Ulrike Franke and Herbert Wettig

Evaluation of the Effectiveness of Theraplay

Symptom Changes in Children with Communication and Behavioral Disorders and in Parental Attitudes after Theraplay

Association for Play Therapy (APT)
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Theoretical Background (1)

The Connection between Communication and Socio Behavioral Disorders

• “Undoubtedly, there is a close connection between language and social impairment.”
  (Hartmann, 2002, in VHN Vierteljahreszeitschrift für Heilpädagogik und Nachbargebiete 71, 2, p.147)

• “It is apparent that children run different risks for social problems depending on the form and extent of their language development disorder. According to current research, children with limited receptive language capabilities and pragmatic deficits appear to be most severely at risk.”
  (Rice, 1993; Windsor, 1995; Fujiki et al., 2001; cited in Hartmann, 2002, VHN 71, p. 146)

• “In the sense of a reciprocal developmental model, Rice (1993) assumes that language in human development is a tool of socialization, (…)
  (Hartmann, 2002, in VHN 71, 2, p. 136)
Theoretical Background (2)

Problems in Social Interaction and their Consequences for the Emotional and Social Development of a Child

• “If, however, social contacts, interactions and relationships with peers are problematic or lacking, then, in the long-term, complex developmental and adaptation problems can be expected in the child’s social, emotional, and educational domains.”

• Scientifically, it is established that children with verbal or communicational disorders, who simultaneously exhibit noticeable socio-emotional behavior, show poor school performance.
## Verification of the Theory

### Results of the Multi-Center Study (1)

**Multi-Morbidity of Communication Disorders**

Total sample of $N=205$ children having speech- or communication disorders

<table>
<thead>
<tr>
<th>Subgroups with one or more communication disorders</th>
<th>Percentage per subsample with multiple disorders</th>
</tr>
</thead>
<tbody>
<tr>
<td>expressive language disordered children $N=119$</td>
<td>with more than one disorder $96$ with only one disorder $4$</td>
</tr>
<tr>
<td>articulation disordered children $N=114$</td>
<td>$87$</td>
</tr>
<tr>
<td>receptive language disordered children $N=94$</td>
<td>$96$</td>
</tr>
<tr>
<td>language delayed children $N=86$</td>
<td>$100$</td>
</tr>
<tr>
<td>mutistic children $N=21$</td>
<td>$38.0$</td>
</tr>
<tr>
<td>stuttering children $N=6$</td>
<td>$33.0$</td>
</tr>
</tbody>
</table>

Subgroups with one or more communication disorders include:
- Stuttering children: $N=6$
- Mutistic children: $N=21$
- Language delayed children: $N=86$
- Expressive language disordered children: $N=119$
- Receptive language disordered children: $N=94$
- Articulation disordered children: $N=114$

*Percentage per subsample with multiple disorders (method: CASCAP-D, Döpfner et al., 1999)*

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Verification of the Theory

Results of the Multi-Center Study (2)

Multi-Morbidity of Socio-Emotional Disorders

<table>
<thead>
<tr>
<th>Subgroup</th>
<th>N</th>
<th>With only one disorder</th>
<th>With more than one disorder</th>
</tr>
</thead>
<tbody>
<tr>
<td>affective disordered children</td>
<td>85</td>
<td></td>
<td></td>
</tr>
<tr>
<td>shy withdrawn children</td>
<td>62</td>
<td></td>
<td></td>
</tr>
<tr>
<td>children with ADD</td>
<td>53</td>
<td></td>
<td></td>
</tr>
<tr>
<td>children with ADHD</td>
<td>51</td>
<td></td>
<td></td>
</tr>
<tr>
<td>aggressive oppositional children</td>
<td>48</td>
<td></td>
<td></td>
</tr>
<tr>
<td>shy oppositional children</td>
<td>44</td>
<td></td>
<td></td>
</tr>
<tr>
<td>anxious disordered children</td>
<td>36</td>
<td></td>
<td></td>
</tr>
<tr>
<td>autistic children</td>
<td>31</td>
<td></td>
<td></td>
</tr>
<tr>
<td>mentally retarded children</td>
<td>31</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total sample of \( N = 205 \) children having speech- or communication disorders

Subgroups with one or more socio-emotional disorder

- mentally retarded children: \( N = 31 \)
- autistic children: \( N = 31 \)
- children with ADHD: \( N = 51 \)
- children with ADD: \( N = 53 \)
- aggressive oppositional children: \( N = 48 \)
- shy oppositional children: \( N = 44 \)
- anxious disordered children: \( N = 36 \)
- affective disordered children: \( N = 85 \)

Percentage per subsample with multiple disorders

(method: CASCAP-D, Döpfner et al., 1999)

- with more than one disorder
- with only one disorder
2. Theraplay as Intervention
is in Germany used as a Treatment
when communication and
socio-emotional or behavioral disorders coincide

• **The Problem**
Communication and language disorders functionally should be treated with speech-language therapy. However, an efficient language treatment of children suffering multi-morbid behavioral disorders is often impossible since they are not accessible for social interaction.

• **Solution to the problem**
Children who suffer communication problems *and* socio-emotional disorders are first treated with Theraplay, to improve their ability in social interaction. When they are approachable *after* Theraplay, their communication or language disorders can be treated.
Goals for a Successful Therapy

For the disordered child ...
- to strive for positive developmental goals,
- to reduce objectively orientated symptoms,
- to minimize dysfunctional, pathological conditions underlying the symptoms of the disorders or the pathological social patterns.

For socio-emotional disordered children and their parents ...
- to restore the quality of life,
- to reduce subjective negative feelings.
3. 
Questions to the Effectiveness of Theraplay in Germany (part 1)

Questions to the Effectiveness of Theraplay in Treating both Communicational and Socio-Emotional Disordered Children

• Which socio-emotional or behavioral disorders are treated with Theraplay in German therapeutic institutions?
• Does Theraplay reduce targeted symptoms of socio-emotional or behavioral disorders?
• Which symptoms are reduced by Theraplay?
• Are the reduced symptoms specific to the disorders?
• Is the reduction of the targeted symptoms clinically meaningful and statistically significant?
3. Questions to the Effectiveness of Theraplay in Germany (part 2)

Questions to the Outcome Resulting from the Effects of Theraplay Regarding Child and Parents

• Does the reduction of socio-emotional symptoms have an effect on the communication disorder?
• Does the child’s positive change of behavior have an effect on the attitudes of their parents?
• Do the attitudes of parents change immediately – or in the long-term?
4. Two Research Approaches to Evaluate the Effectiveness of Theraplay

• 4.1 Multi-Center Study (indicated 📊)
  Basic documentation of the children treated with Theraplay in different German therapeutic institutions. (quality control)

• 4.2 Prospective Controlled Longitudinal Long-Term Study 1998-2008 (indicated 📗)
  Evaluation of the effectiveness of Theraplay of children with behavioral disorders, ages 2;6–6;11 yrs., compared to control groups, beginning from waiting time till catamnesis. (control of the therapeutic effectiveness of Theraplay)
Criteria to Evaluate Psychotherapy in Practice

- The effectiveness of therapy must be evaluated where it is performed – namely in the therapeutic rooms and not in the lab.

- Therapy must be evaluated within the therapeutic process and in its whole variability; not limited to a procedure defined by a therapeutic manual.

- Methods of sampling data need to meet the requirements of the therapeutic method.

- In evaluating the therapy, a research approach must be devised that captures changes displayed during the therapeutic process.
4.1 Multi-Center Study ♻
Basic Documentation of Children Treated with Theraplay
(Quality Control)

- **Multi-Center Study**
  Data collected in eight cities
  (outpatient clinics, private practices and child guidance clinics).

- **Sample**
  N=205 children
  suffering from communication and socio-emotional behavioral disorders,
  who were referred due to their communication disorder,
  Time frame of data sampling: 2000 - 2002

- **Data sampling through basic documentation**
  - History of child’s disorders,
  - Social demographic data of the family,
  - Record medical findings of the child’s symptoms
    at the beginning and the end of the Theraplay therapy;
  - Number of therapeutic sessions.
Multi-Center Study

Content of the Basic Documentation of Children Treated with Theraplay

- **Anamnese**
  What parents believe is the cause for the child’s disorder.
  Degree of parent’s worrying about their child’s disorder.

- **Social-Demographics**
  Biographic data of child and family.

- **Pre-Therapeutic Symptoms**
  Description and degree of symptoms *before* treatment with Theraplay.
  *(Clinical Assessment Scale of Child and Adolescent Psychopathology, German CASCAP-D version by Döpfner et al., 1999)*

- **Post-Therapeutic Symptoms** *(CASCAP-D, Döpfner et al., 1999)*
  Description and degree of symptoms *after* treatment with Theraplay.

- **Quality Control of Theraplay Treatment**
  Clinical and statistical significance of reduced symptoms.

- **Length of Therapy**
  Number of Theraplay sessions. Date of first and last inquiry.
Multi-Center Study 2000-2002
Social-demographic Structure of the Sample

• Sample Size
  \( N = 205 \) children with various communication and socio-behavioral disorders = 100 %

• Age of Children
  4;08 yrs. = mean age of these children (SD=1;08)
  2;03 yrs. = the youngest child
  14;00 yrs. = the oldest child treated with Theraplay

• Gender of Children
  144 boys = 70% boys : 61 girls = 30% girls
  Ratio boys : girls = 2.3 :1

• Number of Theraplay Sessions
  approx. 19 sessions; mean number of sessions
  (4 sessions = the shortest; 61 sessions = the longest therapy)
Multi-Center Study 2000-2002

Current Sample

Children’s History of Upbringing

• **Family Status of Children** \((N=1\text{ no answer})\)
  - approx. 81% legitimate children
  - approx. 13% illegitimate, but children by birth
  - approx. 6% foster- and adopted children

• **Marital Status of Mothers** \((N=10\text{ no answer})\)
  - approx. 75% married mothers
  - approx. 6% unmarried mothers living together with a partner
  - approx. 9% single mothers
  - approx. 10% divorced, widowed, separated mothers

• **Upbringing of Children** \((N=11\text{ no answer})\)
  - approx. 75% both parents are involved
  - approx. 25% single parent is involved
### Multi-Center Study 2000-2002

**Percentage of Children Treated with Theraplay who Suffer From Communication Disorders**

Total sample of \( N = 205 \) children with language and communication disorders categorized by the following subsamples with specific communication disorders (multiple disorders):

<table>
<thead>
<tr>
<th>Subsample</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expressive Language Disordered Children ( N = 119 )</td>
<td>58.1%</td>
</tr>
<tr>
<td>Articulation Disordered Children ( N = 114 )</td>
<td>55.6%</td>
</tr>
<tr>
<td>Receptive Language Disordered Children ( N = 94 )</td>
<td>45.9%</td>
</tr>
<tr>
<td>Language Delayed Children ( N = 86 )</td>
<td>42%</td>
</tr>
<tr>
<td>Selective Mutistic Children ( N = 21 )</td>
<td>10.2%</td>
</tr>
<tr>
<td>Stuttering Children ( N = 6 )</td>
<td>2.9%</td>
</tr>
<tr>
<td>Children in None of These Subsamples ( N = 51 )</td>
<td>24.9%</td>
</tr>
</tbody>
</table>

