

## CHAPTER 5

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# Evaluating the Effectiveness of Theraplay

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Theraplay<sup>®1</sup> is a directive, interactive short-term play therapy, the aim of which is to help behavior disordered, attachment disordered, developmentally disabled, resistant, or traumatized children on their relevant level of development to change the symptoms of their interactive behavior. Theraplay can help children raise their self-esteem, gain trust in themselves and others, regulate their affect, and adapt themselves to their caregivers and others.

### THERAPLAY

#### Directive Play Therapy

When hearing the term “play therapy,” many therapists first think of nondirective play therapy as described by Axline (1947) or Moustakas (1953, 1973); role playing with puppets or drawings (Oaklander, 1978); the sand tray as play medium (Lowenfeld, 1969); or client-centered play therapy (Landreth, 2002; Goetze, 2002). Therapists may imagine puppets, sand trays, or toys with which children can express themselves and their problems. This kind of play has the aim of substituting for therapeutic talking, as young children cannot express their problems or traumatic

events by verbalizing them or may refuse to talk. The therapist participates in the child's play and interprets his or her feelings or thoughts. Theraplay is different from this kind of play therapy.

Theraplay is *directive*, led by the therapist who is responsible for the course of the therapeutic play. Theraplay is *interactive*, so no sand tray or toys are used. The therapist interacts playfully with the child, offers rituals and surprising elements, seeks eye contact, and communicates both verbally and nonverbally, using gesture and pantomime to engage emotionally the right hemisphere of the child's brain. The therapist uses play to initiate and maintain a relationship with the child, reacting with warmth and empathy based on the needs of the child. The therapist shares positive affect, improves attachment behavior, is vivid and nurturing, and touches the child while playing like parents do (Jernberg & Booth, 1999). The activities are introduced at the child's developmental level and fit his or her affect. The therapist regulates the arousal of the child by quieting, soothing, comforting, and structuring or through exciting or challenging games. Counting the number of sessions, Theraplay is a *short-term play therapy*.

### Model

Ann M. Jernberg, PhD, a Heidelberg-born clinical psychologist, developed Theraplay in the 1960s, having in mind the model of a "healthy mother-child relationship" (Jernberg, 1979) and what Winnicott (1958) called "a good enough mother." After observing more than 400 mother-child dyads as reported by Munns (2003), Jernberg found five essential dimensions of interactive behavior in the natural mother-child dyads: structuring, challenging, engagement (stimulation), nurturing, and play. Theraplay is based on these dimensions. As a therapeutic treatment, Theraplay fosters an active, empathic, and playful relationship between child and therapist. The child changes perspective, learning to see him- or herself as being worthy and lovable and to see the world as a positive and interesting place. Parents have an active role in Theraplay and are encouraged to continue at home the interactive games they have seen and experienced.

### History of Theraplay

Theraplay and The Theraplay Institute in Chicago were developed by Jernberg. Since 1967, Theraplay has been used extensively within the framework of the American Head Start Program, in early intervention, in

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day care, in special education, in parenting skill programs, with hospitalized patients and in outpatient clinics, and especially in family therapy, not only in the United States but also in Australia, Canada, Finland, Germany, Great Britain, Hong Kong, Israel, Japan, South Korea, and South Africa.

### **Indications for Theraplay**

Theraplay has been shown to be particularly effective with children suffering from adjustment disorders, attachment disorders (e.g., adoptive or foster children), attention-deficit disorder and attention-deficit/hyperactivity disorder, social behavior disorders, autistic-like lack of social mutuality, mutism, shyness, and social anxiety. Theraplay has also been shown to be effective as an initial treatment to help developmentally disabled or difficult to treat children—for example, with diagnoses such as oppositional-defiant or those who are noncooperative, aggressive, reticent, or socially withdrawn—become more open to functional therapies designed to meet their specific problems.

## **THEORETICAL BACKGROUND**

On the one hand, a meaningful explanation as to why Theraplay works comes from the ethological research of Harlow and Harlow (1966), who described the important role of the mother, her way of emotional interaction, and their consequences on the development of young rhesus monkeys (even though the results cannot be directly applied to humans). On the other hand, there have been many scientific findings in neurobiology in the last decade, broadening what is known about the influence of positive emotional interaction during early childhood, about the close attachment and bonding between child and caregiver, and about the importance of positive emotion, play, and touch on the healthy development of the child. Research-based evidence allows formulation of hypotheses to explain why Theraplay is effective.

### **Neurobiology**

Currently, imaging methods such as positron emission tomography (PET) or functional magnetic resonance imaging (fMRI) offer evidence to suggest where information is encoded in the brain of a child as positive or negative events are experienced, as new knowledge is developed, and as

the child learns to regulate his or her affect (Schore, 1994, 2003). It is hypothesized that Theraplay changes the neural networks of a child. The plasticity of the child's brain and the related socioemotional functions play an important role in early childhood. Schore describes the ability of a child to regulate affect as originating in interaction with a responsive, regulating caregiver. In the absence of such attuned caregiving, the child is unable to achieve self-regulation; and disorders of the self occur that result in social interaction disorders. In *The Developing Mind* (1999), Siegel explains the importance of interpersonal relationships in the development of the growing infant's ways of thinking, experiencing, and behaving. As Schore (2003) also explains in his theory about the hierarchical change of the neural network, early childhood experiences that create negative interactive behavior may be turned around by later therapeutic intervention. Siegel and Hartzell (2003) offer a useful and easily understood description for parents: positive emotional interactions between caregiver and child may allow for development of new neurons in the hippocampus and more synapses in the prefrontal and orbitofrontal cortex of the right (emotional) hemisphere of the brain. New positive experiences lead to new positive behavior patterns. Learning in the context of positive emotional support, for instance by fun and play, is more effective than learning and exercising without emotional support. This fact gives further credence to the idea that Theraplay may effect positive and lasting change to the interactive behavior of children.

### **Attachment and Bonding**

Attachment theory (Bowlby, 1988, 1995; Brisch, 2003; Stern, 1974, 1986, 1995) explains how a child develops attachment to his or her caregiver who offers bonding, allowing an interpersonal relationship to develop between caregiver and child. Extensive research describes the positive influence of early attachment on later development (Goldberg, 2000; Hughes, 1998; Rutter, 1994; Waters, Weinfield, & Hamilton, 2000; Ziegenhain & Jacobsen, 1999). Reports of secure and insecure attachment of children are found in all cultures (van IJzendoorn & Sagi, 1999).

### **Play**

Early childhood play between a child and his or her caregiver is seen as an important element of healthy development and influences the pattern of later interactive behavior and relationships. Theraplay offers play, language, and interaction to the child at his or her respective lev-

els of social and emotional development, a mental starting place by which the child can become healthier (Munns, 2003). Theraplay replicates the typical interactive behavior of a mother during the early development of her child so that the emotional feelings and experiences of bonding between mother and child will be reactivated and positively changed in a nurturing atmosphere. The games offered will change with the growth and development of the child to more age-appropriate activities.

### **Touch**

This is another characteristic feature of Theraplay. Based on Jernberg's observations (Munns, 2003), touch has a fundamental importance in normal, healthy interactions between parents and their child. Brody (1978) practiced touch in her relationship-focused program of Developmental Play. The positive effect of loving, nurturing, and soothing touch has been confirmed by researchers (e.g., Montagu, 1986), especially by Field's extensive studies about the effect of touch (2001).

## **METHODS TO EVALUATE THE EFFECTIVENESS OF THERAPLAY**

Two research projects were carried out to evaluate the effectiveness of Theraplay in the German-speaking part of Europe. Both are field studies, and diagnoses, observations, and interviews were carried out in the usual therapeutic situation, rather than in a laboratory experiment.

### **Methodologies**

Two different studies were undertaken after conducting pilot studies in 1997. The first was a controlled longitudinal study (CLS) started in 1998 in Germany. A randomized sample of  $N = 60$  clinically symptomatic children with dual diagnoses was investigated and compared with a matched control of nonsymptomatic children of the same age and sex (CGN). Initially, the clinically symptomatic children were referred to the Phoniatic Paed-Audiologic Center in Heidelberg due to language or speech problems. In addition to communication disorders, the children were diagnosed with severe behavior disorders, which could have seriously hindered treatment of the speech-language disorders. Therefore, the children involved in this study were treated first with Theraplay to

reduce the symptoms of behavior disorders and to prepare them for the subsequent functional treatment of their language problems. The aim of treatment with Theraplay was to increase their attention, cooperation, and approachability.

