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Psychoanalytic Psychotherapy for Children and Adolescents with Severe Externalising Psychopathology: An Effectiveness Trial

Katharina Weitkamp¹, Judith K. Daniels², Georg Romer³, Silke Wiegand-Grefe⁴

Zusammenfassung

Analytische Psychotherapie bei Kindern und Jugendlichen mit schwerer externalisierender Symptomatik: Eine naturalistische Studie

Hintergrund: Ziel der Studie war die Evaluation ambulanter analytischer Kinder- und Jugendpsychotherapie im naturalistischen Versorgungskontext bei Kindern und Jugendlichen mit externalisierender Symptomatik. Diese externalisierenden Auffälligkeiten gehen mit oppositionellen Störungen, Störungen des Sozialverhaltens und hyperkinetischen Störungen einher.

Methode: 93 Kinder und Jugendliche in ambulanter analytischer Psychotherapie mit externalisierender Symptomatik nahmen an der Studie teil (Interventionsgruppe: $n = 65$; Wartelisten-Kontrollgruppe/minimale supportive Intervention: $n = 28$). Die Daten wurden von Patienten (≥ 11 J.) und Eltern zu Therapiebeginn und -ende, sowie sechs und zwölf Monate nach Therapieende erhoben. Die Effekte der Langzeitbehandlungen wurden im Längsschnittsdesign betrachtet.

Ergebnisse: Zu Therapieende zeigte sich eine signifikante Reduktion der externalisierenden Symptomatik aus Eltern- und Patientensicht (Elternurteil: $d = .69$; Patientenurteil: $d = .63$). Dieser Effekt war auch zwölf Monate nach Therapieende stabil (Elternurteil: $d = .77$; Patientenurteil: $d = .68$). Um die 70% der Patienten können zu Therapieende als verbessert angesehen werden.

Schlussfolgerungen: Psychoanalytische Therapie kann zu einer Verbesserung externalisierender Symptomatik führen mit Effekten, die auch ein Jahr nach Therapieende erhalten bleiben.

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Summary

Objectives: This partly waitlist-controlled prospective field study aimed to evaluate the effectiveness of psychoanalytic psychotherapy for children and adolescents with severe externalising symptoms. Externalising symptoms are associated with diagnoses of conduct disorders, hyperkinetic disorders, and disorders of social functioning.

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Methods: Participants were 93 children and adolescents in psychoanalytic therapy with a diagnosed psychiatric disorder with externalising symptomatology (intervention group: $n = 65$; minimal supportive treatment/waitlist control group: $n = 28$). Data was collected from parents and patients (≥ 11 years) at beginning/end of treatment, 6- and 12-month follow-up. The effects of long-term psychoanalytical treatment were analysed using a longitudinal design.

Results: At the end of therapy, externalising symptoms were significantly reduced rated by both parents and patients (parent-rated: $d = .69$, patient-rated: $d = .63$). This effect was stable at the 1-year follow-up (parent-rated: $d = .77$, patient-rated: $d = .68$). About 70% of the patients may be considered as recovered or improved by the end of therapy.

Conclusions: Psychoanalytic therapy may be successful in alleviating psychiatric disorders with externalising symptoms with effects stable at the 1-year follow-up.

Keywords

Psychoanalytic Psychotherapy – Adolescents – Children – Externalising Behaviour – Effectiveness

1. Background

Externalising pathologies, like hyperkinetic disorders, conduct disorders (CD), or disorders of social functioning are widely prevalent in children and adolescents and are associated with severe negative consequences as well as multiple disadvantages well into adulthood (Klein et al. 2012). These symptoms cover a range of aggressive or attention-seeking behaviours like cheating, lying, swearing, threatening, showing off, stealing, and vandalism. In a longitudinal community sample in the USA, the predicted cumulative prevalence by age of 16 years was 9.0% for CD, 11.3 for oppositional defiant-disorder (ODD), and 4.1% for a hyperkinetic disorder with boys being affected more (Costello et al. 2003). These rates are particularly worrying since professional help-seeking in affected youth is low, with only a third getting any kind of treatment (Ravens-Sieberer et al. 2008). Thus, effective interventions are necessary to treat externalising disorders and tackle this global burden (Erskine et al. 2014; Maughan 2013).