- Other Communication Disorders
- Speech-Language Disorders

(method: CASCAP-D von Döpfner et al., 1999)
### Multi-Center Study 2000-2002

**Percentage of Children Treated with Theraplay who Suffer from Behavioral and Socio-Emotional Disorders**

Total sample of $N=205$ children with language and communication disorders categorized by the following subsamples with socio-emotional disorders:

<table>
<thead>
<tr>
<th>Subsample</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>affective disordered children, $N=85$</td>
<td>41.5</td>
</tr>
<tr>
<td>shy insecure children, $N=62$</td>
<td>30.2</td>
</tr>
<tr>
<td>children with ADD, $N=53$</td>
<td>25.9</td>
</tr>
<tr>
<td>children with ADHD, $N=51$</td>
<td>24.9</td>
</tr>
<tr>
<td>aggressive oppositional children, $N=48$</td>
<td>23.4</td>
</tr>
<tr>
<td>shy oppositional children, $N=44$</td>
<td>21.5</td>
</tr>
<tr>
<td>anxious disordered children, $N=36$</td>
<td>17.6</td>
</tr>
<tr>
<td>autistic children, $N=31$</td>
<td>15.1</td>
</tr>
<tr>
<td>mentally retarded children, $N=31$</td>
<td>15.1</td>
</tr>
</tbody>
</table>

*Percentages of specific subsamples within the total sample (method: CASCAP-D von Döpfner et al., 1999)*

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4.2 Prospective Controlled Longitudinal Study 1998-2008 to Evaluate the Effectiveness of Theraplay

Objectives

• Evaluation of the long-term effectiveness of Theraplay in practice.
• Determination of type and degree of objective symptoms of communication, socio-emotional, and behavioral disorders before treatment with Theraplay.
• Measurement of the therapeutic effects during treatment.
• Measurement of the decreased degree of targeted symptoms caused by communication, socio-emotional, and behavioral disorders after treatment with Theraplay.
• Measurement of the maintenance of the effects of Theraplay in catamnesis up to 5 years after the end of the therapy.
• Determination of the influence that the reduction of behavioral disorders has on the child’s language and speaking abilities.
• Determination of the influence that the reduction of the child’s disorders has on the parent’s attitude towards their child and parenting.
Sample Structure and Sample Size

- **Therapy Group 1 (TG₁)** \( n = 30 \)
  - Randomized group of children with language-, and behavioral disorders treated with Theraplay

- **Therapy Group 2 (TG₂)** \( n = 30 \)
  - Randomized group of children with language-, and behavioral disorders treated with Theraplay
  - (Reliability of the two therapy groups proved by homogeneity of variance)

- **Waiting-Time Control Group (KG WKG)** \( n = 30 \)
  - Randomized group of children (TG₂) during waiting time before treated with Theraplay

- **Speech-Language Therapy Control (KG L)** \( n = 30 \)
  - Age and gender matched group of children with speech-language disorders not treated with Theraplay but treated with speech-language therapy

- **Normal Kindergarten Control Group (KG N)** \( n = 30 \)
  - Age and gender matched group of children without such disorders neither treated with Theraplay nor with speech-language therapy
Prospective Controlled Longitudinal Study 1998-2008
Measurement of the Effect of Theraplay
Long-Term Study up to 5 Years after End of Therapy

- waiting time before start of therapy: control without Theraplay
- therapy time during therapy: measurement with Theraplay
- comparison between before & after therapy: change after Theraplay
- catamnesis after end of therapy: duration of effectiveness of Theraplay

waiting time  time of therapy  catamnesis  catamnesis

ø16 weeks before start of the therapy
number of sessions dependent on type of disorder
2 years after end of therapy
5 years after end of therapy

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Points of Measurement During Long-Term Study

- **Waiting time**
- **Time of therapy**
  - Therapy group TG 1
  - Therapy group TG 2
- **Catamnesis**
  - 2 years after
  - 5 years after

- Pre-post comparison
- Control group WKG
- Control group L
- Control group N

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Prospective Controlled Longitudinal Study 1998-2008
Observation of the Child’s Change in Behavior
From Different Perspectives

Mother  Father
Child At Home

Child in Center

Speech-Language Pathologist Diagnosis
Phoniatrist Physician Diagnosis
Psychologist Assessment of development
H-MIM Diagnosis Assessment of interaction

Theraplay Therapist’s Assessment
Theraplay Co-Therapist

Therapy- video First ‘blind’ Analyzer
Therapy- video Independent second ‘blind’ Analyzer

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Prospective Controlled Longitudinal Study 1998-2008
Measurement of the Type of Effects of Theraplay During Therapy

11 Controlled Variables of the Therapy Process:

1. Attention, concentration, and engagement of the child.
2. Communication, level of language abilities.
3. Child’s emotional state.
4. Child’s attachment & social behavior.
5. Child’s engagement with other persons.
7. Ability of the child to relate to others.
9. Activity of the child, e.g. taking the initiative.
10. Ability of the child to tolerate frustrations.
11. Child’s courage and readiness to take a risk.
5.1
Autistic Children in Germany after Theraplay
Preliminary Results of Two Studies
to Evaluate the Effectiveness of Theraplay
on Autistic Infants and Preschool Children

Classified in DSM-IV
315.31 Mixed Receptive-Expressive Language Disorder
299.00 Autistic Disorder
299.80 Pervasive Developmental Disorder Not Otherwise Specified

Classified in ICD-10
F80.0 Articulation Disorder
F80.1 Expressive Language Disorder
F80.2 Receptive Language Disorder
F84.0 Autism in Early Infancy
F84.1 Atypical Autism
5.1
Autistic Children and their Parents after Theraplay

Multi-Center Study 2000-2002 and
Temporary Results of the Controlled Longitudinal Study 1998-2008

• Size of the subgroup in the total sample
  \(N=31\) children with autistic disorders
  \(=15.1\%\) of the total sample of \(N=205\) children

• Age of the children with autism (predominantly Kanner)
  approx. 4;02 yrs. = mean age of children
  approx. 2;04 yrs. = age of the youngest child
  approx. 7;03 yrs. = age of the oldest child at beginning of therapy

• Gender of the children with autism
  21 boys : 10 girls
  Ratio boys : girls = approx. 2 : 1

• Number of Theraplay sessions
  approx. 28 sessions
  (60 sessions = longest therapy with an autistic child)

There is a large degree of homogeneity of variance in both studies

Temporary Results of the Controlled Longitudinal Study 1998-2008
Multi-Centers Study 2000-2002

Family Structure of N=31 Autistic Children

• Family status of the children
  N= 26 approx. 84% legitimate children
  N=  3 approx.  0% illegitimate, but children by birth
  N=  2 approx.  6% foster or adopted children

• Marital status of the child’s mother (N=1 no answer)
  N=  23 approx. 76% married mothers
  N=  2 approx.  7% single mothers living with a partner
  N=  2 approx.  7% single mothers
  N=  3 approx. 10% divorced, widowed, separated mothers

• Upbringing of the children (N=2 no answer)
  N=  24 approx. 77% both parents are involved
  N=  7 approx. 23% single parent is involved (5 mothers, 2 fathers)

There is a large degree of homogeneity of variance in both studies

Temporary Results of the Controlled Longitudinal Study 1998-2008
## Multi-Center Study 2000-2002
### Marked Degree of Symptoms of Communication Disorders of Autistic Children
Psychopathological Diagnosis. Method: CASCAP-D, 4-point scale

Subsample $N=31 = \text{approx. 15,1\% children with autism of the total sample of } N=205 \text{ children}$

<table>
<thead>
<tr>
<th>Disorder</th>
<th>Mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>receptive language disorder</td>
<td>3.1 (1.2)</td>
</tr>
<tr>
<td>expressive language disorder</td>
<td>2.9 (1.3)</td>
</tr>
<tr>
<td>articulation disorder</td>
<td>2.4 (1.3)</td>
</tr>
<tr>
<td>selective mutism</td>
<td>1.6 (1.1)</td>
</tr>
<tr>
<td>mental retardation</td>
<td>2.5 (1.0)</td>
</tr>
</tbody>
</table>

Mean of marked degree of symptoms at start of therapy

1 = not noticeable    strongly marked = 4

- children of multi-center study

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**Temporary Results of the Controlled Longitudinal Study 1998-2008**

**Marked Degree of Symptoms of Communication Disorders of Autistic Children**

*Psychopathological Diagnosis. Method: CASCAP-D, 4-point scale*

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Mean (sd)</th>
<th>Control Group N</th>
<th>Therapy Group N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Receptive language disorder</td>
<td>2.9 (0.7)</td>
<td>1.1</td>
<td>3.8</td>
</tr>
<tr>
<td>Expressive language disorder</td>
<td>2.8 (0.9)</td>
<td>1.0</td>
<td>3.8</td>
</tr>
<tr>
<td>Articulation disorder</td>
<td>1.4 (0.7)</td>
<td>1.0</td>
<td>2.9</td>
</tr>
<tr>
<td>Selective mutism</td>
<td>1.0 (0.7)</td>
<td>1.0</td>
<td>1.4</td>
</tr>
<tr>
<td>Mental retardation</td>
<td>1.0 (0.7)</td>
<td>1.0</td>
<td>2.8</td>
</tr>
</tbody>
</table>

Subsample of $N=14$ = approx. 23.7% children with autism of the total sample of $N=59$ children

Method: CASCAP-D (Döpfner et al., 1999)

Mean of the marked degree of symptoms at start of therapy

1 = not noticeable  
Strongly marked = 4

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### Multi-Center Study 2000-2002

**Marked Degree of Symptoms of Behavioral Disorders of Autistic Children**

**Psychopathological Diagnosis. Method: CASCAP-D, 4-point scale**

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Score</th>
<th>Description</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>autistic symptoms</td>
<td>3.4</td>
<td></td>
<td>0.5</td>
</tr>
<tr>
<td>attention deficit</td>
<td>3.3</td>
<td></td>
<td>1.2</td>
</tr>
<tr>
<td>unable to play</td>
<td>3.2</td>
<td></td>
<td>1.1</td>
</tr>
<tr>
<td>unwilling to cooperate</td>
<td>3.1</td>
<td></td>
<td>1.2</td>
</tr>
<tr>
<td>socially withdrawn</td>
<td>2.5</td>
<td></td>
<td>1.3</td>
</tr>
<tr>
<td>restless</td>
<td>2.4</td>
<td></td>
<td>1.3</td>
</tr>
<tr>
<td>oppositional</td>
<td>2.3</td>
<td></td>
<td>1.3</td>
</tr>
<tr>
<td>lack of empathy</td>
<td>2.2</td>
<td></td>
<td>1.4</td>
</tr>
<tr>
<td>verbal or motoric tics</td>
<td>2.2</td>
<td></td>
<td>1.1</td>
</tr>
<tr>
<td>shy insecure timid</td>
<td>2.0</td>
<td></td>
<td>1.3</td>
</tr>
</tbody>
</table>

**Subsample of N = 31 ≈ 15.1% children with autism of the total sample of N = 205 children. Method: CASCAP-D (Döpfner et al., 1999)**

**Mean of marked degree of symptoms at start of therapy**

1 = not noticeable, 4 = strongly marked

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Temporary Results of the Controlled Longitudinal Study 1998-2008
Marked Degree of Symptoms of Behavioral Disorders of Children with Autism
Psychopathological Diagnosis. Method: CASCAP-S, 4-point scale.