The CLS children were evaluated repeatedly, and their parents were interviewed at different points of administration during the research period. A randomized half of the sample was diagnosed and their parents interviewed at the beginning of a 16-week waiting period. The other half of the sample was diagnosed and their parents interviewed, and treatment began immediately. Data for all subjects were gathered before, during, and after treatment with Theraplay and in a follow-up 2 years after discharge from treatment. The parent-child interaction was repeatedly observed using the Heidelberg Marschak Interaction Method (Ritterfeld & Franke, 1994) via videotape for systematic analysis by clinicians. All therapy sessions treating the children with Theraplay were videotaped in their entirety and were analyzed scaling each sequence by 42 operationalized criteria of interaction behavior. Each analysis was done by two trained clinicians, scaling independently to ensure inter-rater reliability. The parents were interviewed repeatedly and extensively at the same intervals of time as their children were tested.

The CLS was completed in January 2005, and the results were clinically and statistically highly significant. Due to the homogeneity of the speech-language-disordered population and the consistent therapy setting with the same therapist, the results show a very high internal, but also a low external validity. The high internal validity of the results indicates how effective Theraplay has been in these cases. Due to the low external validity, however, the results may not be generalized to other populations of patients.

Therefore, in 2000, a second project was undertaken, a multi-center study (MCS) in Germany and Austria. The research targeted replication of the CLS to evaluate the effectiveness of Theraplay on a wider scale of populations of patients. The patients of nine quite different therapeutic facilities were investigated for the MCS, including a center for handicapped children, a center for early intervention, an outpatient facility for ear, nose, and throat medicine, a special education facility for early intervention for language-delayed children, a kindergarten in a socially impoverished area, a family therapy psychological practice, and several practices of speech-language pathologists. By the end of 2004, 14 Theraplay therapists completed the treatment of  $N = 319$  children. The net sample of the MCS resulted in  $N = 291$  toddler and preschool children, ages 2 years, 6 months to 6 years, 11 months, with dual diagnoses of behavior

disorders and speech–language deficits or delay. The attrition of  $N = 28$  is explained in the section below about sample size.

### **Informed Consent**

All parents and caregivers received detailed information about Theraplay and the research project before giving informed written consent for their children to take part in the research project.

### **Research Questions**

The results of both studies, the CLS and MCS, answer a number of scientific questions. Out of these, only the results about the symptom-reducing effect of Theraplay and the duration of the therapy will be reported here. The following questions were addressed in evaluating the effectiveness of Theraplay:

- What kinds of symptoms were the children experiencing before treatment with Theraplay?
- How severe were the symptoms of these children before treatment using Theraplay in comparison with clinically nonsymptomatic children of the same age and sex?
- Are the disordered behavioral symptoms reduced by treatment with Theraplay? How much reduction was observed?
- Is the reduction of the symptoms clinically and statistically significant?
- Is the effect of the treatment with Theraplay maintained for at least 2 years after the end of the therapy?
- How many Theraplay sessions are needed to reach the therapeutic aim?

### **Sample Size**

The initially accumulated sample of the MCS contained  $N = 319$  clinically symptomatic children with dual diagnoses of behavior and speech–language disorders. The data were collected from nine different therapeutic facilities. Of these 319 children, 22 were eliminated from the sample because they were younger or older than the target group age of 2 years, 6 months to 6 years, 11 months at the start of treatment. In another six cases, the data about the psychopathological symptoms were not completely recorded. Therefore, the number of cases was reduced by  $N = 28$

from  $N = 319$  to a net sample of  $N = 291$  children. Most of the diagnoses were given by physicians, not by the Theraplay therapists. However, in some of the private practices, where no diagnosis was given by a physician, therapists who had been trained in assessing symptoms diagnosed the type and severity of the disorders.

The initial sample of the CLS included  $N = 68$  clinically symptomatic children with dual diagnoses of both developmental language or speech and severe behavior disorders. In eight cases, parents in the waiting-time control group (CGW) canceled the arranged therapy before it started. The remaining net sample contained  $N = 60$  toddler and preschool children up to 6 years, 11 months of age diagnosed with multiple disorders.

### Sample Structure

Participants in the CLS were randomly assigned to one of two subsamples, between which there was no significant difference. The variance of the investigated characteristics guaranteed the homogeneity of the two groups. Children in one of these two subsamples were assigned to a waiting-time control group (CGW). Children in this group waited 16 weeks after initial identification before beginning Theraplay treatment. In this way, the researchers could control for symptom change during the process of normal aging and development of disordered children. Participants in the other subsample began Theraplay treatment immediately. The accumulated sample of the MCS was also randomly divided into two subsamples to assess the homogeneity of the relevant characteristics. There was no significant difference found in relevant criteria of both samples, CLS and MCS.

Table 5.1 shows the size and the structure in sex and age of both samples: the MCS containing  $N = 291$  and the CLS containing  $N = 60$  clinically symptomatic children out of which  $N = 30$  were randomly selected for the waiting-time control group (CGW). There was also a control group of  $N = 30$  clinically nonsymptomatic normal children (CGN) matched in sex and age. The sex distribution was proportionately the same in all samples, about 70% boys, 30% girls. However, in closer analysis of certain symptoms, the proportions changed (e.g., in cases of oppositional defiance or aggressiveness, more boys were represented, compared with an increased portion of girls experiencing anxiety). The mean age of the children in all three samples (CLS, MCS, CGN) was around 4 years, 5 months at the beginning of the treatment.

Table 5.2 describes some social demographic characteristics of the mothers and their children in the samples of MCS, CLS, and CGN. The

**TABLE 5.1. Sample Size, Sex, and Age of the Toddler and Preschool Children Treated with Theraplay**

Sex	MCS (clinically disordered children)		CLS (clinically disordered children)		CGN (nonsymptomatic children)				
	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%			
Total sample	291	100.0	60	100.0	30	100.0			
Boys	199	68.4	43	71.7	21	70.0			
Girls	92	31.6	17	28.3	9	30.0			
Age (in months)	<i>N</i>	<i>M</i> <sub>month</sub>	<i>SD</i>	<i>N</i>	<i>M</i> <sub>month</sub>	<i>SD</i>	<i>N</i>	<i>M</i> <sub>month</sub>	<i>SD</i>
Age of all	291	53.6	14.5	60	51.8	15.2	30	53.6	15.4
Age of boys	199	53.3	14.6	43	52.5	14.4	21	54.5	15.9
Age of girls	92	54.1	14.4	17	50.2	17.4	9	51.6	14.8

*Note.* MCS, multicenter study; CLS, controlled longitudinal study; CGN, control group of non-symptomatic children; *N*, number of children/sample size; *M*, mean; *SD*, standard deviation.

**TABLE 5.2. Sociodemographic Sample Structure of Toddler and Preschool Children Treated with Theraplay**

Criteria	MCS (clinically disordered children)		CLS (clinically disordered children)		CGN (nonsymptomatic children)	
	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%
Mother's marital status	291	100.0	60	100.0	30	100.0
Married	202	69.4	54	91.5	29	96.7
Unmarried, living with partner	28	9.6	—	—	—	—
Single parent	61	21.0	5	8.5	1	3.3
Birth status	291	100.0	60	100.0	30	100.0
Children living at least with one biological parent	268	94.4	57	95.0	30	100.0
Adopted and foster children	16	6.6	3	5.0	—	—
Upbringing of the child	291	100.0	60	100.0	30	100.0
Both parents	225	79.8	49	87.5	28	96.6
Single parent	57	20.2	7	12.5	1	3.4
Attendance at kindergarten	291	100.0	60	100.0	30	100.0
Yes, in kindergarten	231	80.5	40	69.0	27	93.1

*Note.* Single parent, divorced, separated, widowed, and unmarried mothers; children living at least with one biological parent, legitimate and illegitimate natural children. Other abbreviations as in Table 5.1.

marital status of the mothers in the studies differs, as a higher percentage of mothers in the CLS sample were married than in the MCS, and the difference may be reflected by the patient population in these two studies. Many of the participants in the CLS cohort were identified with developmental language and speech disorders, having been presented to the ear, nose, and throat (ENT) phoniatic specialist by parents who were worried about the language problems of their children. Some of the children in the MCS cohort were living under difficult social situations, such as neglect and poverty.

