differences between mothers and fathers were minor. As shown in the table, half the children were rated as "mild" stutterers by both mothers and fathers. The second most frequent rating was "moderate" stuttering, assigned to about a third of the children. Only one mother and one father rated their child as a severe stutterer (3.8%).

The age of stuttering onset among the children in the sample was computed, as shown in Figure 1.



**Figure 1: Age of stuttering onset among children in sample**

46.2% of the children began stuttering between 2-3 years of age, 30.8% began stuttering between 3-4 years of age, 7.6% began stuttering between the ages of 4 and 5, and 15.4% began stuttering when they reached school age. The cumulative percentage for onset between the ages of 2 and 4 years is **77%**, representing the vast majority of children in this research. These data resemble those of Yairi and Ambrose (2005).

One of the measures used in this study was the FACES questionnaire, translated and normalized by Navon and Tichman (1990). For more details about the questionnaire, see the Attitude Measures section of this study. Our sample results were compared with results for normal population samples. Table 2 shows the FACES results for families in the sample compared to the FACES results for normal families (Navon and Tichman 1990).

**Table 2: FACES results for the sample population compared to Israeli norms**

	Sample	Sample S.D	Mean Israeli	Mean Israeli
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	mean		norm	S.D
Couple cohesion	44.35	4.49	42.61	5.52
Couple changeability	32.6	4.48	33.57	5.62
Family cohesion	41.5	6.06	37.47	6.35
Family changeability	29	5.3	28.62	5.54

A statistical analysis comparing the means and standard deviations of both groups showed no significant difference between them. This indicates that the families who participated in this study do not differ from families in the normal population with respect to cohesion and adaptation (changeability) scores for couple or family relationships.

## 2. Research Measures

### 2.1 Attitude measures

Two questionnaires were used to measure the attitudes of the parents and their children: parent interview questionnaire and child interview questionnaire. The questions for both interviews were based on questions used in interviews in a similar study in Germany. They were adapted based on years of accumulated clinical experience with families coping with stuttering.

The parent questionnaire was based on a questionnaire used in a previous study in Germany by Katz-Bernstein and Subellok (Subellok 2005) that

investigated families with children who stutter and how they cope with their child's disability. This questionnaire was translated to Hebrew by Prof. Katz-Bernstein and used in our research.

The parents' questionnaire was semi-structured, i.e. the questions were open but aimed at specific themes. There were 13 themes, each with an associated list of questions. For example, on the theme "stuttering as a symptom" parents were asked:

- a) Have you noticed any change in your child's fluency over time?
- b) How do you estimate the severity of your child's stuttering?

Mild   Moderate   Severe

- c) How do you estimate the frequency of your child's stuttering?

Occasional   Often   Very often

- d) Under what circumstances does your child stutter most?

(The full questionnaire is attached as Appendix \_\_\_\_.)

The parents' answers were fully recorded and analyzed, even in cases where they added information and did not use or only partially used the answer options offered (when available).

The child interview questionnaire was written by Prof. Katz-Bernstein and Dr. Subellok for the German version of this research and was also translated into Hebrew by Prof. Katz-Bernstein.

The child questionnaire was also aimed at specific themes, but included open questions as well even when answer options were given. For example, the theme "reasons for the interview" included the following question:

\*Did your parents talk with you about stuttering?

Yes   No   Not sure   No answer   Other \_\_\_\_\_

\*If yes, what did they tell you?

(The complete child questionnaire is attached as Appendix \_\_\_\_.)

The questionnaires were given to two speech therapists, who were asked to read and evaluate question relevance, clarity and thoroughness in covering the subject of coping. The answers given in the interviews were categorized by two professional judges who analyzed the answers and discussed the analysis together.

## 2.2 Family adaptation and cohesion measures

Family adaptation and cohesion were measured by the Family Adaptability and Cohesion Evaluation Scales (FACES III), first proposed by Olson, Russel and Frankel (1980; 1983) and translated and adapted to Hebrew by Tichman and Navon (1990). In fact, there were two questionnaires, one measuring adaptation and cohesion in the family and the other measuring the same criteria for the couple's relationship.

Parents had to answer each question on the written questionnaire on a scale of 1-5 according to how they evaluated their family and their couple relationship. Each parent answered the family and couple questionnaires individually.

The FACES questionnaires were used to understand each parent's point of view about the family and the couple relationship and how these factors are related to how the family copes. (The English versions of the questionnaires are attached as Appendix \_\_\_\_.)

## 2.3 Child's History Measure

Every family completed a questionnaire about the child, including information about the family (parents, siblings), the child's development, history of the child's stuttering, the child's health history, academic and social functioning at school and other details. This questionnaire was sent by mail to the parents, who completed it by hand usually before the meeting with the researcher.

(The child history questionnaire is attached as Appendix \_\_\_\_.)

## 3. Data Analysis



The primary analysis was a qualitative content analysis. Its purpose was to find common categories in the raw data that could help explain and understand the participants' answers.

Each question was analyzed separately. Two experienced speech therapists each made a separate categorization and then together decided on a final list of categories. After that, a quantitative analysis computed the frequency of appearance for every category in all the answers given in the sample. This analysis was performed by two professional judges who were asked to read the interviews and decide whether or not each category exists in the interview answers.

Inter-judge reliability was measured by percentage of agreement between them. Agreement was 85% or higher for all questions.

After the answer categories were defined and counted, several types of statistical analyses were applied to find relations between categories. These analyses included frequencies distribution of the categories and tests for relationships between variables using Chi square tests and Wilcoxon for non parametric variables, and t-tests and analyses of variance for parametric variables.

#### 4. Procedure

The researcher set up appointments by telephone at the convenience of the family. All families were interviewed in their homes. Parents were interviewed for at least two hours, while the interview with the child who stuttered lasted about 45-60 minutes.

In most cases, both parents were interviewed together. In two cases, the mother and father were interviewed separately due to time and place constraints. In a third family the father left in the middle of the interview because of "prior obligations" even though both parents had been informed about the length of interview and the necessity that both parents be present.

The order of the interviews depended on time and parental constraints. If the interview was scheduled for the evening, the children were interviewed first because of bedtime. Often parents wanted to be interviewed first in order to become better acquainted with the person who was going to interview their child and to gain some trust.

In most cases, the children were interviewed individually, though some parents would not leave their child alone with a stranger or were curious and listened to the child's interview from a distance. One child asked for his parents to sit close to him during the interview.

Both interviews were tape-recorded, and notes were taken as well.

The child's history questionnaire was sent by mail and usually completed by the parents before meeting with the researcher. The FACES questionnaires were similarly filled out in advance. At the end of the interviews, parents had an opportunity to ask about anything they did not understand on the questionnaires, to finish filling them out and to submit them to the researcher.