Subsample of $N=14=\text{approx. } 23.7\%$ children with autism of the total sample of $N=59$ children
method: CASCAP-D (Döpfner et al., 1999)

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Mean</th>
<th>Control Group N</th>
<th>Therapy Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>autistic symptoms (sd=0.8)</td>
<td>1.0</td>
<td></td>
<td>3.1</td>
</tr>
<tr>
<td>attention deficit (sd=0.9)</td>
<td>1.16</td>
<td></td>
<td>3.5</td>
</tr>
<tr>
<td>unable to play (sd=1.1)</td>
<td>1.0</td>
<td></td>
<td>3.1</td>
</tr>
<tr>
<td>unwilling to cooperate (sd=0.8)</td>
<td>1.1</td>
<td></td>
<td>3.5</td>
</tr>
<tr>
<td>socially withdrawn (sd=1.3)</td>
<td>1.02</td>
<td></td>
<td>2.2</td>
</tr>
<tr>
<td>restless (sd=1.3)</td>
<td>1.2</td>
<td></td>
<td>2.6</td>
</tr>
<tr>
<td>oppositional (sd=1.3)</td>
<td>1.0</td>
<td></td>
<td>1.8</td>
</tr>
<tr>
<td>lack of empathy (sd=1.3)</td>
<td>1.02</td>
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<td>2.8</td>
</tr>
<tr>
<td>verbal or motoric tics (sd=0.8)</td>
<td>1.0</td>
<td></td>
<td>1.5</td>
</tr>
<tr>
<td>shy insecure timid (sd=0.9)</td>
<td>1.1</td>
<td></td>
<td>1.4</td>
</tr>
</tbody>
</table>

Mean of marked degree of symptoms at start of therapy
1 = not noticeable
strongly marked = 4
Temporary Results of the Controlled Longitudinal Study 1998-2008

Abilities of Autistic Children out of Parent’s View before Therapy

Method: 6-point rating scale.
Statistics: Mean, SD, Pearson Correlation Coefficients Mother/Father

Subsample of $N=14=\text{approx. 23.7\% children with autism}$ of the total sample of $N=59$ children

- child’s interest (m-sd=1.6; f-sd=1.4, corr. m/f: $r=.43$)
- language comprehension (m-sd=1.3; f-sd=1.4; corr. m/f: $r=.08$)
- willing to cooperate (m-sd=1.8; f-sd=1.5; corr. m/f: $r=.19$)
- mental versatility (m-sd=1.5; f-sd=1.1; corr. m/f: $r=.68$)
- willing to communicate (m-sd=1.5, f-sd=1.4; corr. m/f: $r=.23$)
- child’s attention (m-sd=1.4; f-sd=1.4; corr. m/f: $r=.22$)
- child’s concentration (m-sd=1.3; f-sd=1.2; corr. m/f: $r=.62$)

Mean of child's abilities scaled by mother and father
1 = very bad 
very well = 6
Temporary Results of the Controlled Longitudinal Study 1998-2008
Autistic Children’s Behavior at Home
out of Parent’s View before Therapy
Method: 6-point rating scale.
Statistics: Mean, SD, Pearson Correlation Coefficients Mother/Father

Subsample of N=14=approx. 23.7% children with autism
of the total sample of N=59 children

- I am loved by my child (m-sd=1.3; f-sd=0.8; corr. m/f: r=.53)
- has strong mood swings (m-sd=0.5; f-sd=1.5; corr. m/f: r=.37)
- generally self-confident at home (m-sd=1.2; f-sd=1.2; corr m/f: r=.61)
- is happy, cheerful at home (m-sd=1.4; f-sd=1.0; corr. m/f: r=.76)
- continuously well-tempered at home (m-sd=1.5; f-sd=1.6; corr. m/f: r=.82)
- very calm at home (m-sd=0.8; f-sd=1.4; corr. m/f: r=.37; sign. o<.05)

Mean of child's behavior at home scaled by mother and father
1 = very bad
very well = 6

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33
Multi-Center Study 2000-2002

Decrease of Symptoms after Theraplay
N=31 Autistic Children

Method: CASCAP-D. 4-point scale.
Statistics. Mean, SD, GLM_Variance analysis with repeated measurement

- Autism (sd=1.1; p=.0013**)  
- Attention deficit (sd=1.2; p=.0013**)  
- Unable to play (sd=1.2; p=.0001***)
- Unwilling to cooperate (sd=1.1; p=.0001***)
- Socially withdrawn (sd=1.1; p=.0001***)
- Restless (sd=1.2; p=.0111*)
- Oppositional refusal (sd=1.2; p=.0049***)
- Lack of empathy (sd=1.1; p=.0013**)
- Verbal or motoric tics (sd=0.8; p=.0040***)
- Shy insecure timid (sd=0.8)
- Anxious of parting (sd=1.1; p=.019*)

Degree of Change
4 = strongly marked to 1 = not noticeable

Start of therapy  End of therapy
Temporary Results of the Controlled Longitudinal Study 1998-2008
Decrease of Symptoms before and after Theraplay
N=14 Autistic Children
Method: CASCAP-D, 4-point scale.
Statistics. Mean, SD, GLM_Variance analysis with repeated measurement

- autism (sd=0.8; p=.0026**)
- attention deficit (sd=0.9; p=.0079**)
- unable to play (sd=1.0; p=.0034**)
- unwilling to cooperate (sd=0.8; p=.0001***)
- socially withdrawn (sd=1.1; p=.0482*)
- restless (sd=0.9; p=.1713 n.s.)
- oppositional refusal (sd=1.1; p=.7128 n.s.)
- lack of empathy (sd=0.9; p=.0165*)
- verbal or motoric tics (sd=1.0; p=.8067 n.s.)
- shy insecure timid (sd=1.0; p=n.s.)
- anxious of parting (sd=1.2; p=n.s.)

Degree of change
4 = strongly marked to 1 = not noticeable

Start of therapy
End of therapy
Multi-Center Study 2000-2002

Co-variation of Communication Disorders when Symptoms of Behavioral Disorders are Reduced

*N=31 Autistic Children before and after Theraplay*

Method: CASCAP-D. 4-point scale.
Statistics. Mean, SD, GLM, Variance analysis with repeated measurement

- receptive language disorder (sd=1.2; p<.05)
- expressive language disorder (sd=1.2; not significant)
- articulation disorder (sd=1.1; not significant)
- selective mutism (sd=0.8; p=.0629*)
- mental retardation (sd=1.0; not significant)

Degree of Change
4 = strongly marked to 1 = not noticeable

Receptive language disorder (sd=1.2; p<.05)
Temporary Results of the Controlled Longitudinal Study 1998-2008

Co-variation of Communication Disorders when Symptoms of Behavioral Disorders are Reduced

N=14 Autistic Children before and after Theraplay

Method: CASCAP-D, 4-point scale.
Statistics. Mean, SD, GLM, Variance analysis with repeated measurement

Degree of Change

4 = strongly marked to 1 = not noticeable

- receptive language disorder
  (sd=0.7; p<.001)
- expressive language disorder
  (sd=0.5; not significant)
- articulation disorder
  (sd=1.0; p<.01)
- selective mutism
  (sd=0.8; not significant)
- mental retardation
  (sd=0.5; p<.10)

start of therapy  end of therapy

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Temporary Results of the Controlled Longitudinal Study 1998-2008
Outcome of Theraplay from Parents’ Point of View
Parents of N=14 Autistic Children

Degree of Assessment of the Outcome of Theraplay on a 6-point rating scale

- Mean of mothers (sd=1.2)
- Mean of parents (sd=1.1)
- Mean of fathers (sd=1.1)
- Theraplay therapist (sd=0.7)

1=no outcome  2  3  4  5  very successful=6

Outcome of Theraplay out of therapist's view
Outcome of Theraplay out of mother's view
Outcome of Theraplay out of parent's view (mean)
Outcome of Theraplay out of father's view
Temporary Results of the Controlled Longitudinal Study 1998-2008

Parents of N=14 Autistic Children

Frequency of Participating in Therapeutic Sessions

Parent’s participation in sessions observing child’s change of symptoms

Number of Theraplay sessions in which parents participated

N=14 children with autism (predominantly Kanner syndrome)

- Mean number of Theraplay sessions: 17 (shortest) to 43 (longest)
- Mean of sessions in which mothers participated: 3 (sd=11.1), N=1 did not participate
- Mean of sessions in which fathers participated: 24 (sd=11.1), N=9 did not participate
Temporary Results of the Controlled Longitudinal Study 1998-2008
Change of Abilities of Autistic Children after Theraplay out of Mother’s View
Method: 6-point rating scale. Statistics: Mean, Pearson correlation coefficients

### Subsample of $N=14=\text{approx. 23,7\%}$ children with autism of the total sample of $N=59$ children

<table>
<thead>
<tr>
<th>Ability</th>
<th>Start of Therapy</th>
<th>End of Therapy</th>
</tr>
</thead>
<tbody>
<tr>
<td>M: child's interest</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(corr. M/F: $r=.65$)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M: language comprehension</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(corr. M/F: $r=.28$)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M: child willing to cooperate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(corr. M/F: $r=.90$)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M: mental versatility</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(corr. M/F: $r=.21$)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M: child willing to communicate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(corr. M/F: $r=.86$)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M: child's attention</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(corr. M/F: $r=.05$)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M: child's concentration</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(corr. M/F: $r=.57$)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Temporary Results of the Controlled Longitudinal Study 1998-2008
Change of Abilities of Autistic Children after Theraplay out of Father’s View


Subsample of N=14=approx. 23.7% children with autism of the total sample of N=59 children

Degree of Change

1 = very bad                       very well = 6

F: child's interest
(corr. M/F: r=.65; M/Th: r=.64)

F: language comprehension
(corr. M/F: r=.28; M/Th: r=.28)

F: child willing to cooperate
(corr. M/F: r=.90; M/Th: r=.70)

F: mental versatility
(corr. M/F: r=.21; M/Th: r=.00)

F: willing to communicate
(corr. M/F: r=.86; M/Th: r=.71)

F: child's attention (M/F: p<0.1)
(corr. M/F: r=.05; M/Th: r=.29)

F: child's concentration (sign.
M/F: p<.05; corr. M/F: r=.57; M/Th: r=.32)
Temporary Results of the Controlled Longitudinal Study 1998-2008
Change of Interaction of Autistic Children after Theraplay out of Mother’s View
Method: 6-point rating scale. Statistics: Mean, Pearson correlation coefficients

Subsample of $N=14=\approx 23.7\%$ children with autism of the total sample of $N=59$ children

- M: child tries to contact others often (df=1; $F=2.15, p>.05$ n.s.)
- M: child accepts attempts of others to come in contact (df=1; $F=5.87, p<.05$)
- M: it’s nothing unusual child acts autonomous (df=1; $F=5.27, p<.05$)
- M: attention and concentration of the child is very well at the moment (df=1; $F=31.57, p=.0001$)
- M: child talks with many people now (df=1; $F=6.32, p<.05$)

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Temporary Results of the Controlled Longitudinal Study 1998-2008

Similarities between Mother’s and Father’s View of Social Interaction of their Autistic Child before and after Theraplay

Method: 6-point rating scale. Statistics: Mean, Pearson correlation coefficients

Subsample of N=14=approx. 23,7% children with autism of the total sample of N=59 children