### Points of Administration

The results of the psychopathological findings of the clinically symptomatic children in the CLS cohort are reported here for only three of the possible eight data collection points ( $t_0$ - $t_7$ ) investigated in the study:

- $t_1$  = at the beginning of the Theraplay treatment
- $t_6$  = at the end of the Theraplay treatment
- $t_7$  = 2 years after the end of the Theraplay treatment

The data gathered at the beginning of the waiting time ( $t_0$ ) and during the therapeutic process ( $t_2$ - $t_5$ ) will not be reported here. The MCS was designed as a pre-post-intervention study, and the data reported here include only:

- $t_1$  = before Theraplay treatment
- $t_6$  = after the period of Theraplay treatment

For purposes of comparison, the data of the control group (CGN) of clinically nonsymptomatic children were collected:

- $t_1$  = at the beginning of a 16-week period
- $t_6$  = at the end of a 16-week period

This model allows for analysis of comparable data from all three samples to evaluate the effectiveness of Theraplay on the severity of the symptoms and the change from the beginning ( $t_1$ ) to the end of the therapy ( $t_6$ ) and also for the CLS 2 years after the discharge from the treatment with Theraplay ( $t_7$ ).

### Data Sampling Instruments Used

The CLS was designed to address a wide spectrum of research questions; correspondingly, varied instruments and data collection methods were necessary:

- To observe repeatedly the parent–child interactive behavior
- To assess repeatedly the type and severity of the child’s symptoms
- To quantify the change of symptoms across the course of the therapeutic process
- To interview repeatedly the child’s parent or caregiver

Many of these data sampling instruments were designed as practice-based observational tools because, at the time of the pilot study, there were either no relevant standardized and valid instruments in the German language or the tools available were not practically useful because of a time-intensive administration. Some of the instruments used in the CLS were also used in the CGN to compare the data collected from clinically symptomatic and nonsymptomatic children matched in age and sex and from their parents.

The goal of the MCS was to replicate the data of the CLS in different populations for the purpose of generalizing the results evaluating the effectiveness of Theraplay. Therefore, the only data collected in the MCS included medical history, sociodemographic structure, psychopathologic assessment at the beginning and end of the treatment, and data about the number of sessions needed to achieve the therapeutic aim.

Table 5.3 shows which research instruments were used for sampling the data of the MCS, CLS, and CGN and at which points of administration each instrument was used. The research instruments included for this report are printed *italicized and bold*.

*Q12* is a questionnaire to gather sociodemographic data of the child, the mother and father, and, in the case of adopted or foster children, the primary caregiver. The parents were also asked for the country of birth and mother tongue of the child, his or her bi- or multilingual use of language, and if he or she attends a kindergarten. Other data gathered by questionnaire *Q12* are not reported here, for example, about the course of pregnancy, problems of the child’s birth, congenital defects, early development of the child, number and sex of siblings, sequence of siblings, upbringing of the child, educational style and method, education and professional training, occupation or profession, and religious denomina-

TABLE 5.3. Research Instruments Used and Points of Administration

Research instruments		Points of administration							
		MCS		CLS			CGN		
		<i>t</i> <sub>1</sub>	<i>t</i> <sub>6</sub>	<i>t</i> <sub>0</sub>	<i>t</i> <sub>1</sub>	<i>t</i> <sub>6</sub>	<i>t</i> <sub>7</sub>	<i>t</i> <sub>1</sub>	<i>t</i> <sub>6</sub>
Basic interviews with parents/caregiver									
Q11	History of disorder	×		×					×
Q12	<i>Sociodemographic data</i>	×		×					×
Q13	Out-of-the-ordinary events			×					
Observation, assessment, and tests to diagnose the child's disorder									
O14-1	Diagnosis: Communication ability			×					
Q14-2	Parent's report: Communication			×					
T18	<i>CASCAP-D Psychopathology</i>	×	×	×	×	×	×	×	×
T21-1	Diagnosis: Language ability			×	×	×			×
Q21-2	Parent's report: Language usage			×	×	×			
T23	Receptive language ability test			×	×	×	×		
T24	Development test (WET)			×	×	×	×	×	×
S31-1	Diagnosis: Child's home behavior			×	×	×			
S35-1	Diagnosis: Effect of the therapy					×			
Observation and evaluation of the parent-child interactive behavior									
O16	Parent-child separation and reunion			×					
O/S251	Diagnosis: Mother-child interaction			×	×	×	×	×	×
O/S252	Diagnosis: Father-child interaction			×	×	×	×	×	×
Repeated interviews with each parent									
S31-2	Parent's report: Child's criteria			×	×	×		×	×
S32	Parent's report: Child's behavior			×	×	×		×	×
S33	Parent-child relationship inventory			×	×	×	×	×	×
S34	Parent's report: Child's change					×	×		
Q35-0	<i>Number of therapeutic sessions</i>					×			
S35-1	Diagnosis: Effect of the therapy					×	×		
S35-2	Parent's report: Effect of the therapy					×	×		
Q36	Parent's report 2 years after concluding therapy						×		

Note. Instruments in *bold and italics* are those whose results are reported in this chapter. O, observation; O/S, observation and later analysis with scale; Q, questionnaire; S, scale; T, diagnostic test; ×, point of usage. Points of administration: *t*<sub>0</sub>, beginning of the waiting time; *t*<sub>1</sub>, beginning of the therapy; *t*<sub>6</sub>, end of the therapy; *t*<sub>7</sub>, 2 years after the end of the therapy; *t*<sub>2-5</sub> during therapy are not included. Other abbreviations as in Table 5.1.

tion of the parents, illnesses and out-of-the-ordinary events in the family, and the medical history of the child's disorder.

*T18* is a tool used repeatedly to assess and scale the psychopathological symptoms of the child and to scale symptoms reported by the caregiver. The instrument is based on the German version of the Clinical Assessment Scale for Child and Adolescent Psychopathology (CASCAP-D; Doepfner, Berner, Flechtner, Lehmkuhl, & Steinhausen, 1999). In 1997, when the CLS was planned, the CASCAP-D was preferred instead of the Child Behavior Checklist (CBCL; Achenbach, 1991) or other similar scales because of its simple assessment and dimensional scaling of the type and severity of the child's symptoms and because it was well known and used daily as part of the basic diagnostic documentation in outpatient clinics for child and adolescent psychiatry and children's hospitals. Like the CBCL, the CASCAP-D assesses symptoms rather than disorders as classified in DSM-IV or ICD-10. The clinically marked symptom is scaled as 1, nonsymptomatic; 2, mild; 3, moderate; or 4, severe.

CASCAP-D was empirically validated in Germany by Doepfner et al. using the Cologne studies 1 and 2 (Doepfner, Berner, Schwitzgebel, & Lehmkuhl, 1994; Doepfner et al., 1999, pp. 89-107). The assessed symptoms can be aggregated to solid symptom scales. The intercorrelation among corresponding symptom scales was  $r = .54$  through  $r = .96$ , and the empirically defined symptom scales were sufficiently independent from each other. The intercorrelation was statistically significant with  $p < .05$ ,  $N = 597$ . The original set of 96 diagnostic symptoms was reduced on practice-based evidence to 53 relevant symptoms indicated to treat interactive behavior with Theraplay.

*Q35-0* is a questionnaire in which the number of therapeutic sessions was indicated by the therapist, as well as the number of sessions during which the mother, father, or relevant caregiver took part.

### **Therapy Setting**

All reported therapies of the CLS were carried out in the Phoniatrie Paed-Audiologic Center in Heidelberg in a therapeutic playroom, with an adjacent observation room. The simply furnished playroom was well lit and there was a large, soft mat on the floor. A few things necessary for the session were placed near the therapist and hidden by a cloth; all other materials were hidden in closets. Parents could observe the reactions of their child through a built-in one-way mirror from the adjoining room. Two built-in video cameras and a microphone were used to tape the whole

therapeutic process for later clinical analysis. In the MCS, the different playrooms for Theraplay sessions in the different therapeutic facilities were similarly furnished to meet the same criteria. Parents or caregivers could observe entire therapy sessions by video. In most cases, the therapeutic setting of the MCS was similar to the CLS.

### **Therapy Procedure**

Theraplay was carried out by certified Theraplay therapists with various professional backgrounds: psychiatrists, psychologists, speech-language pathologists, voice teachers, occupational therapists, and special education teachers. The structure and course of the therapeutic session was very similar in all settings. Often, the children, especially aggressive ones, were treated by both a therapist and a co-therapist. The latter kept the child in her lap, giving him or her warm support and the feeling of being secure, while at the same time protecting the therapist from spitting, scratching, biting, kicking, and other painful injuries that may be inflicted by an aggressive child. The therapist sat or knelt in front of the child to guide him or her through the course of the therapy, and the parent either observed the course of the therapy from the adjoining room or directly participated in place of the co-therapist.

## **RESULTS OF THE EVALUATION OF THE EFFECTIVENESS OF THERAPLAY**

The results are based on repeated assessment of the psychopathological symptoms of toddler and preschool children between the ages of 2 years, 6 months and 6 years, 11 months. Although all the children had received medical diagnoses that warranted treatment, it is important to emphasize that the intervention focused on symptoms, not clinical diagnoses. The effectiveness of Theraplay was demonstrated by a reduction in symptoms or symptom level rather than changes in diagnosis as classified in DSM-IV or ICD-10.