In Germany, almost half of all specialized child and adolescent psychotherapists have a psychoanalytic training background (48.7%) (Bundesregister der Kassenärztlichen Bundesvereinigung 2011). Although psychoanalytic psychotherapy is a prevalent treatment method, it has not been sufficiently evaluated yet (Abbass et al. 2013; Midgley & Kennedy 2011; Tsiantis & Trowell 2010), particularly not for disorders with externalising symptoms. A first methodologically sound study on the efficacy of psychoanalytic therapy for youth patients with externalising disorders compared 25 sessions of psychoanalytic psychotherapy with a wait-list control group (Winkelmann et al. 2005). Therapist-rated impairment was significantly reduced with a moderate effect size of $d = 0.6$. None of the patients in the intervention group could be considered as *recovered* after 25 therapy sessions, 31% of the patients *improved*. The

authors concluded that a number of their patients needed longer, more intense or another type of treatment.

According to the *Roadmap for Mental Health Research in Europe* (ROAMER), it is currently an important goal of psychotherapy research to evaluate the effectiveness of psychotherapeutic treatment for youths and their parents who seek help in everyday clinical practice to fill this research gap (Emmelkamp et al. 2014). Hence, previous results from the controlled trial by Winkelmann and colleagues (2005) will be extended to the naturalistic setting with the effectiveness trial presented here. We studied naturally occurring therapy doses, since psychoanalytic therapy in Germany is usually longer in duration with a maximum of 180 sessions for adolescents and 150 sessions for children regularly reimbursed by German health insurance. The aim of the current study was to assess the change of externalising symptoms across psychoanalytic psychotherapy in a sample of children and adolescents with severe externalising symptoms. We chose the patient and parent rated externalising symptom scores as the primary outcome, because it is (1) a dimensional rather than a dichotomous criterion (Wissenschaftlicher Beirat Psychotherapie 2010), (2) following a consumer-focused approach, and (3) circumnavigates the documented unreliability of psychiatric diagnosis (Aboraya et al. 2006). The sample was followed in a naturalistic therapy setting with individual therapy duration. The following analyses of the sample with externalising symptoms are part of a bigger study with two additional groups: anxiety and depressive symptoms which are published elsewhere (Weitkamp et al. submitted; 2014).

2. Methods

2.1. Procedure

The study was designed as a partly controlled, dual-perspective effectiveness study in a naturalistic setting: while the first 25 sessions were controlled by a minimal treatment/wait-list design, the evaluation of the long-term treatment was implemented as a longitudinal study. The study was approved by the ethics committee of the Medical Board Hamburg.

The patients received individual psychoanalytic psychotherapy which was predominantly child-focused, complemented by parent sessions usually at a ratio of 4:1. The interventions were based on Anna Freud (1949) and object-relations theory as set out by Winnicott (1958) comparable to the treatment of anxiety and affective disorders described in the treatment guidelines by Baumeister-Duru et al. (2013). Aim of the therapy is for the child to get access to his/her primarily unconscious feelings and anxieties. Typically, as a defence mechanism these feelings are expressed as behavioural symptoms. Because youth with externalising problems tend to act out, it is seen as particularly important to adhere to the therapeutic setting (time, regularity, reliability). Free play, free associations, and dreams are considered access points to the unconscious. Further essential characteristics are the therapeutic relationship with the positive and negative counter-/transference, the analyses of interpretations

and resistance, as well as the handling of regressive processes. Empathy, patience, a non-judgemental position, tolerance, and containment are fundamental pillars of the therapist's work.

The participants presented themselves at the participating psychotherapy practices during the study interval. Inclusion criteria were severe externalising symptoms rated by either parent or patient (on the externalising score of the Child Behaviour Checklist/Youth Self Report; Arbeitsgruppe Deutsche Child Behavior Checklist 1998a; 1998b), age four to 21 years, and patients entering outpatient psychoanalytical psychotherapy. Exclusion criteria were an age under four or over 21 years, acute suicidal tendencies or current psychotic symptoms as well as insufficient command of the German language.