- M: child tries to contact others often (df=1; F=2,15, p>.05 n.s.)
- F: child tries to contact others often (corr. M:F r=.16)
- M: attempts of others to contact child are accepted (p<.05)
- F: attempts of others to contact child are accepted (corr. r=.58)
- M: child often acts autonomous (df=1; F=5,27; p<.05)
- F: child often acts autonomous (corr. r=.08)
- M: attention and concentration of the child is very well (p<.0001)
- F: attention and concentration of the child is very well (corr. r<.01)
- M: child talks with many people (df=1, F=6,32; p<.05)
- F: child talks with many people (corr. r=.16)
Temporary Results of the Controlled Longitudinal Study 1998-2008

Change of Home Behavior of Autistic Children after Theraplay out of Mother’s View

Method: 6-point rating scale. Statistics: Mean, Pearson correlation coefficients

Subsample of N=14=approx. 23,7% children with autism of the total sample of N=59 children

- M: I am loved by my child
  (corr. M/F: r=.69)

- M: the mood of my child changes often
  (corr. M/F: r=.34)

- M: child is self-confident at home
  (corr. M/F: r=.17)

- M: is happy, cheerful at home
  (corr. M/F: r=.76)

- M: my child is continuously well-tempered at home
  (corr. M/F: r=.43)

- M: my child is very calm at home
  (corr. M/F: r=.00)

Degree of Change

1 = very bad  
2 =  
3 =  
4 =  
5 =  
6 = very well =

start of therapy  
end of therapy
Temporary Results of the Controlled Longitudinal Study 1998-2008
Change of Home Behavior of Autistic Children after Theraplay out of Father’s View
Method: 6-point rating scale. Statistics: Mean, Pearson correlation coefficients

Subsample of \(N=14=\text{approx. } 23.7\%\) children with autism of the total sample of \(N=59\) children

- **F: I am loved by my child** (corr. M/F: \(r=.69\))
- **F: child has strong mood swings** (corr. M/F: \(r=.34\))
- **F: the mood of my child changes often** (corr. M/F: \(r=.34\))
- **F: is happy, cheerful at home** (corr. M/F: \(r=.69\))
- **F: child is continuously well-tempered at home** (corr. M/F: \(r=.43\))
- **F: child is very calm at home** (corr. M/F: \(r=.00\))

<table>
<thead>
<tr>
<th>Start of Therapy</th>
<th>End of Therapy</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 = very bad</td>
<td>6 = very well</td>
</tr>
<tr>
<td>2,1</td>
<td>4,7</td>
</tr>
<tr>
<td>3,5</td>
<td>5,3</td>
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<tr>
<td>2,9</td>
<td>5,1</td>
</tr>
<tr>
<td>5,9</td>
<td>4,5</td>
</tr>
<tr>
<td>4,3</td>
<td>5,3</td>
</tr>
</tbody>
</table>

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Temporary Results of the Controlled Longitudinal Study 1998-2008
Improvement of the Abilities of Autistic Children after Theraplay

Method: 6-point rating scale.
Statistics: Mean, SD, Pearson Correlation Coefficients Mother/Father

Subsample of $N=14=\approx 23.7\%$ children with autism of the total sample of $N=59$ children

- My child's trust in others improved ($sd=.9$) (corr. $r=.10$)
- My child's feeling of needs/wishes improved ($sd=1.1$) (corr. $r=.32$)
- My child's willingness to get in contact improved ($sd=1.1$) (corr. $r<.02$)
- My child's contact to others improved ($sd=1.1$) (corr. $r=.29$)
- My child's courage improved ($sd=.9$) (corr. $r=.36$)
- My child's self-confidence improved ($sd=.9$) (corr. $r<.01$)
- My child's confidence improved ($sd=.8$) (corr. $r=.32$)

Mean of child's abilities scaled by mother and father:
1-2 = did deteriorate  3-4 = remain the same  5-6 = did improve

father's view  mother's view
Temporary Results of the Controlled Longitudinal Study 1998-2008
Improvement of Parent’s Feelings after their Autistic Child got Theraplay
Method: 6-point rating scale.
Statistics: Mean, SD, Pearson Correlation Coefficients Mother/Father

Subsample of \( N=14 = \text{approx. 23.7\% children with autism of the total sample of } N=59 \text{ children} \)

- I feel I'm accepted by the therapist (sd=1.3) (corr. \( r=.60 \))
  - Mean of father's view: 4.4
  - Mean of mother's view: 5.3

- Therapy made it possible for me to handle my child better (sd=1.3) (corr. \( r=.73 \))
  - Mean of father's view: 4.7
  - Mean of mother's view: 5.0

- I'm more relaxed since my child got therapy (sd=1.3) (corr. \( r=.80 \))
  - Mean of father's view: 4.8
  - Mean of mother's view: 4.6

- The therapy of my child means support for me (sd=1.5) (corr. \( r=.42 \))
  - Mean of father's view: 4.7
  - Mean of mother's view: 4.6

- Theraplay helped me and my child (sd=1.4) (corr. \( r=.05 \))
  - Mean of father's view: 4.5
  - Mean of mother's view: 4.3

Mean of mother's and father's feelings after child's change
1-2 = did deteriorate  3-4 = remain the same  5-6 = did improve
Temporary Results of the Controlled Longitudinal Study 1998-2008

Increased Attitudes of Mothers after Theraplay of her Autistic Child

Mothers of $N=12$ children with autism


Statistics: Mean, sd, GLM_Variance analysis with repeated measurement

- **17**: great deal of enjoyment from life
  - (sd=0.6) (F=91, df=1, p=.3655)
  - Degree of attitude change
    - $4 = $strongly agree$ to $1 = $strongly disagree$
    - $3.5$
    - $3.3$

- **39**: I am a good listener
  - (sd=1.0) (F=2.38, df=1, p=.3384)
  - Degree of attitude change
    - $2.8$

- **46**: My child and I talk things over
  - (sd=1.0) (F=2.54, df=1, p=.1550)
  - Degree of attitude change
    - $2.0$
Temporary Results of the Controlled Longitudinal Study 1998-2008
Decreased Attitudes of Mothers after Theraplay of her Autistic Child

Mothers of N=12 children with autism

Statistics: Mean, sd, GLM_Variance analysis with repeated measurement

05: spend great deal of time with my child (sd=1.3)
(F=1.68,df=1,p=.2269)

22: great deal of satisfaction from having children (sd=0.8)
(F=1.0,df=1,p=.3138)

06: raising my child, I feel alone (sd=0.8)
(F=9.30,df=1,p=.0138*)

Degree of attitude change
4 = strongly agree to 1 = strongly disagree

start of therapy end of therapy
5.2
Aggressive Oppositional Children in Germany after Theraplay

Preliminary Results of Two Studies to Evaluate the Effectiveness of Theraplay on Autistic Infants and Preschool Children

Classified in DSM-IV
315.31 Mixed Receptive-Expressive Language Disorder
309.4 Adjustment Disorders
  With Mixed Disturbance of Emotions and Conducts
312.30 Impulsive-Control Disorder Not Otherwise Specified

Classified in ICD-10
F80.0 Articulation Disorder
F80.1 Expressive and ... F80.2 Receptive Language Disorder
F91.3 Social Behavior Disorder With Oppositional Behavior
F92.8 Combined Social Behavior Disorder Not Otherwise Specified
5.2
Aggressive Children and Their Parents after Theraplay

- **Size of subgroup of the total sample**
  N=48 aggressive children with oppositional behavior
  =23.4% of the total sample of N=205 children

- **Age of the aggressive children**
  approx. 4;11 yrs. = mean age of these children
  approx. 2;03 yrs. = age of the youngest child
  approx. 8;00 yrs. = age of the oldest child at start of therapy

- **Gender of the aggressive children**
  37 boys : 11 girls
  Ratio boys : girls = approx. 3.4 : 1

- **Number of Theraplay sessions**
  approx. 20 sessions
  (61 sessions = the longest therapy to a child)

  There is a large degree of homogeneity of variance in both studies
Multi-Center Study 2000-2002

Family Structure of N=48 Aggressive Children

- **Family status of the children**
  - N=40 approx. 83% legitimate children
  - N= 8 approx. 17% illegitimate, but children by birth
  - N= 2 approx. 4% foster or adopted children

- **Marital status of the child’s mother** (N=1 no answer)
  - N=30 approx. 65% married mothers
  - N= 2 approx. 4% single mothers living together with a partner
  - N= 7 approx. 15% single mothers
  - N= 7 approx. 15% divorced, widowed, separated mothers

- **Upbringing of children** (N=2 no answer)
  - N=29 approx. 66% both parents are involved
  - N=15 approx. 34% single parent is involved

There is a large degree of homogeneity of variance in both studies

Temporary Results of the Controlled Longitudinal Study 1998-2008
Multi-Center Study 2000-2002
Marked Degree of Symptoms of Communication Disorders of Aggressive Children
Psychopathological Diagnosis. Method: CASCAP-D, 4-point scale

Subsample of N=48 = approx. 23.4% oppositional aggressive children of the total sample of N=205 children
method: CASCAP-D (Döpfner et al., 1999)

- expressive language disorder (sd=1.1) 2.7
- articulation disorder (sd=1.2) 2.6
- receptive language disorder (sd=1.3) 2.5

Mean of marked degree of symptoms at the start of therapy
1 = not noticeable strongly marked = 4
Temporary Results of the Controlled Longitudinal Study 1998-2008

Marked Degree of Symptoms
of Communication Disorders of Aggressive Children
Psychopathological Diagnosis. Method: CASCAP-D, 4-point scale

Subsample of N=16 = rd. 27.1% oppositional aggressive children
of the total sample of N=59 children
method: CASCAP-D (Döpfner et al., 1999)

<table>
<thead>
<tr>
<th>Disorder</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expressive language disorders</td>
<td>2.9</td>
<td>1.1</td>
</tr>
<tr>
<td>Articulation disorders</td>
<td>2.5</td>
<td>1.1</td>
</tr>
<tr>
<td>Receptive language disorders</td>
<td>2.8</td>
<td>1.0</td>
</tr>
</tbody>
</table>

Mean of marked degree of symptoms at start of therapy
1 = not noticeable
strongly marked = 4

control group N, therapy group
**Multi-Center Study 2000-2002**

**Marked Degree of Symptoms of Behavioral Disorders of Aggressive Children**
Psychopathological Diagnosis. Method: CASCAP-D, 4-point scale

Subsample of $N=48$ = about 23.4% oppositional aggressive children of the total sample of $N=205$ children
method: CASCAP-D (Döpfner et al., 1999)

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>oppositional refusive (sd=0.5)</td>
<td>3.5</td>
<td></td>
</tr>
<tr>
<td>unwilling to cooperate (sd=1.0)</td>
<td>3.2</td>
<td></td>
</tr>
<tr>
<td>attention deficit (sd=1.2)</td>
<td>2.8</td>
<td></td>
</tr>
<tr>
<td>dominant (sd=1.2)</td>
<td>2.7</td>
<td></td>
</tr>
<tr>
<td>forced restless (sd=1.1)</td>
<td>2.6</td>
<td></td>
</tr>
<tr>
<td>impulsive (sd=1.3)</td>
<td>2.4</td>
<td></td>
</tr>
<tr>
<td>aggressive (sd=1.3)</td>
<td>2.3</td>
<td></td>
</tr>
<tr>
<td>unable to play (sd=1.2)</td>
<td>2.0</td>
<td></td>
</tr>
<tr>
<td>acting foolish (sd=1.2)</td>
<td>1.9</td>
<td></td>
</tr>
</tbody>
</table>