### **Type and Frequency of Symptoms**

The set of 53 symptoms to be treated with Theraplay (instrument T18) was selected out of a total of 96 symptoms of the German-validated CASCAP-D based on clinical experience of their relevance to Theraplay treatment. At the beginning (point  $t_1$  of administration), all of the children

had dual or multiple diagnoses of the relevant symptoms to be treated with Theraplay. The frequency of some of the symptoms differed in the two studies, which may be explained by the different structure of the samples. The sample of the CLS was exclusively gathered from children treated in the Phoniatic Paed-Audiologic Center in Heidelberg who were referred due to speech–language disorders. That may explain why the percentage of children diagnosed with receptive language disorder is high (86.7%) and why children experiencing affective disorders or anxiety are seldom diagnosed (5%). On the other hand, the sample of the MCS is populated with patients from very different therapeutic facilities. The spectrum of diagnoses from these facilities is much wider than that of the CLS, and even though nine facilities were included, this by no mean covers the whole spectrum of symptoms that could be successfully treated with Theraplay; hence, the type and frequency of the symptoms found in these two studies may not be seen as an epidemiological distribution of those symptoms in the investigated age spectrum in the German-speaking population.

Table 5.4 shows a high percentage of children diagnosed with attention deficit (MCS: 74.9%; CLS: 83.3%) and being noncooperative (MCS: 68.4%; CLS: 75.0%) at the beginning of the treatment with Theraplay. Inattentive, noncooperative, and hyperactive behavior was found in the sample of the CLS more often than in the MCS, which may be explained by the relatively high percentage of receptive language–disordered children in the CLS sample (86.7%), as noted above. Oppositional defiant, aggressive, and play-disordered behavior was found more frequently in the sample of the MCS, as this more clinically diverse population included children from socially impoverished living areas, children with behavior disorders, and children diagnosed with other handicaps. Conversely, the percentage of shy, withdrawn, and selectively mute children was higher in the speech- and language-disordered sample of the CLS than in the MCS. The different frequencies of certain pathological symptoms to be found in the different samples is understandably influenced by the sample structure. That may also explain why the percentage of affective-disordered, anxious children is quite small in the sample of the CLS. Typically, a lack of language comprehension doesn't cause anxiety in children of this age, and the referral for intervention was more likely due to their parents' worry that their children might not be mature enough to start school. The percentage of children diagnosed with autism, an autistic-like lack of social mutuality, and selective mutism was relatively small in both studies. The following sections discuss the effectiveness of the treatment with Theraplay in reducing the symptoms listed in Table

TABLE 5.4. Type and Frequency of Symptoms Treated with Theraplay

Symptoms	MCS		CLS		CGN	
	N	%	N	%	N	%
Net sample size	291	100.0	60	100.0	30	100
<u>Symptoms of attention, activity, and social behavior disorders</u>						
Attention deficit	218	74.9	50	83.3	3	—
Attention deficit hyperactivity	105	36.1	25	41.7	2	—
Noncooperativeness	199	68.4	45	75.0	1	—
Oppositional defiance	161	55.3	23	38.3	1	—
Aggressiveness	69	23.7	7	11.7	—	—
Playing disorder	118	40.7	21	35.0	—	—
<u>Symptoms of affective and anxiety disorders</u>						
Shyness, bashfulness	149	51.2	21	35.0	3	—
Lack of self-confidence	111	38.1	3	5.0	—	—
Social anxiety	59	20.3	3	5.0	1	—
Performance anxiety	51	17.5	2	3.3	1	—
Selective mutism	38	13.1	9	15.0	—	—
<u>Symptoms of language and pervasive developmental disorders</u>						
Receptive language disorder	193	66.3	52	86.7	—	—
Lack of social mutuality	56	19.2	14	23.3	—	—

Note. N, number of cases of the net sample; %, percentage of the net sample.

5.4, or, in other words, how effective Theraplay is in positively changing the interactive behavior of these children.

### Symptom Severity before Treatment Using Theraplay

Again it is noted that the severity of the symptoms before treating the children with Theraplay is scaled either as mild (2), moderate (3), or severe (4). The data given in Table 5.5 are mean values of those differentiated assessments. Each mean value ( $M_{t_1}$ ;  $SD_{t_1}$ ) is also dependent on the percentage of children in a sample demonstrating severe, moderate, or mild degree of a symptom.

The highest possible value on the scale to assess the severity of a symptom using CASCAP-D is  $M = 4.0$ . A large proportion of the clinically disordered children in the MCS (and CLS) scored a mean of  $M_{t_1} > 3.0$ , very near the highest possible scaling, which may be seen as an indication of the severity of the social behavior of many of these children (see Table

5.5). In the following data,  $M_{t_1}$  scores without parentheses refer to the MCS, and those within the parentheses refer to the CLS:

- $N = 218$  ( $N = 50$ ) Attention-deficit disorder  $M_{t_1} = 3.20$  ( $M_{t_1} = 3.04$ )
- $N = 105$  ( $N = 25$ ) Attention-deficit/hyperactivity disorder  $M_{t_1} = 3.17$  ( $M_{t_1} = 2.96$ )
- $N = 199$  ( $N = 45$ ) Noncooperativeness  $M_{t_1} = 3.13$  ( $M_{t_1} = 3.00$ )
- $N = 161$  ( $N = 23$ ) Oppositional defiant disorder  $M_{t_1} = 3.15$  ( $M_{t_1} = 3.09$ )
- $N = 118$  ( $N = 20$ ) Play disorders  $M_{t_1} = 3.02$  ( $M_{t_1} = 3.05$ )

The explosive nature of the unrestrained, externalizing behaviors is particularly clear if the severity of the clinically symptomatic children is compared with the low scores ( $M_{t_1} = 1.00$ – $1.30$ ) of the same symptom in clinically nonsymptomatic children in the CGN (see Table 5.5).

The children experiencing internalizing behavior disorders are contrasted to the ones demonstrating externalizing behavior disorders. Shyness and social anxiety are examples of internalizing symptoms. Generally, internalizing symptoms of children were scored on a lower level of severity than externalizing symptoms. This difference in scoring, even by trained clinicians, may be because shy, withdrawn children are less disturbing to the caregiver and don't attract the attention of the clinician as much as aggressive children.

- $N = 149$  ( $N = 21$ ) Shyness, bashfulness  $M_{t_1} = 3.04$  ( $M_{t_1} = 2.52$ )
- $N = 111$  ( $N = 3$ ) Lack of self-confidence  $M_{t_1} = 3.11$  ( $M_{t_1} = 2.33$ )
- $N = 38$  ( $N = 9$ ) Selective mutism  $M_{t_1} = 3.11$  ( $M_{t_1} = 2.56$ )
- $N = 51$  ( $N = 3$ ) Performance anxiety  $M_{t_1} = 3.02$  ( $M_{t_1} = 2.00$ )
- $N = 59$  ( $N = 3$ ) Social anxiety  $M_{t_1} = 2.83$  ( $M_{t_1} = 3.00$ )

In Table 5.5, the data of the CLS are notable for the fact that only a few children were diagnosed with a lack of self-confidence, social anxiety, performance anxiety, or selective mutism. This may be explained by the fact that the children of the CLS were presented to the speech-language pathologist with suspected diagnoses of developmental language delay or other language or speech disorder, as compared to the children of the MCS, many of whom were indicated for treatment with Theraplay because of behavior or interactive disorder diagnoses.