Between September 2007 and October 2012, 393 eligible patients were approached for participation. The wait-list control group was formed, depending on the therapist's capacities using naturally occurring waiting periods. The wait-list interval was planned to be three months long. Supportive bridging sessions were possible if necessary. This means that the comparator group might be better understood as a minimal supportive treatment than an untreated control-group. 65 wait-list patients and 177 intervention patients form the complete sample of the effectiveness trial (see flow diagram in Fig. 1). For non-participants, therapists provided an anonymous form with basic data to enable comparison with participants. Study participants and non-participants did not differ significantly on relevant characteristics, such as age, gender, externalizing disorder, global level of impairment, or therapist-rated family functioning (significance level between $p \leq .092$ for age and $p \leq .883$ for global level of impairment).

At the beginning of outpatient therapy, families received a letter informing them of the study and they gave written informed consent. Participants filled out questionnaires mailed to their home address at the beginning and end of each individual therapy. Additional assessments were carried out after 50, 70, 120, and 150 sessions for children and after 50, 90, 140, and 180 sessions for adolescents (these measurement points monitoring process were not part of the current data analyses presented here). Follow-up assessments were carried out six and twelve months after the end of therapy. The main outcome criterion was the externalising pathology rated by patients and parents. Additionally, to establish the patient diagnoses at the beginning of treatment and one year after the end of treatment, parents as well as patients (age ≥ 11 years) were interviewed by a trained psychologist using the Schedule for Affective Disorders and Schizophrenia for School-Age Children (K-SADS; Delmo et al. 2001). Sixteen of the 65 intervention families (24.6%) did not agree to participate in the diagnostic interview because of inability to schedule an interview after repeated attempts. There were no diagnostic K-SADS interviews in the wait-list control condition. However, therapist diagnoses were available for all patients.

Figure 1: Flow diagram

2.2. Participants

For the current analyses, only those children and adolescents who showed clinical levels of externalising symptoms rated either by the parents or the adolescent on the externalising syndrome scale of the Child Behaviour Checklist (CBCL)/Youth Self Report (YSR) (cut-off > 63) were selected. According to this definition, out of the total sample of 177 patients, 65 intervention patients and 28 wait-list patients were identified as suffering from severe externalising symptoms. The remaining patients suffered from anxiety, depressive, or other disorders and their data are published elsewhere (Weitkamp et al. submitted; 2014).

Regarding the 65 intervention patients, data were collected from 60 parents and 32 patients themselves (overlap $n = 27$, 41.5%). In the minimal treatment/wait-list control group, 23 of the 28 families (82.1%) completed the questionnaires at both

Table 1: General characteristics of the sample

Characteristic	Wait-list Control/ CC (n = 23)	Thera- py/ITT (n = 65)	Therapy/ CC (n = 41)	Wait-list vs. therapy/CC	Therapy CC vs. ITT
				<i>p</i>	<i>p</i>
Age	11.35 (3.71)	11.65 (4.15)	11.54 (3.75)	.788	.923
Gender (female)	47.8%	64.6%	63.4%	.081	.452
Parents living apart	37.5%	54.3%	51.3%	.111	.386
Externalising symptoms (CBCL/parent)	66.24 (7.15)	67.63 (6.44)	67.16 (7.17)	.317	.718
Externalising symptoms (YSR/patient)	58.75 (8.54)	59.36 (6.97)	57.56 (7.28)	.940	.442
Functioning (CGAS)	52.33 (9.42)	54.32 (9.97)	55.11 (10.49)	.480	.780
Externalising disorder (K- SADS)	–	53.1%	50.0%	–	.548
Affective disorder (K-SADS)	–	36.7%	26.5%	–	.841
Anxiety disorder (K-SADS)	–	36.7%	38.2%	–	.444
Adjustment disorder (K-SADS)	–	26.5%	32.4%	–	.281
Other disorder* (K-SADS)	–	30.6%	32.4%	–	.433
Externalising disorder (thera- pist diagnosis)	31.8%	27.3%	31.6%	.652	.326
Comorbidity (≥ 2 diagnoses)	68.2%	81.9%	81.6%	.108	.516