1 = not noticeable                      strongly marked = 4

Mean of marked degree of symptoms at start of therapy
Temporary Results of the Controlled Longitudinal Study 1998-2008
Marked Degree of Symptoms of Behavioral Disorders of Aggressive Children
Psychopathological Diagnosis. Method: CASCAP-D, 4-point scale

Subsample of N=16=about 27.1% oppositional aggressive children of the total sample of N=59 children
Method: CASCAP-D (Döpfner et al., 1999)

- Oppositional refusive (sd=0.5)
- Unwilling to cooperate (sd=0.6)
- Attention deficit (sd=1.1)
- Dominant (sd=0.9)
- Forced restless (sd=1.1)
- Impulsive (sd=1.0)
- Aggressive (sd=0.9)
- Unable to play (sd=1.3)
- Acting foolish (sd=1.2)

Mean of marked degree of symptoms at the start of therapy
1 = not noticeable
3 = strongly marked = 4

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Temporary Results of the Controlled Longitudinal Study 1998-2008
Abilities of Oppositional Aggressive Children out of Parent’s View before Therapy

Method: 6-point rating scale.
Statistics: Mean, SD, Pearson Correlation Coefficients Mother/Father

Subsample of N=16=approx. 27,1% children with autism of the total sample of N=59 children

- child's interest (m-sd=1.4; f-sd=1.1; corr. m/f: r=.70)
- language comprehension (m-sd=1.1; f-sd=1.0; corr. m/f: r=.24)
- willing to cooperate (m-sd=1.5; f-sd=1.2; corr. m/f: r=.03)
- mental versatility (m-sd=1.2; f-sd=1.1; corr. m/f: .48)
- willing to communicate (m-sd=1.6; f-sd=1.5; corr. m/f: r=.38)
- child's concentration (m-sd=1.3; f-sd=1.4; corr. m/f: r=.81)
- child's attention (m-sd=1.1; f-sd=1.3) (corr. m/f: r=.74)

Mean of child’s abilities scaled by mother and father

1 = very bad

very well = 6

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Temporary Results of the Controlled Longitudinal Study 1998-2008
Oppositional Aggressive Children’s Behavior at Home out of Parent’s View before Therapy

Method: 6-point rating scale.
Statistics: Mean, SD, Pearson Correlation Coefficients Mother/Father

Subsample of \(N=16=\text{approx. 27,1\% oppositional aggressive children}\)
of the total sample of \(N=59\) children

1. I am loved by my child (m-sd=0.4; f-sd=0.7; corr. m/f: \(r=.14\))
2. Generally self-confident at home (m-sd=0.9; f-sd=0.9; corr. m/f: \(r=.06\))
3. Generally happy, cheerful at home (m-sd=0.8; f-sd=0.5; corr. m/f: \(r=.03\))
4. Generally strong mood swings (m-sd=1.0; f-sd=1.4; corr. m/f: \(r=.16\))
5. Continuously well-tempered at home (m-sd=1.0; f-sd=0.9; corr. m/f: \(r=.48\))
6. Very calm at home (m-sd=1.7; f-sd=1.1; corr. m/f: \(r=.18\))

Mean of child’s behavior at home scaled by mother and father

1 = very bad  
very well = 6

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Association for Play Therapie
Multi-Center Study 2000-2002

Decrease of Symptoms after Theraplay

N=48 Oppositional Aggressive Children

Method: CASCAP-D, 4-point scale. Statistics: Mean, SD, GLM, repeated measurement of variance

Degree of Change

4 = strongly marked   to   1 = not noticeable

- oppositional refusive (sd=0.7) (p=.0001***)
- unwilling to cooperate (sd=1.0) (p=.0001***)
- attention deficit (sd=1.0) (p=.0001***)
- dominant (sd=0.9) (p=.0001***)
- restless (sd=1.0) (p=.0001***)
- impulsive (sd=1.0) (p=.0001***)
- aggressive (sd=1.2) (p=.0001***)
- unable to play (sd=1.0) (p=.0031**)
- acting foolish (sd=1.0) (p=.0036**)
Temporary Results of the Controlled Longitudinal Study 1998-2008

Decrease of Symptoms after Theraplay

N=16 Oppositional Aggressive Children

Method: CASCAP-D, 4-point scale. Statistics: Mean, SD; GLM_repeated measurement of variance

- oppositional (sd=0.7) (p=.0001)
- unwilling to cooperate (sd=1.1) (p<.001)
- attention deficit (sd=1.1) (p<.05)
- dominant (sd=0.7) (p<.001)
- restless (sd=1.2) (not significant)
- impulsive (sd=0.7) (not significant)
- aggressive (sd=0.9) (0<.10)
- unable to play (sd=0.9) (not significant)
- acting foolish (sd=1.0) (0<.02)

Degree of Change

4 = strongly marked  to  1 = not noticeable

Start of therapy

End of therapy

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Association for Play Therapie
Multi-Center Study 2000-2002

Co-variation of the Communication Disorders when Symptoms of Behavioral Disorders are Decreasing

*N=48 Oppositional Aggressive Children after Theraplay*

Method: CASCAP-D, 4-point scale. Statistics: Mean, sd, GLM_repeated measurement of variance

- expressive language disorders (sd=0.9) (p=.0008***)
- articulation disorders (sd=0.9) (p=.0014**)
- receptive language disorders (sd=0.9) (p=.0002***)

Degree of Change

4 = strongly marked  to  1 = not noticeable

start of therapy  end of therapy
Temporary Results of the Controlled Longitudinal Study 1998-2008
Co-variation of Communication Disorders when Symptoms of Behavioral Disorders decrease
N=16 Aggressive Children after Theraplay

Method: CASCAP-D, 4-point scale. Statistics: Mean, sd, GLM_repeated measurement of variance

- expressive language disorder (sd=0.9) (not significant)
- articulation disorder (sd=0.8) (not significant)
- receptive language disorder (sd=1.2) (not significant)

Degree of Change
4 = strongly marked to 1 = not noticeable
Temporary Results of the Controlled Longitudinal Study 1998-2008

Outcome of Theraplay from Parents’ Point of View

Parents of N=15 Oppositional Aggressive Children

Method: 6-point scale. Statistics: Mean, sd

Degree of Assessment of the Outcome of Theraplay
on a 6-point rating scale

Mean of mothers (sd=1.2) 4.8
Mean of parents (sd=1.1) 4.5
Mean of fathers (sd=1.1) 4.1
Theraplay therapist (sd=0.7) 4.8

1=no
very successful=6

1=Outcome of Theraplay out of therapist's view
2=Outcome of Theraplay out of mother's view
3=Outcome of Theraplay out of parent's view (mean)
4=Outcome of Theraplay out of father's view
Temporary Results of the Controlled Longitudinal Study 1998-2008
Frequency of Parents with Aggressive Children Participating in Theraplay Sessions
Parent’s participation in sessions observing child’s change of symptoms

Number of Theraplay sessions in which parents participated
N=15 oppositional aggressive children (N=1 missing data)

- mean number of sessions
- mothers: 15
- fathers: 1

- average number of Theraplay sessions (sd=6.1)
- mean sessions in which mothers participated (sd=7.9)
- mean sessions in which fathers participated (sd=2.6) (N=10 father did not participate)
Temporary Results of the Controlled Longitudinal Study 1998-2008
Change of Abilities of Oppositional Aggressive Children after Theraplay out of Mother’s View
Method: 6-point rating scale. Statistics: Mean, Pearson correlation coefficients

Subsample of \( N=16=\text{appr. 27.1\% oppositional aggressive children of the total sample of } N=59 \text{ children} \)

- - M: my child's interest (corr. M/F: \( r=.11 \))
- - M: language comprehension (corr. M/F: \( r=.24 \))
- ❧ M: child is willing to cooperate (corr. M/F: \( r=.45 \))
- ♦ M: mental versatility of child (corr. M/F: \( r=.22 \))
- - M: willing to communicate (corr. M/F: \( r=.16 \))
- - M: child's concentration (corr. M/F: \( r=.34 \))
- - M: child's attention (corr. M/F: \( r=.39 \))

\[
\begin{array}{|c|c|c|}
\hline
\text{Degree of Change} & \text{start of therapy} & \text{end of therapy} \\
\hline
1 = \text{very bad} & & \hline
2 & 2.9 & 3.1 \\
3 & 3.6 & 4 \\
4 & 4 & 4.3 \\
5 & 4.6 & 5.9 \\
6 & & \hline
\end{array}
\]
Temporary Results of the Controlled Longitudinal Study 1998-2008
Change of Abilities of Oppos. Aggressive Children after Theraplay out of Father’s View
Method: 6-point rating scale. Statistics: Mean, Pearson correlation coefficients
GLM_repeated measurement of variance

Subsample of $N=16=\text{approx. } 27.1\%$ oppositional aggressive children of the total sample of $N=59$ children

Degree of Change

1 = very bad                       6 = very well

- F: my child's interest
  (corr. M/F: $r=0.11$; $p=n.s.$)

- F: language comprehension
  (corr. M/F: $r=0.24$; $p=n.s.$)

- F: child is willing to cooperate
  (corr. M/F: $r=0.55$, $p=0.037^*$)

- F: mental versatility of child
  (corr. M/F: $r=-0.22$, $p=0.016^*$)

- F: willing to communicate
  (corr. M/F: $r=0.16$, $p=0.015^*$)

- F: child's concentration
  (corr. M/F: $r=0.34$, $p=0.017^*$)

- F: child's attention
  (corr. M/F: $r=0.39$, $p=0.002^*$)
Temporary Results of the Controlled Longitudinal Study 1998-2008
Change of Interaction of Oppositional Aggressive Children after Theraplay out of Mother’s View
Method: 6-point rating scale. Statistics: Mean, Pearson correlation coefficients

Subsample of \(N=16=\text{approx.} \, 27.1\%\) children with autism of the total sample of \(N=59\) children

- M: My child speaks a lot now (sd=1.9) (df=1; \(F=6.89; p<.05\))
- M: Attention and concentration of my child are very well (sd=.9) (df=1; \(F=11.75; p=.002\))
- M: The expression of my child's emotions are mostly calm (sd=1.2) (df=1; \(F=8.56; p<.01\))
- M: My child is able to communicate well (sd=1.5) (df=1; \(F=4.50; p<.05\))
- M: The expression of my child's emotions are relaxed (sd=0.9) (df=1; \(F=8.01; p<.01\))
Temporary Results of the Controlled Longitudinal Study 1998-2008

Similarities between **Mother**’s and **Father**’s View of Social Interaction of their Oppositional Aggressive Child before and after Theraplay