Receptive language disorder was diagnosed in many of the children with behavior or interactive disorders. In both studies, the severity of

TABLE 5.5. Change in Symptoms after Treatment with Theraplay

Symptoms	MCS (N = 291 toddler and preschool children with dual diagnoses)				CLS (N = 60 toddler and preschool children with dual diagnoses)				CGN (N = 30)	
	N	$M_{t_1}$ ( $SD_{t_1}$ )	$M_{t_6}$ ( $SD_{t_6}$ )	p	N	$M_{t_1}$ ( $SD_{t_1}$ )	$M_{t_6}$ ( $SD_{t_6}$ )	p	N	$M_{t_1}$ ( $SD_{t_1}$ )
<b>Symptoms of attention, activity, and social behavior disorders</b>										
Attention deficit	218	3.20 (0.8)	2.04 (0.8)	< .0001	50	3.04 (0.7)	2.22 (0.9)	< .0001	3	1.30 (0.5)
Attention deficit/ hyperactivity	105	3.17 (0.8)	1.84 (0.7)	< .0001	25	2.96 (0.8)	1.63 (0.8)	< .0001	2	1.27 (0.5)
Noncooperativeness	199	3.13 (0.8)	1.50 (0.7)	< .0001	45	3.00 (0.8)	1.66 (0.8)	< .0001	1	1.30 (0.5)
Oppositional defiance	161	3.15 (0.8)	1.39 (0.5)	< .0001	23	3.09 (0.7)	1.39 (0.5)	< .0001	1	1.10 (0.3)
Aggressiveness	69	2.93 (0.8)	1.26 (0.5)	< .0001	7	2.57 (0.8)	1.00 (0.0)	= .0023	0	1.00 (0.0)
Playing disorder	118	3.02 (0.8)	1.62 (0.8)	< .0001	20	3.05 (0.9)	1.79 (0.9)	< .0001	0	1.00 (0.0)
<b>Symptoms of affective and anxiety disorders</b>										
Shyness, bashfulness	149	3.04 (0.8)	1.36 (0.6)	< .0001	21	2.52 (0.7)	1.14 (0.4)	< .0001	3	1.23 (0.4)
Lack of self- confidence	111	3.11 (0.8)	1.39 (0.6)	< .0001	3	2.33 (0.6)	1.00 (0.0)	< .0001	0	1.00 (0.0)
Social anxiety	59	2.83 (0.8)	1.36 (0.6)	< .0001	3	3.00 (1.0)	1.00 (0.0)	n.s.	1	1.03 (0.2)
Performance anxiety	51	3.02 (0.8)	1.31 (0.5)	< .0001	2	2.00 (0.0)	1.00 (0.0)	< .0001	1	1.03 (0.2)
Selective mutism	38	3.11 (0.8)	1.71 (1.1)	< .0001	9	2.56 (0.7)	1.56 (1.1)	= .0152	0	1.00 (0.0)
<b>Symptoms of language and pervasive developmental disorders</b>										
Receptive language disorder	193	3.11 (0.8)	2.01 (0.8)	< .0001	52	3.13 (0.8)	2.25 (1.0)	< .0001	0	1.00 (0.0)
Autistic-like lack of social mutuality	56	2.98 (0.8)	1.88 (0.9)	< .0001	14	3.07 (0.8)	2.14 (1.0)	= .0009	0	1.00 (0.0)

Note. N, sample size;  $M_{t_1}$  ( $SD_{t_1}$ ), mean (standard deviation) of the symptom's scale at the beginning of the therapy;  $M_{t_6}$  ( $SD_{t_6}$ ), mean (standard deviation) of the reduced symptom's scale at the end of the therapy; p, statistical significance of the symptom's change. Other abbreviations as in Table 5.1.

receptive language disorders was high; in MCS,  $N = 193$  of 291 children were identified as having receptive language disorder with a mean of  $M_{t_1} = 3.11$  ( $SD = 0.8$ ), and in CLS,  $N = 52$  of 60 children were likewise identified with a mean of  $M_{t_1} = 3.13$  ( $SD = 0.8$ ) on the 4-point scale of CASCAP-D.

This coincidence of dual diagnoses of behavior disorders and language disorders is reported in the literature extensively (cf. Von Suchodoletz & Keiner, 1998) but without ranking the severity of the symptoms or giving data about the positive therapeutic change (see Table 5.5).

### **Reduction of Symptom Severity of Behavior Disorders after Treatment with Theraplay, and Clinical and Statistical Significance of Change**

The positive change of the interactive behavior of clinically symptomatic children after being treated with Theraplay is clearly seen in Figures 5.1–5.3, showing the change of externalizing symptoms, and in Figures 5.4–5.6 showing the change of internalizing symptoms. Each of these figures demonstrates the therapeutically induced change of a symptom from the beginning ( $t_1$ ) to the end ( $t_6$ ) of the treatment with Theraplay and the lasting effect 2 years after the end of the therapy ( $t_7$ ). The black triangle (▲) is the symbol for the clinically nonsymptomatic normal children of the CGN, in most cases showing no or very low degree of the relevant symptom, assessed at the beginning of the 16-week waiting period. This level is to be seen as a base line for comparison with the severity of the same symptom found in clinically symptomatic children of the MCS or CLS sample. This comparison demonstrates the high level of symptoms in the clinically disordered group of children before they were treated with Theraplay ( $t_1$ ) and the degree of positive change at the end of the therapy ( $t_6$ ). In addition, the curve of the CLS shows the lasting effect of the achieved therapeutic results 2 years after the end of the therapy ( $t_7$ ). There was no relapse, and the achieved effect was stable.

The sample of the MCS was big enough to be subdivided into groups of children with initially severe, moderate, or mild symptoms. The squares with a straight line indicate the clinically symptomatic subsamples of the MCS and the resulting change. The black square (■) with an unbroken line (—) is the symbol for all children in the subsample with severe symptoms (CASCAP-D = 4). The gray square with an unbroken line marks all children with moderate symptoms (CASCAP-D = 3), and the white square (□) with an unbroken line indicates all children with mild symptoms (CASCAP-D = 2). The white diamond (◇) with a broken

line (---) indicates the average of these three clinically symptomatic samples of the MCS, corresponding to the mean value ( $M_{t_1}$ ) in Table 5.5. The black diamond (◆) with a broken line (---) indicates the average process of symptom change for all clinically symptomatic children from the CLS sample starting from the beginning of the therapy ( $t_1$ ) to the end ( $t_6$ ) and at a point 2 years after the end of the therapy ( $t_7$ ). The course of the CLS curve 2 years after the end of treatment allows for evaluation of relapses or clinically relevant or statistically significant negative changes. Figures 5.1–5.3 demonstrate the therapeutic changes of the external symptoms after children were treated with Theraplay.

- *Noncooperative toddler and preschool children* (see Figure 5.1)  
 MCS:  $N = 199$  noncooperative children altogether (mean)  
      $N = 78$  with severe noncooperative behavior  
      $N = 69$  with moderate noncooperative behavior  
      $N = 52$  with mild noncooperative behavior  
 CLS:  $N = 45$  noncooperative children altogether (mean)
- *Oppositional defiant toddler and preschool children* (see Figure 5.2)  
 MCS:  $N = 161$  oppositional defiant children altogether (mean)  
      $N = 65$  with severe oppositional defiant behavior  
      $N = 55$  with moderate oppositional defiant behavior  
      $N = 41$  with mild moderate oppositional defiant behavior  
 CLS:  $N = 23$  oppositional defiant children altogether (mean)
- *Aggressive toddler and preschool children* (see Figure 5.3)  
 MCS:  $N = 69$  aggressive children altogether (mean)  
      $N = 21$  with severe aggressiveness  
      $N = 22$  with moderate aggression  
      $N = 26$  with mild aggression  
 CLS:  $N = 7$  aggressive children altogether (mean)

Figures 5.4–5.6 demonstrate the therapeutically induced change of internal symptoms.

- *Shy, bashful toddler and preschool children* (see Figure 5.4)  
 MCS:  $N = 149$  shy children altogether (mean)  
      $N = 51$  with severe shyness  
      $N = 53$  with moderate shyness  
      $N = 45$  with mild shyness  
 CLS:  $N = 21$  shy children altogether (mean)

- *Socially withdrawn toddler and preschool children* (see Figure 5.5)
  - MCS:  $N = 103$  socially withdrawn children altogether (mean)
    - $N = 26$  with severe tendency for social withdrawal
    - $N = 38$  with moderate tendency for social withdrawal
    - $N = 39$  with mild tendency for social withdrawal
  - CLS:  $N = 19$  socially withdrawn children altogether (mean)
- *Socially anxious toddler and preschool children* (see Figure 5.6)
  - MCS:  $N = 59$  children with social anxiety altogether (mean)
    - $N = 15$  with severe social anxiety
    - $N = 19$  with moderate social anxiety
    - $N = 25$  with mild social anxiety
  - CLS:  $N = 3$  children with social anxiety altogether (mean)

All of these symptoms typical of behavior disorders show a similar picture of change attributed to the Theraplay treatment. After treating the children with Theraplay, their symptoms marked as severe (■) in the beginning come near to milder degrees of the clinically nonsymptomatic children of the control group (▲). The effect of the treatment with Theraplay is a clinically significant reduction of the disordered symptoms of the interactive behavior of the children. Obviously, the effect of Theraplay is much greater if the symptom was originally marked as severe (■) than if it was originally only a moderate or mild notation (□). In other words, the more severe the relevant symptom originally identified, the more marked the change resulting from Theraplay treatment. These changes of the symptoms are clinically and statistically significant. Table 5.5 shows that even the mean of change of the symptoms is statistically highly significant ( $M_{t_1} \rightarrow M_{t_6}; p < 0.0001$ ), with the exception of some of the very small subsamples of the CLS. There were only a few children in the sample of the CLS diagnosed with aggression, social anxiety, performance anxiety, or selective mutism; therefore, the evaluation of this data was omitted.