*Enuresis, encopresis, eating disorder, tics, CC = complete cases (pre-post data), CGAS = Child global assessment scale, ITT = intention to treat, group comparisons were ANOVA, t-tests, or χ^2 depending on the level of measurement.

measurement points. For those 23 wait-list patients, data from eleven patients and 21 parents could be collected (data for both perspectives for 9 patients, 39.1%). Consequently, results of the different perspectives overlap to a certain degree but not completely. General characteristics of the sample are shown in Table 1. About two-thirds of the sample was female and the age was on average 11.65 years (range: 4–20y.). Only about 50% of the sample met the diagnostic criteria for a full blown externalising disorder, but all participants were diagnosed with at least one mental disorder.

2.3. Instruments

The instruments for the current analyses were taken from a broader assessment battery which was compiled for the evaluation study.

Externalising symptoms were measured with the externalising syndrome scale from the Child Behaviour Checklist/Youth Self Report (CBCL/YSR) (Arbeitsgruppe Deutsche Child Behavior Checklist 1998a, 1998b). The CBCL/YSR consists of 118 items on specific emotional and behavioural problems in childhood and adolescence. An internalising and an externalising symptom score can be calculated from the corresponding syndrome scales. The externalising syndrome scale, covering disruptive and dissocial symptoms was the primary outcome of the current study. Each item stands for a specific problem behaviour and is rated on a 3-point scale from 0 = *not true* to 2 = *very true or often true*. The cut-off is a T-value of $T > 63$. The reliability and validity of these widely used instruments have been examined in a number of studies (Ebesutani et al. 2011).

Psychiatric diagnosis was established by both the attending therapist and additionally with the Kiddie Schedule for Assessment of Affective Disorders and Schizophrenia – Present Episode Version (K-SADS-P) (Delmo et al. 2001) carried out by a trained psychologist. The K-SADS is a semi-structured interview guideline covering ICD-10 and DSM-IV diagnoses of child and adolescent psychiatric disorders.

2.4. Analysis

To control the potential bias of these missing values, the complete case analyses (CC) were complemented with intention-to-treat analyses (ITT) in the form of expectation maximisation imputation (EM) of missing data as a robust and unbiased technique to handle data attrition (Salim et al. 2008). Prior to the imputation, a missing value analysis was carried out with SPSS to ascertain that the pattern of missing data allowed for imputation. Little's MCAR test (Little 1988) was not significant, indicating that the remaining observations may be considered representative of the originally identified data set (Piggott 2001). Data were imputed for externalising symptom score (CBCL/YSR) across the measurement points. 30 data-sets were imputed. Relative efficiency was high (= 98%), indicating low variability between these imputed data-sets. We report the results of a single imputation data-set. However, pooled analyses of the multiple imputation data yielded comparable results.

All calculations were carried out separately for the patient and the parent perspective. The primary outcome was the externalising symptom score (CBCL/YSR).