Method: 6-point rating scale. Statistics: Mean, Pearson correlation coefficients

**Subsample of** $N=16$=approx. 27.1% oppositional aggressive children of the total sample of $N=59$ children

<table>
<thead>
<tr>
<th></th>
<th>Start of Therapy</th>
<th>End of Therapy</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Degree of Change</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M: My child speaks a lot now (sd=1.9) (df=1; F=6.89; p&lt;.05)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F: My child speaks a lot now (sd=2.0) (corr. $r=.16$)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M: Attention and concentration of my child are very well (sd=.9) (df=1; F=11.75; p=.002)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F: Attention and concentration of my child are very well (sd=.7) (corr. $r=.08$)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M: The expression of my child’s emotions are mostly calm (sd=1.2) (df=1; F=8.56; p&lt;.01)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F: The expression of my child’s emotions are mostly calm (sd=1.2) (corr. $r=.52$)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M: My child is able to communicate well (sd=1.5) (df=1; F=4.50; p&lt;.05)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F: My child is able to communicate well (sd=1.7) (corr. $r=.10$)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Temporary Results of the Controlled Longitudinal Study 1998-2008
Change of Home Behavior of Oppositional Aggressive Children after Theraplay out of Mother’s View
Method: 6-point rating scale. Statistics: Mean, Pearson correlation coefficients

Subsample of $N=16=approx. 27.1\%$ oppositional aggressive children of the total sample of $N=59$ children

- $\bigotimes$ - M: I am loved by my child (corr. M/F: $r=-.36$)
- $\bigotimes$ - M: child is self-confident at home (corr. M/F: $r=-.48$)
- M: is happy, cheerful at home (corr. M/F: $r=.22$)
- $\blacktriangle$ - M: child has strong mood swings home (corr. M/F: $r=.63$)
- $\blacktriangle$ - M: child is continuously well-tempered (corr. M/F: $r=.22$)
- $\bigdiamond$ - M: my child is very calm at home (corr. M/F: $r=.68$)

<table>
<thead>
<tr>
<th>Degree of Change</th>
<th>Start of Therapy</th>
<th>End of Therapy</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 = very bad</td>
<td>2,6</td>
<td>2,4</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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Temporary Results of the Controlled Longitudinal Study 1998-2008
Change of Home Behavior of Aggressive Children after Theraplay out of Father’s View

Method: 6-point rating scale. Statistics: Mean, Pearson correlation coefficients
GLM repeated measurement of variance
(Differences between mother’s and father’s view are not significant)

Subsample of $N=16$=approx. 27.1% oppositional aggressive children of the total sample of $N=59$ children

<table>
<thead>
<tr>
<th></th>
<th>Degree of Change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>start of therapy</td>
</tr>
<tr>
<td>F: I am loved by my child</td>
<td>1,2</td>
</tr>
<tr>
<td>F: child is self-confident at home</td>
<td>3,5</td>
</tr>
<tr>
<td>F: child is happy, cheerful at home</td>
<td>3,5</td>
</tr>
<tr>
<td>F: child has strong mood swings at home</td>
<td>4,2</td>
</tr>
<tr>
<td>F: is continuously well-tempered at home</td>
<td>2,2</td>
</tr>
</tbody>
</table>

(corr. M/F: $r=-.36$)
(corr. M/F: $r=-.48$)
(corr. M/F: $r=.22$)
(corr. M/F: $r=.22$)
(corr. M/F: $r=.63$)
(corr. M/F: $r=-.68$)
Temporary Results of the Controlled Longitudinal Study 1998-2008

Improvement of the Abilities of Oppositional Aggressive Children after Theraplay

Method: 6-point rating scale.
Statistics: Mean, SD, Pearson Correlation Coefficients Mother/Father

Subsample of N=16=approx. 27,1% oppositional aggressive children of the total sample of N=59 children

<table>
<thead>
<tr>
<th>Ability</th>
<th>Mother's View</th>
<th>Father's View</th>
</tr>
</thead>
<tbody>
<tr>
<td>The attention of my child</td>
<td>5.1</td>
<td>5.4</td>
</tr>
<tr>
<td>My child's willingness to accept body contact of others</td>
<td>4.3</td>
<td>4.9</td>
</tr>
<tr>
<td>My child's self-confidence</td>
<td>4.6</td>
<td>4.9</td>
</tr>
<tr>
<td>My child's trust in other people</td>
<td>4.6</td>
<td>4.9</td>
</tr>
<tr>
<td>My child's ability to feel needs/wishes</td>
<td>4.8</td>
<td>4.8</td>
</tr>
<tr>
<td>My child's confidence</td>
<td>4.7</td>
<td>4.5</td>
</tr>
</tbody>
</table>

Mean of child's abilities scaled by mother and father
1-2 = did deteriorate 3-4 = remain the same 5-6 = did improve
### Temporary Results of the Controlled Longitudinal Study 1998-2008

**Improvement of Parent’s Feelings after their Oppositional Aggressive Child got Theraplay**

**Method:** 6-point rating scale  
**Statistics:** Mean, SD, Pearson Correlation Coefficients Mother/Father

---

**Subsample of** $N=16$ = approx. 27.1% oppositional aggressive children of the total sample of $N=59$ children

<table>
<thead>
<tr>
<th>Statement</th>
<th>Father's View</th>
<th>Mother's View</th>
</tr>
</thead>
<tbody>
<tr>
<td>Since the therapy I can handle my child more relaxed</td>
<td>4.4</td>
<td>5.5</td>
</tr>
<tr>
<td>(sd=0.5) (corr. $r=0.54$)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Therapy made it possible to handle my child better</td>
<td>4.3</td>
<td>5.3</td>
</tr>
<tr>
<td>(sd=1.1) (corr. $r=0.02$)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I feel I'm accepted by the therapist</td>
<td>4.1</td>
<td>5.1</td>
</tr>
<tr>
<td>(sd=1.0) (corr. $r=0.32$)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The therapy helped me and my child</td>
<td>4.2</td>
<td>4.8</td>
</tr>
<tr>
<td>(sd=1.9) (corr. $r=0.00$)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>In comparison to the last interview I feel relieved</td>
<td>3.8</td>
<td>4.7</td>
</tr>
<tr>
<td>(sd=0.6) (corr. $r=0.57$)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The attachment between my child and me improved by Theraplay</td>
<td>4.2</td>
<td>4.7</td>
</tr>
<tr>
<td>(sd=1.5) (corr. $r=0.36$)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

**Mean of mother's and father's feelings after child's change**  
1-2 = did deteriorate  3-4 = remain the same  5-6 = did improve
Temporary Results of the Controlled Longitudinal Study 1998-2008

Increasing Change of Mother’s Attitudes after Theraplay of her Oppositional Aggressive Child

Mothers of $N=16$ oppositional refusal aggressive children


Statistics: Mean, SD, GLM_Variance analysis with repeated measurement

- 36. generally satisfied with my life (sd=0.9) (F=.79, df=1, p=3889)
- 22: satisfaction from having children (sd=0.7) (F=.09, df=1, p=7719)
- 42: my spouse and I work as a team (sd=1.3) (F=.42, df=1, p=5314)
- 75: a foto of my child in my wallet (sd=1.6) (F=.98, df=1, p=3444)

Degree of Change
(statistically not significant)

1 = strongly disagree to 4 = strongly agree
Temporary Results of the Controlled Longitudinal Study 1998-2008
Decreasing Change of Mother’s Attitudes after Theraplay of her Oppositional Aggressive Child

Mothers of $N=16$ oppositional refusal aggressive children

Statistics. Mean, SD, GLM_Variance analysis with repeated measurement

- • 05: I spend much time with my child (sd=.8) (df=1; f=1,60; p>.05; n.s.)
- ▲ 03: I have much satisfaction from having children (sd=.5) (df=1; f=4,94; p<.05)
- ■ 41: I'm involved in my child's activities (sd=1.0) (df=1; F=1,56; p>.05)
- ◦ 17: I get enjoyment from all aspects of life (sd=.8) (df=1; f=1,00; p>.05 n.s.)
- × 48: Being a parent is most important (sd=1.1) (df=1; f=1,01; p>.05 n.s.)

Degree of Change
(statistically mostly not significant)
4 = strongly agree to 1 = strongly disagree

start of therapy  end of therapy

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5.3
Shy insecure Children in Germany after Theraplay
Preliminary Results of Two Studies to Evaluate the Effectiveness of Theraplay on Autistic Infants and Preschool Children

Classified in DSM-IV
315.31 Mixed Receptive-Expressive Language Disorder
300.02 Generalized Anxiety Disorder
300.23 Social Anxiety Disorder

Classified in ICD-10
F80.0 Articulation Disorder
F80.1 Expressive and ... F80.2 Receptive Language Disorder
F93.2 Social Anxiety Disorder Beginning in Infancy
5.3

Shy Insecure Children and Their Parents after Theraplay

• **Size of subgroup of the total sample**
  
  $N=62$ shy insecure children
  
  = 30.2% of the total sample of $N=205$ children

• **Age of the shy insecure children**
  
  approx. 4;07 yrs. = the mean age of these children
  
  approx. 1;10 yrs. = the age of the youngest child
  
  approx. 8;01 yrs. = the age of the oldest child at start of therapy

• **Gender of the shy insecure children**
  
  40 boys : 22 girls
  
  Ratio boys : girls = approx. 1.8 : 1

• **Number of Theraplay sessions**
  
  approx. 20 sessions
  
  (41 sessions = longest therapy to an autistic child)

  There is a large degree of homogeneity of variance in both studies
Multi-Center Study 2000-2002
Family Structure of \( N=62 \) Shy Insecure Children

- **Family status of children**
  \( N=50 = \text{approx. 81\% legitimate children} \)
  \( N=10 = \text{approx. 16\% illegitimate, but children by birth} \)
  \( N=2 = \text{approx. 3\% foster or adoptive children} \)

- **Marital status of the child’s mother** (\( N=1 \) no answer)
  \( N=42 = \text{approx. 69\% married mothers} \)
  \( N=6 = \text{approx. 10\% unmarried mothers living together with a partner} \)
  \( N=6 = \text{approx. 10\% single mothers} \)
  \( N=7 = \text{approx. 11\% divorced, widowed, separated mothers} \)

- **Upbringing of the children** (\( N=1 \) no answer)
  \( N=45 = \text{approx. 74\% both parents are involved} \)
  \( N=16 = \text{approx. 26\% single parent is involved} \)

There is a large degree of homogeneity of variance in both studies.

Temporary Results of the Controlled Longitudinal Study 1998-2008
Multi-Center Study 2000-2002
Marked Degree of Symptoms
of Communication Disorders of Shy Insecure Children
Method: CASCAP-D (Döpfner et al., 1999) 4-point scale. Statistics: Mean, SD

Subsample of N=62=approx. 30,2% shy insecure children
of the total sample of N=205 children
Method: CASCAP-D (Döpfner et al., 1999)

<table>
<thead>
<tr>
<th>Disorder</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Articulation disorder (sd=0.7)</td>
<td>2.7</td>
</tr>
<tr>
<td>Expressive language disorder (sd=0.9)</td>
<td>2.7</td>
</tr>
<tr>
<td>Receptive language disorder (sd=0.9)</td>
<td>2.4</td>
</tr>
<tr>
<td>Selective mutism (sd=0.9)</td>
<td>1.6</td>
</tr>
<tr>
<td>Mental retardation (sd=0.5)</td>
<td>1.4</td>
</tr>
</tbody>
</table>

1 = not noticeable  strongly marked = 4

Mean of marked degree of symptoms at start of therapy

Children of multi-center study

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Temporary Results of the Controlled Longitudinal Study 1998-2008
Marked Degree of Symptoms of Communication Disorders of Shy Insecure Children

Method: CASCAP-D (Döpfner et al., 1999) 4-point scale. Statistics: Mean, SD.