Figures 5.1–5.6 also give a first indication about the objectivity of the data to evaluate the effectiveness of Theraplay, indicating that the therapeutic method is independent of the diagnostic cohort, the type of therapeutic facility, and the therapist. The broken lines demonstrating the mean of the change of symptoms in both studies run widely parallel, in some cases even congruent, yielding research-based evidence of the degree of change of the symptoms as similar or the same in both independent studies and indicating the validity of Theraplay.

However, this example of the remarkable effectiveness of Theraplay to reduce the symptoms of the interactive behavior of clinically symptomatic

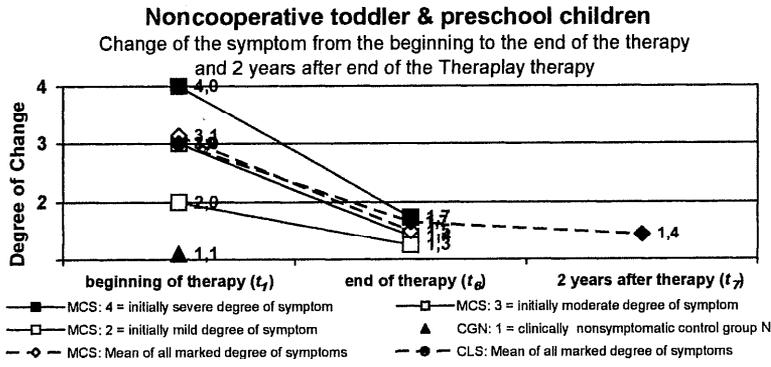


FIGURE 5.1. The effectiveness of Theraplay on noncooperative toddler and preschool children.

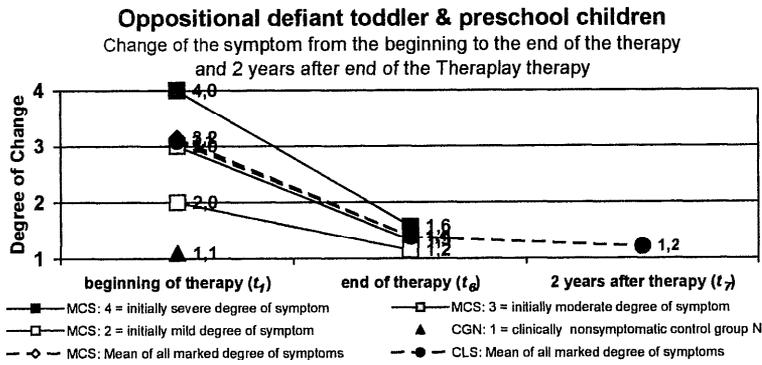


FIGURE 5.2. The effectiveness of Theraplay on oppositional defiant toddler and preschool children.

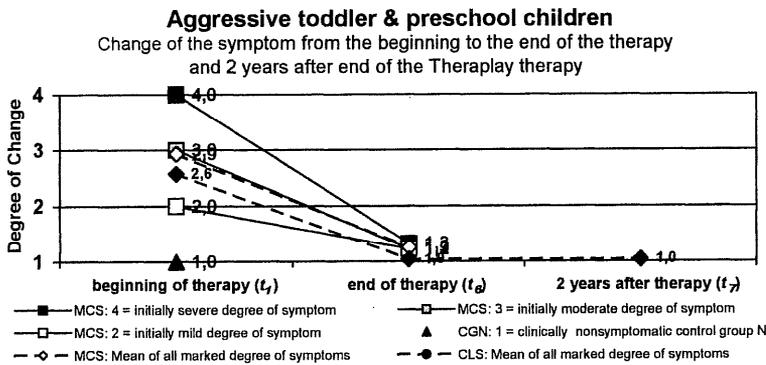


FIGURE 5.3. The effectiveness of Theraplay on aggressive toddler and preschool children.

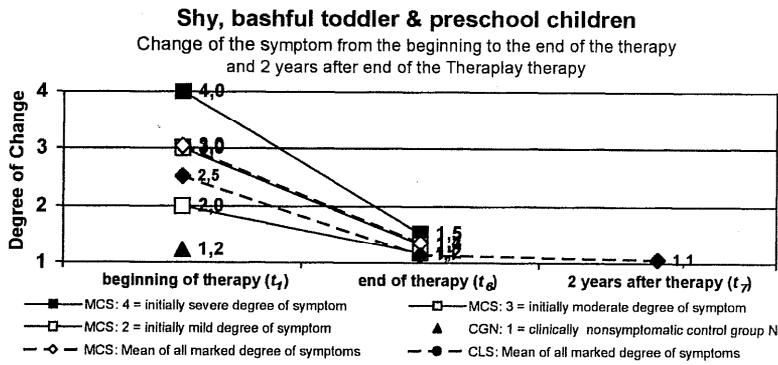


FIGURE 5.4. The effectiveness of Theraplay on shy, bashful toddler and preschool children.

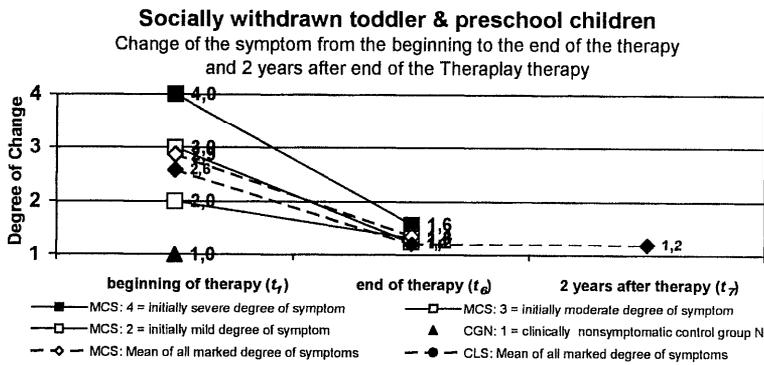


FIGURE 5.5. The effectiveness of Theraplay on socially withdrawn toddler and preschool children.

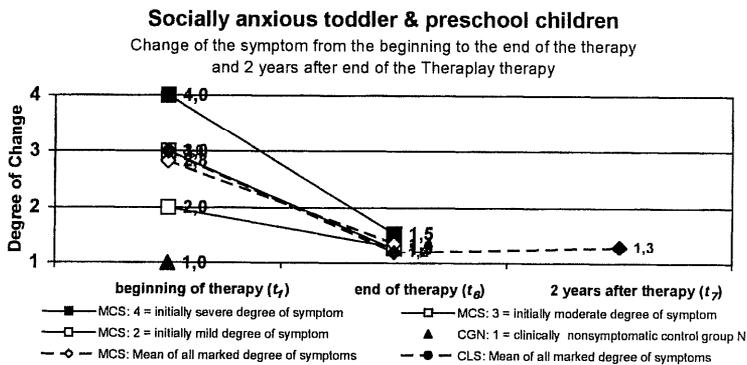


FIGURE 5.6. The effectiveness of Theraplay on socially anxious toddler and preschool children.

toddler and preschool children to a level often coming near to that of clinically nonsymptomatic, normal children is not valid for all of the investigated symptoms. There are symptoms that are neuropsychologically influenced such as ADHD or the attention deficits of children with an autistic-like lack of social mutuality, typical also for children with early childhood autism or receptive language disorders, indicating a delayed development of language comprehension in toddler and preschool children. In these kinds of disorders, only children with originally mild symptoms improved to a degree similar to the interactive behavior of clinically nonsymptomatic children. Children demonstrating moderate or severe symptoms of this kind only improved to an ongoing level of mild or moderate symptoms when treated with Theraplay (see Figures 5.7–5.9), but even this reduction of the symptoms was clinically and statistically significant, with a very low probability of error  $p < .0001$  to  $p = .0009$  (see Table 5.5).

Figures 5.7–5.9 demonstrate the therapeutically conditioned change of such neuropsychologically influenced symptoms as attention-deficit/hyperactivity, autistic-like lack of social mutuality, or receptive language delay. In the following, the corresponding samples of Figures 5.7–5.9 are described.

