

Therapy in children suffering from mixed specific developmental disorders

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Introduction

According to ICD-10, a mixed specific developmental disorder can be assumed to exist, if a specific developmental disorder is diagnosed in two or more areas (language, motor function). However, it can be ruled out, if any of these dysfunctions predominate or if a primary diagnosis has been made (WHO, 2002).

In this case the child's abilities in the defined areas are below the developmental and age expectations with a standard deviation of 1.5 -2.0 (Straßburg, 2000). Concerning the language acquisition and development the children show a Late-Talker-profile at the age of 2, with a vocabulary of less than 50 words and no word combinations (Rescorla, 1989). In addition to biological factors of influence, socioeconomic and family factors are considered the cause of the developmental deficits (Guralnick, 1997).

In language acquisition research, there has been no empirical proof of the efficacy of an early lexical intervention in children with mixed specific developmental disorders from the age of 2 which examine the quality of care of the children. The quality of care factor is classified as the home life situation of the child, which is affected by societal parameters (for instance employment, educational or welfare policy) but also by material, immaterial and educational resources of the parents/ carers as well as by influences of the private environment (Hock, 2000).

This project consists of an evaluation of lexical therapy for children with mixed specific developmental disorders and the influence of the quality of care (children living in family vs. living in a children's home) as a part of the LST-LTS-project (Lexical and Syntactic Therapy in children with multiple disabilities and late-talker-profile, Siegmüller 2008).

Questions:

- Is the input-oriented method efficient within an early lexical intervention in children with mixed specific developmental disorders?
- Is there an improvement at the receptive and the productive level (achievement of the 50-word-range and triggering the vocabulary-spurt) of the children?
- Does the quality of care factor have any influence on the therapy in children with mixed specific developmental disorders, so that heterogeneous effects will result?

Methods

Method: Input-oriented method (modelling)

The input is presented concisely, flexibly and with a high frequency. There are two different modalities of presentation:

1. Modelling in sequences

The target structure is presented by the therapist in a pre-structured sequence.

2. Interactive modelling

The target structure is presented in a joint activity of child and therapist.

During the input presentation, the child listens. At no point in time the child is asked for production.

The input-oriented intervention is only at the receptive level.

Material: designated word-list

- orientated on the composition of the early vocabulary of toddlers (Kauschke, 2000)
- with systematic quantitative and qualitative increase of the target words
- individual variation concerning duration of the sequence, duration and frequency of the rest periods, complexity of activity.

Procedure:

Fixed session structure:

- opening play
- first input sequence
- rest period
- second input sequence
- rest period
- free play situation with the possibility of production
- checking the receptive acquisition of the new target words
- closing play

Duration and frequency of the intervention:

Maximal 20 sessions (45 minutes each), twice a week

Pre-Test-Results:

Child (Gender)	Age	Number of words SBE-2-KT ¹	Number of all produced words	PDSS ² Word comprehension Nouns/verbs	Bayley PDI ³
K1 (m)	2;4	3	11	not practicable	57
K2 (m)	2;1	15	17	not practicable	63
K3 (m)	2;3	10	21	not practicable	53
K4 (f)	2;1	5	10	not practicable	69
K5 (f)	2;10	17	44	11/6	52
K6 (m)	2;0	11	15	6/8	50

Fig.1

¹ Sprachbeurteilung durch Eltern. Kurzttest für die U7. Suchdoletz von & Sachse, 2008
² Patholinguistische Diagnostik bei Sprachentwicklungsstörungen, Kauschke & Siegmüller, 2000
³ Bayley (2000); Psychomotor Development Index (PDI) < 69 stark unterdurchschnittliche Leistung

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Results

Therapy process of 6 children (N=10) – Results until May 2009

Receptive and productive acquisition of the target words

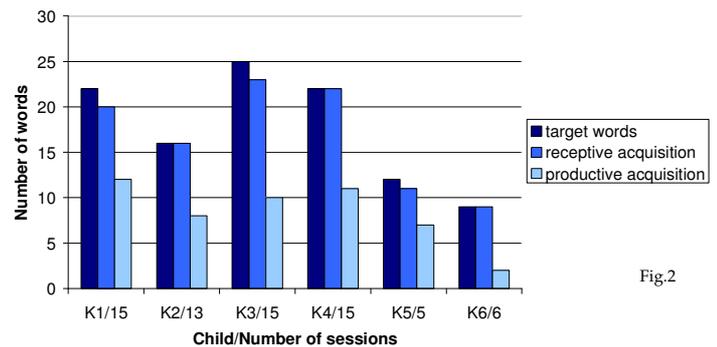


Fig.2

Acquisition of the productive vocabulary of children living in family (FAM) or a children's home (CH)

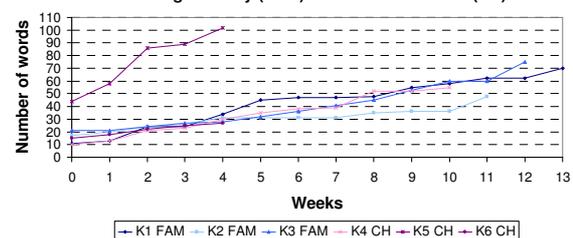


Fig.3

Discussion

Discussion:

All of the six toddlers with mixed specific developmental disorder (Fig.1) seem to be benefiting from the input-oriented method:

- on average 96% of the receptive target words and 46% productive ones were acquired
- 4 of the 6 children exceeded over the 50-word-range within the completed sessions so far, but only 2 of them (K3, K5) have shown a vocabulary-spurt by now
- the quality of care factor has not influenced the productive word acquisition so far

Further steps:

In the following progress of the study, the sample will be extended to permit the comparison of groups. The effect of quality of care factor and socio-economic factors will be analyzed.

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