Subsample of N=21=approx. 35,6% shy insecure children of the total sample of N=59 children

- articulation disorder (sd=0.7) 2.7
- expressive language disorder (sd=0.9) 3.1
- receptive language disorder (sd=0.9) 2.8
- selective mutism (sd=0.9) 1.6
- mental retardation (sd=0.5) 1.5

Mean of marked degree of symptoms at start of therapy
1 = not noticeable        strongly marked = 4
Marked Degree of Symptoms of Behavioral Disorders of Shy Insecure Children

Method: CASCAP-D (Döpfner et al., 1999) 4-point scale. Statistics: Mean, SD.

Subsample of N=62=approx. 30.2% shy insecure children of the total sample of N=205 children

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>shy insecure timid (sd=0.5)</td>
<td>3.4</td>
<td></td>
</tr>
<tr>
<td>lack of self-confidence (sd=1.2)</td>
<td>2.6</td>
<td></td>
</tr>
<tr>
<td>unwilling to cooperate (sd=1.3)</td>
<td>2.5</td>
<td></td>
</tr>
<tr>
<td>attention deficit (sd=1.3)</td>
<td>2.4</td>
<td></td>
</tr>
<tr>
<td>socially withdrawn (sd=1.2)</td>
<td>2.2</td>
<td></td>
</tr>
<tr>
<td>being suspicious (sd=1.2)</td>
<td>2.2</td>
<td></td>
</tr>
<tr>
<td>oppositional refusive (sd=1.3)</td>
<td>2.1</td>
<td></td>
</tr>
</tbody>
</table>

1 = not noticeable

Mean of marked degree of symptoms at start of therapy

1 = not noticeable

strongly marked = 4
Temporary Results of the Controlled Longitudinal Study 1998-2008

Marked Degree of Symptoms of Behavioral Disorders of Shy Insecure Children

Method: CASCAP-D (Döpfner et al., 1999) 4-point scale. Statistics: Mean, SD.

Subsample of N=21=approx. 35,6% shy insecure children of the total sample of N=59 children

Method: CASCAP-D (Döpfner et al., 1999)

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Control Group Mean</th>
<th>Therapy Group Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>shy insecure timid (sd=0.7)</td>
<td>1,1</td>
<td>2.5</td>
</tr>
<tr>
<td>lack of self-confidence (sd=0.4)</td>
<td>1,0</td>
<td>2.6</td>
</tr>
<tr>
<td>unwilling to cooperate (sd=1.1)</td>
<td>1,1</td>
<td>2.1</td>
</tr>
<tr>
<td>attention deficit (sd=0.9)</td>
<td>1,2</td>
<td>2.4</td>
</tr>
<tr>
<td>socially withdrawn (sd=0.8)</td>
<td>1,0</td>
<td>1.7</td>
</tr>
<tr>
<td>being suspicious (sd=0.7)</td>
<td>1,0</td>
<td>1.3</td>
</tr>
<tr>
<td>oppositional refusive (sd=0.7)</td>
<td>1,0</td>
<td>1.2</td>
</tr>
</tbody>
</table>

Mean of marked degree of symptoms at start of therapy

1 = not noticeable
strongly marked = 4
Temporary Results of the Controlled Longitudinal Study 1998-2008

Abilities of Shy Insecure Children
out of Parent’s View before Therapy

Method: 6-point rating scale
Statistics: Mean, SD, Pearson Correlation Coefficients Mother/Father

Subsample of $N=21=\text{approx. 35,6\% shy insecure children}$
out of the total sample of $N=59$ children

- My child is willing to cooperate (m-$sd=1.2$; f-$sd=1.2$; corr. M/F: $r=.62$)
  - Mean of child's abilities scaled by mother and father
    - father's view
    - mother's view
    - $1=\text{very bad}$
    - $6=\text{very well}$

- Mental versatility of the child (m-$sd=0.9$; f-$sd=1.2$; corr. M/F: $r=.44$)
  - Mean of child's abilities scaled by mother and father

- Child's interest (m-$sd=1.4$; f-$sd=1.3$; corr. M/F: $r=.38$)
  - Mean of child's abilities scaled by mother and father

- Language comprehension (m-$sd=1.3$; f-$sd=1.3$; corr. M/F: $r=.57$)
  - Mean of child's abilities scaled by mother and father

- Is willing to communicate (m-$sd=1.3$; f-$sd=1.1$; corr. M/F: $r=.04$)
  - Mean of child's abilities scaled by mother and father

- Child's attention (m-$sd=1.3$; f-$sd=1.2$; corr. M/F: $r=.19$)
  - Mean of child's abilities scaled by mother and father

- Child's concentration (m-$sd=1.2$; f-$sd=1.2$; corr. M/F: $r=.04$)
  - Mean of child's abilities scaled by mother and father

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Temporary Results of the Controlled Longitudinal Study 1998-2008
Shy Insecure Children’s Behavior at Home out of Parent’s View before Therapy
Method: 6-point rating scale.
Statistics: Mean, SD, Pearson Correlation Coefficients Mother/Father

Subsample of N=21=approx. 35,6% shy insecure children of the total sample of n=59 children

6-point rating scale

- I am loved by my child (m-sd=0.4; f-sd=0.7; corr. M/F: r=.47)
  - father's view
  - mother's view

- generally self-confident at home (m-sd=0.9; f-sd=0.9; corr. M/F: r=.12)

- generally happy, cheerful at home (m-sd=0.8; f-sd=0.5; corr. M/F: r=.69)

- generally has strong mood swings (m-sd=1.0; f-sd=1.4; corr. M/F: r=.33)

- child is continuously well-tempered (m-sd=1.0; f-sd=0.9; corr. M/F: r=.69)

- child is very calm at home (m-sd=1.7; f-sd=1.1; corr. M/F: r=.64)

Mean of child's behavior at home scaled by mother and father
1=very bad
very well=6
Multi-Center Study 2000-2002
Decrease of Symptoms after Theraplay
N=62 Shy Insecure Children
Method: CASCAP-D, 4-point scale. Statistics: Mean, SD, GLM_repeated measurement of variance

Degree of Change
4 = strongly marked to 1 = not noticeable

- shy insecure timid (sd=0.7) (p=.0001***)
- lack of self-confidence (sd=1.2) (p=.0001***)
- unwilling to cooperate (sd=1.2) (p=.0001***)
- attention deficit (sd=1.1) (p=.0001***)
- socially withdrawn (sd=1.1) (p=.0001***)
- being suspicious (sd=1.1) (p=.0001***)
- oppositional refusive (sd=1.3) (p=.0001***)

start of therapy end of therapy
Temporary Results of the Controlled Longitudinal Study 1998-2008

Decrease of Symptoms after Theraplay

N=21 Shy Insecure Children

Method: CASCAP-D, 4-point scale. Statistics: Mean, SD, GLM_repeated measurement of variance

Degree of Change

4 = strongly marked to 1 = not noticeable

- shy insecure timid (sd=0.9) (p=.0001***)
- lack of self-confidence (sd=0.4) (p=.0001***)
- unwilling to cooperate (sd=0.9) (p=.0049**)
- attention deficit (sd=0.8) (p=.0096**)
- socially withdrawn (sd=0.9) (p=.0256*)
- being suspicious (sd=0.7) (p=n.s.)
- oppositional refusive (sd=0.7) (p=n.s.)
Multi-Center study 2000-2002

Co-variation of the Communication Disorders when Symptoms of Behavioral Disorders are Reduced

N=62 Shy Insecure Children after Theraplay

Method: CASCAP-D, 4-point scale. Statistics: Mean, SD, GLM_repeated measurement of variance

<table>
<thead>
<tr>
<th>Disorder</th>
<th>Start of Therapy</th>
<th>End of Therapy</th>
<th>Degree of Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Articulation disorder</td>
<td>2,8</td>
<td>2,2</td>
<td>Strongly marked</td>
</tr>
<tr>
<td>Expressive language disorder</td>
<td>2,8</td>
<td>2,4</td>
<td>Not noticeable</td>
</tr>
<tr>
<td>Receptive language disorder</td>
<td>2,8</td>
<td>2,2</td>
<td>Strongly marked</td>
</tr>
<tr>
<td>Selective mutism</td>
<td>2,8</td>
<td>2,2</td>
<td>Not noticeable</td>
</tr>
<tr>
<td>Mental retardation</td>
<td>2,8</td>
<td>2,2</td>
<td>Strongly marked</td>
</tr>
</tbody>
</table>
Temporary Results of the Controlled Longitudinal Study 1998-2008
Co-variation of the Communication Disorders when Symptoms of Behavioral Disorders are Reduced
N=21 Shy Insecure Children after Theraplay
Method: CASCAP-D, 4-point scale. Statistics: Mean, SD, GLM_repeated measurement of variance

Degree of Change
(mostly statistically not significant up to now)
4 = strongly marked to 1 = not noticeable

- articulation disorder (sd=1.2) (p=.1045 n.s.)
- expressive language disorder (sd=1.2) (p=1335 n.s.)
- receptive language disorder (sd=1.0) (p=.0044**)
- selective mutism (sd=0.7) (p=n.s.)
- reduced intellect (sd=0.4) (p=n.s.)

start of therapy  end of therapy
Temporary Results of the Controlled Longitudinal Study 1998-2008
Outcome of Theraplay from Parents’ Point of View
Parents of N=21 Shy Insecure Children
Method: 6-point rating scale. Statistics: Mean, SD.

Degree of Assessment of the Outcome of Theraplay on a 6-point rating scale

- Mean of mothers (sd=1.3) = 4.9
- Mean of parents (sd=1.2) = 4.9
- Mean of fathers (sd=1.1) = 4.8
- Theraplay therapist (sd=0.7) = 5.1

1=no outcome                     very successful=6

Outcome of Theraplay out of therapist's view
Outcome of Theraplay out of mother's view
Outcome of Theraplay out of parent's view (mean)
Outcome of Theraplay out of father's view
Temporary Results of the Controlled Longitudinal Study 1998-2008
Parents with Shy Insecure Children
Frequency of Participating in Therapeutic Sessions
Parent’s participation in sessions observing child’s change of symptoms

Frequency of Participating in Theraplay Sessions
Parents of N=21 Shy Insecure Children

<table>
<thead>
<tr>
<th>number of sessions</th>
<th>mothers</th>
<th>fathers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>15</td>
<td>0</td>
</tr>
</tbody>
</table>

Number of Theraplay sessions in average (9=the shortest, 25 the longest session)

- mothers: 15 sessions (SD=7.9) (N=1 never participated)
- fathers: 1 session (SD=2.6) (N=10 never participated)
Temporary Results of the Controlled Longitudinal Study 1998-2008
Change of Abilities of Shy Insecure Children after Theraplay out of Mother’s View

Method: 6-point rating scale. Statistics: Mean, Pearson correlation coefficients

Subsample of $N=21=\text{appr. 35,6\% shy insecure children}$

of the total sample of $N=59$ children

- ■ M: my child's interest
  (corr. M/F: $r=.38$)
- ■ M: language comprehension
  (corr. M/F: $r=.57$)
- ▲ M: ch. is willing to cooperate
  (corr. M/F: $r=.62; p<.05$)
- ■ M: mental versatility
  (corr. M/F: $r=.44$)
- ■ M: ch. is willing to communicate
  (corr. M/F: $r=.04$)
- ▲ M: child's concentration
  (corr. M/F: $r=.17$)
- ◇ M: child's attention
  (corr. M/F: $r=.19$)
Temporary Results of the Controlled Longitudinal Study 1998-2008
Change of Abilities of Shy Insecure Children after Theraplay out of Father’s View