- *Toddler and preschool children suffering from attention-deficit/hyperactivity* (see Figure 5.7)
  - MCS:  $N = 105$  inattentive, hyperactive children altogether (mean)
    - $N = 41$  with severe attention-deficit/hyperactivity symptoms
    - $N = 41$  with moderate attention-deficit/hyperactivity symptoms
    - $N = 23$  with mild attention-deficit/hyperactivity symptoms
  - CLS:  $N = 25$  inattentive, hyperactive children altogether (mean)
- *Toddler and preschool children suffering from an autistic-like lack of social mutuality* (see Figure 5.8)
  - MCS:  $N = 44$  inattentive children with autistic-like lack of social mutuality (mean)
    - $N = 15$  inattentive children with a severe lack of social mutuality
    - $N = 16$  inattentive children with a moderate lack of social mutuality
    - $N = 13$  inattentive children with a mild lack of social mutuality

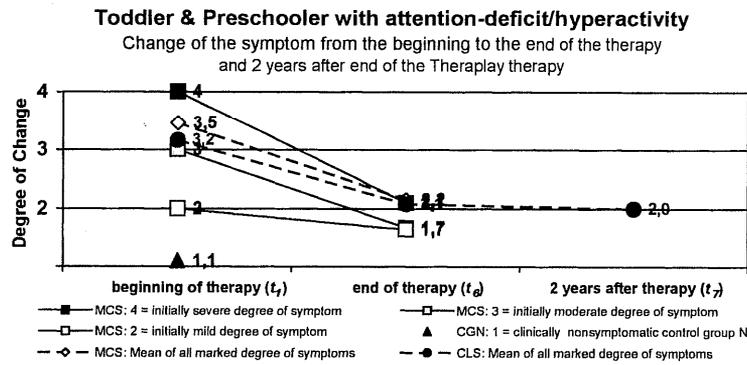


FIGURE 5.7. The effectiveness of Theraplay on inattentive toddler and preschool children suffering from attention-deficit/hyperactivity disorder (ADHD).

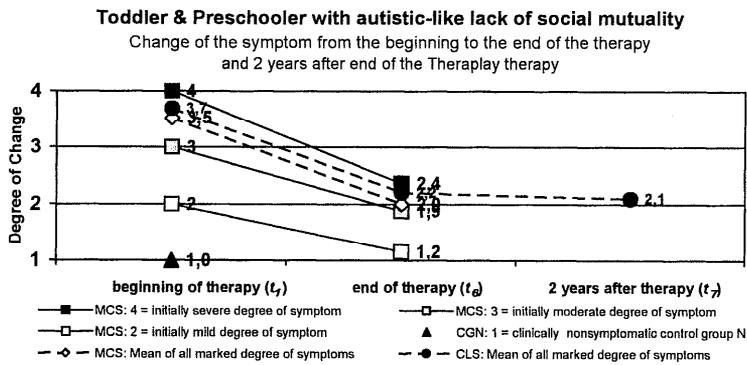


FIGURE 5.8. The effectiveness of Theraplay on toddler and preschool children suffering from an autistic-like lack of social mutuality.

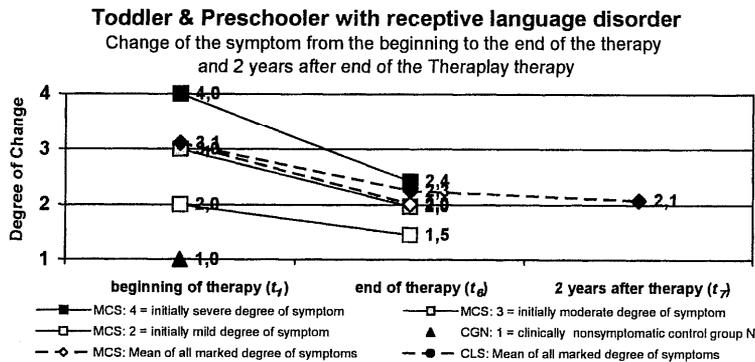


FIGURE 5.9. The effectiveness of Theraplay on receptive language-disordered toddler and preschool children.

CLS:  $N = 13$  inattentive children with an autistic-like lack of social mutuality (mean)  
 Out of these 13, 9 children were diagnosed with autism (Kanner syndrome).

- *Receptive language-disordered toddler and preschool children* (see Figure 5.9)

MCS:  $N = 193$  children with receptive language disorder altogether (mean)

$N = 73$  with severe symptoms of receptive language disorders

$N = 68$  with moderate symptoms of receptive language disorders

$N = 52$  with mild symptoms of receptive language disorders

CLS:  $N = 51$  children with receptive language disorder altogether (mean)

### Effect Size

Table 5.5 presents the statistically significant positive change in the symptoms. Another important way to demonstrate the effectiveness of Theraplay is to look at the size of the effect. There are several different ways to analyze the effect size ( $d$ ). In this case, the following formula was used:  $d = M_{t_6} - M_{t_1} / SD_{(t_1 + t_6)} / 2$ . Jacobs (1999) claims that the result of this formula would come near the population's distribution of effect size ([www.phil.uni-sb.de/jacobs/seminar/vpl/bedeutung.htm](http://www.phil.uni-sb.de/jacobs/seminar/vpl/bedeutung.htm)).

A small effect size of the reduction of a symptom caused by a treatment would be around  $d = 0.20$ , medium effect size value around  $d = 0.50$ , large effect size value around  $d = 0.80$  (Bortz & Doering, 1995). In general, the effect sizes demonstrated by the MCS were very large ( $d > 1.00$ , see Table 5.6). Likewise, the effect size noted for the CLS in most of the symptoms was also very large ( $d \geq 1.00$ , see Table 5.6), apart from the effect size of attention-deficit with autistic-like lack of social mutuality ( $d = 0.91$ ) and the effect size of receptive language disorder ( $d = 0.88$ ), both of which still reflect a large effect. Like the statistical significance of the therapeutic change of the symptoms when treated with Theraplay, the large effect sizes described above confirm the effectiveness of Theraplay with toddlers and preschool children experiencing symptoms of interactive behavior disorders.

**TABLE 5.6. Effect Size as an Indication of the Extent of the Symptom's Change after Treatment with Theraplay**

Figure Symptoms	MCS ( <i>N</i> = 291 toddler and preschool children with dual diagnoses)				CLS ( <i>N</i> = 60 toddler and preschool children with dual diagnoses)				
	<i>N</i>	<i>M</i> <sub><i>t</i>1</sub> ( <i>SD</i> <sub><i>t</i>1</sub> )	<i>M</i> <sub><i>t</i>6</sub> ( <i>SD</i> <sub><i>t</i>6</sub> )	<i>d</i>	<i>N</i>	<i>M</i> <sub><i>t</i>1</sub> ( <i>SD</i> <sub><i>t</i>1</sub> )	<i>M</i> <sub><i>t</i>6</sub> ( <i>SD</i> <sub><i>t</i>6</sub> )	<i>d</i>	
Effect size of the reduction of externalization behavior disorder symptoms									
5.1	Noncooperativeness	199	3.13	1.50	2.51	45	3.00	1.60	1.91
5.2	Oppositional defiance	161	3.15	1.39	3.32	23	3.09	1.39	3.40
5.3	Aggressiveness	69	2.93	1.26	3.34	7	2.57	1.00	1.57
Effect size of the reduction of internalization behavior disorder symptoms									
5.4	Shyness, bashfulness	149	3.04	1.36	2.71	21	2.52	1.14	3.83
5.5	Socially withdrawn	103	2.87	1.36	2.44	19	2.58	1.21	3.26
5.6	Social anxiety	59	2.83	1.36	2.53	3	3.00	1.00	2.00
Effect size of the reduction of neuropsychological conditioned behavior disorder symptoms									
5.7	Attention-deficit/ hyperactivity	105	3.17	1.84	1.87	25	2.96	1.63	1.73
5.8	Attention deficit with autistic-like lack of social mutuality	44	3.05	1.84	1.49	13	3.15	2.23	0.91
5.9	Receptive language disorder	193	3.11	2.01	1.36	52	3.13	2.25	0.88

Note. *N*, sample size; *M*<sub>*t*1</sub> (*SD*<sub>*t*1</sub>), mean (standard deviation) of the symptom's scale at the beginning of the therapy; *M*<sub>*t*6</sub> (*SD*<sub>*t*6</sub>), mean (standard deviation) of the symptom's reduced scale at the end of the therapy; *d*, effect size of the symptom's change (around *d* = 0.20, small; around *d* = 0.50, medium; around *d* = 0.80, large; *d* > 1.00, very large). Other abbreviations as in Table 5.1.

### Duration of the Therapy: Average Number of Therapeutic Sessions

Generally, a therapeutic session treating a child with Theraplay takes 30 minutes, with additional time required to prepare the therapeutic plan prior to the interaction and to document the therapeutic process after each session. In the following, the duration of treatment is given as the average number of 30-minute sessions.