To compare the minimal treatment/wait-list interval with the first interval of therapy (25 sessions) we carried out repeated measures ANOVA with externalising symptoms as the dependent variable and *time* as well as *group* (wait-list vs. intervention) as independent factors. To analyse the change in externalising symptoms ratings over the pre-, post-, and FU phase, we calculated mixed linear models with the imputed data-set (ITT analyses). Dependent variables were the difference scores between the baseline score and post and FU scores (positive values equal positive therapy change) for externalising symptoms for parent and patients separately. We added the baseline externalising symptom scores to the model to control for regression to the mean. Additionally, depressive and anxiety status were entered, to account for the high comorbidity levels in the sample (Weitkamp et al. submitted; 2014). Relevant for the analyses were firstly, the intercept (e.g., was the change over time significantly greater than 0); secondly, the change over time from the end of therapy to the 6- and 12-month FU (e.g., stability of the potential therapy effect), and thirdly, the three-way interaction of time*depressive status*anxiety status (e.g., to test the differences of symptom change across time if patients suffered additionally from severe depressive and/or anxiety symptoms). We used backwards selection to attain the final model. The best fit was attained with first-order covariance estimation for the patient ratings and heterogeneous first-order autoregressive estimation for the parent ratings. Level of significance was set to the conventional $\alpha = .05$. Additionally, a twofold criterion for clinically significant (CS) and reliable change was calculated (Reliable Change Index, RCI, Jacobson et al. 1999). CS meant moving from above the cut-off at the beginning of treatment to a score below the cut-off at the end of treatment. The RCI is an indicator whether the observed change in scores is greater than might be expected from random variation alone by taking the reliability of the measure into account. The RCI was calculated in accordance with Jacobsen and colleagues (1999) and Wise (2004). Each individual may be classified as “*Recovered* (passed both CS and RCI criteria), *Improved* (passed RCI criteria alone), *Unchanged/Indeterminate* (passed neither), or *Deteriorated* (passed RCI in the negative direction)” (Wise 2004; p. 52). Both perspectives were joined together favouring improvement and deterioration over improved/unchanged ratings.

Diagnostic status at pre-treatment and at 1-year follow-up was compared via contingency tables with a McNemar test for dependent samples. To control for the potential bias due to the substantial drop-out rates, we conducted drop-out analyses of interview attendance on patient characteristics like age, gender, disruptive diagnosis, comorbidity status, externalising symptoms (CBCL/YSR externalising), and disruptive pathology reduction during therapy. ANOVAs were executed with follow-up interview attendance as the independent variable. The nominal variables gender and comorbidity status were analysed with contingency tables.

Overall, post-hoc power analyses yielded sufficient power ($< 80\%$) for most of the analyses with the exception of ANOVA of the patient ratings comparing the wait-list/first therapy interval with a power of 58%.

3. Results

On average, patients received 94.82 therapy sessions (range 19–300; SD = 58.94) over the course of 24.14 months (SD = 14.11). Only 16.9% of the patients were enrolled in short term therapy (up to 25 sessions).

3.1. Comparison of minimal treatment/wait-list interval and initial therapy phase

At the first measurement point, minimal treatment/wait-list and intervention group did not differ significantly on any of the reported descriptive statistics. There were no significant differences in externalising symptoms (patient rating: $F = 0.399$, $p \leq .531$; parent rating: $F = 0.106$, $p \leq .746$) at the first measurement point.

The wait-list interval was on average 3.36 months (SD = 1.76). Where the information was available, 87.5% of the patients received bridging sessions by the therapist in the wait-list interval, to stabilise and support the patient and the family where necessary. The number of bridging sessions ranged from 1 to 8 ($M = 3.44$, $SD = 2.40$). Thus, the comparison group needs to be regarded as a minimal treatment rather than a no-treatment comparator. For the intervention patients, duration of the initial therapy phase of 25 sessions was on average 6.27 months (SD = 2.62).

Two separate ANOVAs with repeated measures and group factor (wait-list vs. intervention) were conducted with externalising symptoms as the dependent variable for patient and parent view separately (see Tab. 2). The parents reported a significant decrease of externalising symptoms with small effect sizes in both, minimal treatment/wait-list interval and the first therapy interval (time: $F = 21.306$, $p < .001$, $\eta^2 = .276$). The self-report of the patients did not evidence a significant decrease in

Table 2: Repeated measures ANOVA for patient and parent report on externalising symptoms for the wait-list interval vs. the first interval of therapy

		t0	t1			
Externalising	n	M (SD)	M (SD)	F	p	Partial η^2
Patient				Time		
MST	16	59.13 (8.13)	57.19 (9.42)	3.385	.077	.111
Intervention	13	59.38 (6.53)	58.69 (5.09)	Time*group		
				0.759	.391	.027
Parent				Time		
MST	31	66.94 (6.30)	62.39 (8.13)	21.306	< .001	.276
Intervention	27	67.70 (7.07)	63.70 (8.62)	Time*group		
				0.088	.768	.002

t0 = first measurement: beginning of wait-list interval for wait-list patients, beginning of therapy for intervention patients, t1 = second measurement: beginning of therapy for wait-list patients, end of first therapy interval (25 sessions) for intervention patients, MST = minimal supportive treatment (wait-list).