Method: 6-point rating scale. Statistics: Mean, Pearson correlation coefficients
GLM repeated measurement of variance

Subsample of \( N=21 \approx 35.6\% \) shy insecure children of the total sample of \( N=59 \) children

<table>
<thead>
<tr>
<th>Start of Therapy</th>
<th>End of Therapy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Degree of Change</td>
<td></td>
</tr>
<tr>
<td>1 = very bad</td>
<td>6 = very well</td>
</tr>
<tr>
<td>1 = very bad</td>
<td>6 = very well</td>
</tr>
</tbody>
</table>

- F: my child's interest
  - (corr. M/F: \( r=.38 \), n.s.)
- F: language comprehension
  - (corr. M/F: \( r=.57 \), n.s.)
- F: child is willing to cooperate
  - (corr. M/F: \( r=.62; p<.05 \))
- F: mental versatility of child
  - (corr. M/F: \( r=.44 \); n.s.)
- F: is willing to communicate
  - (corr. M/F: \( r=.04 \), n.s.)
- F: child's concentration
  - (corr. M/F: \( r=.17 \); n.s.)
- F: child's attention
  - (corr. M/F: \( r=.19 \), n.s.)
Temporary Results of the Controlled Longitudinal Study 1998-2008
Change of Interaction of Shy Insecure Children after Theraplay out of Mother’s View
Method: 6-point rating scale. Statistics: Mean, Pearson correlation coefficients

Subsample of $N=21$=approx. 35.6% shy insecure children of the total sample of $N=59$ children

- M: My child asks for fulfilling wishes often (sd=.9) (df=1; $f=1.77$; $p>.05$ n.s.)
- M: My child has a self-confident behavior at the moment (sd=.8) (df=1; $F=6.55$; $p<.01$)
- M: My child is being scared of strangers (sd=1.5) (df=1; $F=6.55$; $p<.01$)
- M: My child speaks a lot (sd=1.8) (df=1; $f=1.78$; $p>.05$ n.s.)
- M: My child communicates very well (sd=1.4) (df=1; $f=6.15$; $p<.05$)
- M: My child is mostly shy and insecure (sd=1.4) (df=1; $f=2.25$; $p>.05$ n.s.)
Temporary Results of the Controlled Longitudinal Study 1998-2008

Similarities between Mother’s and Father’s View of Social Interaction of their Shy Insecure Child before and after Theraplay

Method: 6-point rating scale. Statistics: Mean, Pearson correlation coefficients

| Subsample of N=21=approx. 35.6% shy insecure children of the total sample of N=59 children |
| Degree of Change |

- **M:** My child asks for fulfilling wishes (sd=.9) (p>.05 n.s.)
- **F:** My child asks for wishes often (sd=1.0) (corr.r=.43)
- **M:** My child has self-confident behavior (sd=.8) (F=6.55; p<.01)
- **F:** My child has a self-confident behavior (sd=1.1) (corr. r=.03)
- **M:** My child is scared of strangers (F=6.55, p<.01)
- **F:** My child is scared of strangers (sd=1.5) (corr.r=.00)
- **M:** My child speaks a lot (sd=1.8) (df=1; F=1.78; p>.05)
- **F:** My child speaks a lot (sd=1.5) (corr. r=.03)
- **M:** My child communicates very well (sd=1.4) (df=1; f=6.15;)

### Degree of Change

- **very bad = 1**
- **very well = 6**

<table>
<thead>
<tr>
<th>Start of therapy</th>
<th>End of therapy</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M: My child asks for fulfilling wishes (sd=.9) (p&gt;.05 n.s.)</td>
</tr>
<tr>
<td></td>
<td>F: My child asks for wishes often (sd=1.0) (corr.r=.43)</td>
</tr>
<tr>
<td></td>
<td>M: My child has self-confident behavior (sd=.8) (F=6.55; p&lt;.01)</td>
</tr>
<tr>
<td></td>
<td>F: My child has a self-confident behavior (sd=1.1) (corr. r=.03)</td>
</tr>
<tr>
<td></td>
<td>M: My child is scared of strangers (F=6.55, p&lt;.01)</td>
</tr>
<tr>
<td></td>
<td>F: My child is scared of strangers (sd=1.5) (corr.r=.00)</td>
</tr>
<tr>
<td></td>
<td>M: My child speaks a lot (sd=1.8) (df=1; F=1.78; p&gt;.05)</td>
</tr>
<tr>
<td></td>
<td>F: My child speaks a lot (sd=1.5) (corr. r=.03)</td>
</tr>
<tr>
<td></td>
<td>M: My child communicates very well (sd=1.4) (df=1; f=6.15;)</td>
</tr>
</tbody>
</table>
Temporary Results of the Controlled Longitudinal Study 1998-2008
Change of Home Behavior of Shy Insecure Children after Theraplay out of Mother’s View

Method: 6-point rating scale. Statistics: Mean, Pearson correlation coefficients
GLM repeated measurement of variance (Differences over time are not significant)

Subsample of N=21=approx. 35,6% shy insecure children of the total sample of N=59 children

- M: I am loved by my child (corr. M/F: r=.47)
- M: my child is self-confident at home (corr. M/F: r=.12)
- M: I am happy, cheerful at home (corr. M/F: r=.69)
- M: has strong mood swings at home (corr. M/F: r=.33)
- M: is continuously well-tempered at home (corr. M/F: r=.69)
- M: my child is very calm at home (corr. M/F: r=.04)

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Temporary Results of the Controlled Longitudinal Study 1998-2008
Change of Home Behavior of Shy Insecure Children after Theraplay out of Father’s View

Method: 6-point rating scale. Statistics: Mean, Pearson correlation coefficients
GLM_repeated measurement of variance (Diff. over time and between M/F are not significant)

Subsample of N=21=approx. 35.6% shy insecure children of the total sample of N=59 children

- F: I am loved by my child (corr. M/F: r=.47)
- F: is self-confident at home (corr. M/F: r=.12)
- F: is happy, cheerful at home (corr. M/F: r=.69)
- F: child has strong mood swings at home (corr. M/F: r=.33)
- F: is continuously well-tempered at home (corr. M/F: r=.69)
- F: my child is very calm at home (corr. M/F: r=.04)

Degree of Change
1 = very bad                       very well = 6

start of therapy                  end of therapy
Temporary Results of the Controlled Longitudinal Study 1998-2008
Improvement of the Abilities of Shy Insecure Children after Theraplay
Method: 6-point rating scale.
Statistics: Mean, SD, Pearson Correlation Coefficients Mother/Father

Subsample of \( N=21 \approx \text{approx. } 35.6\% \) of shy insecure children of the total sample of \( N=59 \) children

- My child's confidence in others improved (sd=.8) (corr. r=.22) [4.4, 4.8]
- My child's self-confidence improved (sd=.6) (corr. r=.02) [4.5, 4.8]
- My child's courage improved (sd=1.0) (corr. r=.00) [4.5, 4.8]
- My child's ability to handle feelings improved (sd=1.0) (corr. r=.38) [4.4, 4.8]
- My child's confidence improved (sd=.7) (corr. r=.13) [4.5, 4.8]
- My child's contact with others improved (sd=.6) (corr. r=.02) [4.5, 4.8]
- My child's attention improved (sd=.8) (corr. r=.40) [4.7, 4.9]

Mean of child's abilities scaled by mother and father
1-2 = did deteriorate  3-4 = remain the same  5-6 = did improve
Temporary Results of the Controlled Longitudinal Study 1998-2008

Improvement of Parent’s Feelings after their Shy Insecure Child got Theraplay

Method: 6-point rating scale.
Statistics: Mean, SD, Pearson Correlation Coefficients Mother/Father

Subsample of \( N=21 \)=approx. 35.6% shy insecure children of the total sample of \( N=59 \) children

<table>
<thead>
<tr>
<th>Statement</th>
<th>Father's View</th>
<th>Mother's View</th>
</tr>
</thead>
<tbody>
<tr>
<td>I feel to be accepted by the therapist (sd=.7) (corr. ( r=.78 ))</td>
<td>5.7</td>
<td>4.8</td>
</tr>
<tr>
<td>The therapy of my child helped me and my child (sd=1.3) (corr. ( r=.04 ))</td>
<td>5.1</td>
<td>4.5</td>
</tr>
<tr>
<td>The therapy of my child gives me support (sd=1.5) (corr. ( r=.92 ))</td>
<td>4.9</td>
<td>4.8</td>
</tr>
<tr>
<td>In comparison to the last interview I fell relieved (sd=1.5) (corr. ( r=.49 ))</td>
<td>4.4</td>
<td>4.2</td>
</tr>
<tr>
<td>The therapy made it possible to better handle my child (sd=1.8) (corr. ( r=.64 ))</td>
<td>4.7</td>
<td>4.3</td>
</tr>
</tbody>
</table>

Mean of mother's and father's feelings after child's change
1-2 = did deteriorate 3-4 = remain the same 5-6 = did improve

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Association for Play Therapie
Temporary Results of the Controlled Longitudinal Study 1998-2008
Increasing Changes of Mother’s Attitudes after Theraplay of her Shy Insecure Child
Mothers of N=21 shy insecure children
Statistics. Mean, SD, GLM_Variance analysis with repeated measurement

09: if I say no to my child, I try to explain (sd=0.9) (F=3.41, df=1, p=.0819*)

41: very involved in my child's activity (sd=1.0) (F=0.71, df=1, p=.4113 n.s.)

01: child tells me if sth. is bothering (sd=0.8) (F=17.38, df=1, p=.0006***)

20: child tells me all about friends (sd=0.9) (F=2.35, df=1, p=.8116 n.s.)

Degree of Change
1=strongly disagree to 4=strongly agree

start of therapy end of therapy
Temporary Results of the Controlled Longitudinal Study 1998-2008

Decreasing Changes Mother’s Attitudes after Theraplay of her Shy Insecure Child

Mothers of N=21 shy insecure children


Statistics: Mean, SD, GLM_Variance analysis with repeated measurement

<table>
<thead>
<tr>
<th>Start of Therapy</th>
<th>End of Therapy</th>
</tr>
</thead>
<tbody>
<tr>
<td>48: Being a parent is most important in life (sd=1.0) (F=1.22, df=1, p=.248, n.s.)</td>
<td></td>
</tr>
<tr>
<td>58: I wonder how I would survive if anything happens to my child (sd=1.1) (F=0.43, df=1, p=.521, n.s.)</td>
<td></td>
</tr>
<tr>
<td>23: If I don't have more time away from my child I'll go crazy (sd=0.6) (F=2.17, df=1, p=.158)</td>
<td></td>
</tr>
<tr>
<td>55: I wonder if I did the right thing having children (sd=0.8) (F=.76, df=1, p=.345)</td>
<td></td>
</tr>
<tr>
<td>27: Being parent isn't as satisfying as I thought (sd=0.6) (F=2.06, df=1, p=169)</td>
<td></td>
</tr>
</tbody>
</table>

Degree of Change

4 = strongly agree to 1 = strongly disagree