Theraplay claims to be a short-term play therapy, and this claim is confirmed by the results of both the MCS and CLS as independent studies (see Table 5.7).

The therapeutic aim has been to reduce the enduring and disturbing symptoms in the interactive behavior of disordered toddler and preschool children between the ages of 2 years, 6 months and 6 years, 11 months. An average of 19–20 30-minute therapeutic sessions were necessary to achieve the goal for noncooperative, oppositional defiant, or aggressive behaviors, as noted in the externalizing behaviors of toddler and preschool children (see Table 5.7). The necessary number of sessions ranged from 9 to 30 sessions, due to mild, moderate, or severe degrees of their symptomatic presentation. Toddler and preschool children suffering from internalizing symptoms like shyness, tendency for social withdrawal, and social anxiety were also treated an average of 18–21 30-minute sessions to achieve the therapeutic aim of reducing the symptoms of these children to the degree that they become as open-minded, courageous, and approachable as clinically nonsymptomatic children of the

**TABLE 5.7. Duration of Theraplay**

Figure Symptoms	Mean number of sessions: MCS ( <i>N</i> = 291 toddler and preschool children with dual diagnoses)			Mean number of sessions: CLS ( <i>N</i> = 60 toddler and preschool children with dual diagnoses)			
	<i>N</i>	<i>M</i>	<i>SD</i>	<i>N</i>	<i>M</i>	<i>SD</i>	
Effect size of the reduction of externalization behavior disorder symptoms							
5.1	Noncooperativeness	199	19.4	10.9	45	19.3	8.4
5.2	Oppositional defiance	161	19.2	10.4	23	18.2	6.5
5.3	Aggressiveness	69	19.8	10.6	7	15.9	5.8
Effect size of the reduction of internalization behavior disorder symptoms							
5.4	Shyness, bashfulness	149	17.9	9.7	21	16.8	4.3
5.5	Socially withdrawn	103	20.5	11.3	19	20.7	7.9
5.6	Social anxiety	59	20.1	11.3	3	18.7	10.7
Effect size of the reduction of neuropsychological conditioned behavior disorder symptoms							
5.7	Attention-deficit/hyperactivity	105	21.4	12.6	25	21.0	9.9
5.8	Attention deficit with autistic-like lack of social mutuality	44	26.0	13.0	13	26.0	8.9
5.9	Receptive language disorder	193	19.7	10.8	52	19.0	7.9

*Note.* *N*, sample size; *M*, mean number of 30-minute sessions needed to achieve the therapeutic aim (lasting effect of symptom reduction after treatment with Theraplay); *SD*, standard deviation of the number of therapeutic sessions, also to be interpreted as the range between the shortest and longest number of therapeutic sessions. Other abbreviations as in Table 5.1.

same age and sex (see Table 5.7). The range also reached from 9 to 30 sessions, again based on the initial level of severity.

Toddler and preschool children with receptive language disorders also required an average of 19–20 therapeutic sessions with Theraplay to initiate verbal comprehension and to reduce the accompanying symptoms of behavior disorders (see Table 5.7). The number of sessions ranged from 8 to 32, each with a duration of 30 minutes of Theraplay.

Theraplay does not claim to heal children diagnosed with attention-deficit/hyperactivity disorders, but it may considerably reduce those symptoms that interfere with the interactive behavior of such children. After being treated with Theraplay, the children in these studies became much more calm, attentive, and interested; at the end of treatment they were still somewhat physically agitated and impulsive, but on a much lower level. Evidence indicates that an average of 21–22 30-minute sessions were needed to reduce the interfering symptoms so that a mutually satisfying interaction between the child and his or her caregiver became possible (see Table 5.7). The number of sessions required ranged from 8 sessions with children who were very easy to handle up to 34 sessions with children demonstrating a severe degree of attention-deficit/hyperactivity disorder.

To treat children with a comorbid disorder of attention-deficit and an autistic-like lack of social mutuality, more therapeutic sessions were necessary than with the previously reported cases of interactive behavior disorders. A lack of social mutuality is not only a symptom accompanying autism spectrum disorders; the lack of approachability for social interaction is also found in other diagnoses, but is pathognomic in children diagnosed with autism. Generally, it is well known that a long-term therapy is necessary to treat autistic children. To treat toddler and preschool children experiencing such complex symptoms, an average of 26 Theraplay sessions was needed (see Table 5.7) and, depending how severe the symptoms were, between 13 and 60 sessions. As noted, Theraplay cannot cure this disorder but makes the child much more approachable and amenable to interactions with his or her caregiver and others.

## DISCUSSION OF THE RESULTS

The American Psychiatric Association (APA) has established criteria for evidence-based therapies. A coding system from A through G is used.

Based on these criteria, the CLS with an accumulated randomized sample of patients and control samples reached the code A- level, next to the first level. Code A- means a randomized clinical study of an intervention in which subjects are prospectively followed over time, there are treatment and control groups (e.g., a waiting-time control group), and subjects are randomly assigned to the two groups, but the approach is not double-blind as code A asks for. The other study, the MCS, may be placed between code A- and B. Code B, the third level of evidence, means a clinical trial by a prospective study in which an intervention is made and the results of that intervention are tracked longitudinally, but B does not meet the standards for a randomized clinical trial.

The convincing results of the CLS cannot be generalized, however, due to the unilateral specificity of the patient cohort, which may not be extrapolated to other populations of patients and therapeutic situations. The MCS does not fully meet the criteria for the third level of evidence (B), as it is a pre-post design without a control group. But the MCS is clearly aimed at analyzing different cohorts of patients under different therapeutic situations, treated by an increased number of Theraplay therapists. The point is that the results of the MCS are generalizable to a wider number of different populations of patients. On the basis of these criteria used to assess the practice-based evidence of these two studies, Theraplay may be seen as "presumably effective" on defined symptoms, especially on symptoms of externalizing or internalizing interactive behavior disorders. However, the results should be replicated by additional studies and extended to other populations of patients.

The results of these two studies show independently that Theraplay effectively reduced externalizing and internalizing symptoms of the disordered interactive behaviors of toddler and preschool children compared with the sample matched by age and sex. The clinical and statistical significance of the results is also proved by the statistical computation of the significant effect size of the reduced symptoms. Even neuropsychological syndromes such as ADHD, attention-deficit connected to an autistic-like lack of social mutuality as typically seen in autism spectrum disorders, and receptive language disorders have been effectively treated by Theraplay with statistically significant positive changes in the analyzed cohorts of patients.

The results of the controlled longitudinal study with a follow-up 2 years after the individual discharge from Theraplay treatment allow the conclusion that the effectiveness of Theraplay is lasting. There were neither relapses nor statistically significant changes of the symptoms; hence, the therapeutic results achieved with Theraplay were stable.

Looking at the results of research and counting the number of sessions, Theraplay is a real short-term play therapy. The average duration of therapy was 18–20 30-minute sessions, as measured by the number of therapeutic sessions needed to achieve a lasting reduction of symptoms of externalizing or internalizing behavior disorders. Depending on the mild, moderate, or severe degree of the symptoms, there were around  $\pm$  10–12 sessions needed. Additional sessions were typically necessary to reduce the symptoms of ADHD or of comorbid receptive language disorders. To reduce the symptoms of an autistic-like lack of social mutuality, there were on average 26 sessions needed to achieve the targeted result of the therapy. Having the necessary number of therapeutic sessions in mind, Theraplay can probably meet the claim to be an effective short-term play therapy for significantly reducing the symptoms as analyzed in these studies.

Finally, there were some deficiencies in these studies that should be avoided in future research. In both reported studies, the psychopathological diagnosis was assessed using CASCAP-D, the German version of the Clinical Assessment Scale for Child and Adolescent Psychopathology. Having in mind the need to standardize the research instruments for future intercultural studies in all countries where certified therapists treat patients with Theraplay, ideally there should be validated instruments to assess psychopathological and attachment disorders adapted to many different languages.

In the MCS, diagnosis and intervention were done by different clinicians, and in such a model, there will be inherent differences in clinical opinion. In future studies, careful attention should be paid to strictly separate diagnosis and intervention to control for variation and rule out any doubt about research results.

Future studies to evaluate the effectiveness of Theraplay should be carried out as prospective controlled studies with randomized samples of participants manifesting different symptoms and nonsymptomatic controls, both followed over time.

In spite of this criticism, the results of these two independent studies, financed by the researchers themselves, may contribute to the practice-based evidence evaluating the effectiveness of Theraplay.

#### NOTE

1. The term "Theraplay" is legally protected by Wz. 39518465 and The Theraplay Institute, Wilmette, Illinois.

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