externalising symptoms in either group (time: $F = 3.385$, $p \leq .077$, $\eta^2 = .111$). The interaction term did not reach significance (parent report: time*group: $F = 0.088$, $p \leq .768$, $\eta^2 = .002$; patient report: time*group: $F = 0.759$, $p \leq .391$, $\eta^2 = .027$), indicating that there were no significant differences in the absolute change between minimal treatment/wait-list control and intervention group (first therapy interval).

3.2. Change in externalising symptoms across therapy and six- and twelve-month follow-ups

Pre-post, 6- and 12-month follow-up data was available for 40 patients: 13 self-reports and 31 parent reports (see Tab. 3 for means and variances).

Patient report. The mixed-model analysis of the patient-rated externalising symptoms showed a significant fixed effect of the intercept ($F = 6.740$; $p \leq .014$), indicating a significant overall improvement of symptoms across the measuring points from beginning of therapy to end and follow-ups. Comparing ratings at therapy end and six- and twelve-month follow-ups, the main effect of time ($F = 0.926$; $p \leq .402$) did not reach significance, indicating that externalising ratings did not change significantly from end of therapy to the follow-ups (see Tab. 4). Severity of externalising symptoms at baseline/beginning of therapy was a significant moderator ($F = 11.338$; $p \leq .002$). Controlling for regression to the mean, this indicates that higher baseline symptoms were associated with stronger symptom reduction across therapy and six- and twelve-month follow-ups. To sum it up, patients perceived a significant reduction of symptoms during the therapy interval and this reduction was stable across the 1-year follow-up. Pre-post effect sizes (Cohen's d) were small ($d = .30$) for the completed cases (CC) and moderate ($d = 0.63$) for the ITT sample. Pre-1-year FU effect sizes were moderate, $d = .58$ (CC) and $d = .68$ (ITT).

Parent report. The mixed-model analysis of the patient-rated externalising symptoms showed a significant fixed effect of the intercept ($F = 22.347$; $p < .001$), indicating a significant overall improvement of symptoms from beginning of therapy to end and

Table 3: Change in externalising symptoms and health-related quality of life over beginning of therapy, end of therapy and 1-year follow-up for parent and patient informants (intention-to-treat, imputed data-set)

Outcome variable	beginning of therapy (t1)		end of therapy (tE)		1-year follow-up (FU2)		Stat. sign.
	M	Var	M	Var	M	Var	
Patient							
Externalising symptoms (YSR)	59.36	6.97	53.84	7.35	53.53	7.18	Δ t1-tE* Δ t1-FU2*
Parent							
Externalising symptoms (CBCL)	67.63	6.44	59.81	13.28	59.11	12.70	Δ t1-tE* Δ t1-FU2*

Parent $n = 60$, patient $n = 33$, * $p \leq .05$, Δ = difference, ns = not significant.

Table 4: Mixed model: dependent variable difference of externalizing symptoms across time with externalizing symptoms at baseline as covariates – patient report

Fixed Effects				
	F	P		
Intercept	6.740	.014		
Time	0.926	.402		
YSR externalizing Baseline	11.338	.002		
Estimated Marginal Means				
	Estimated Mean	SE	95%-CI	
			Upper	Lower
Therapy Effect				
Δ t1-tE	5.52	1.09	3.33	7.72
Δ t1-FU1	6.84	1.09	4.65	9.03
Δ t1-FU2	5.83	1.09	3.64	8.02

CI = confidence interval, t1 = baseline/beginning of therapy, tE = end of therapy, FU1 = 6-month follow-up, FU2 = 12-month follow-up, Δ = difference.

Table 5: Mixed model: dependent variable difference of externalizing symptoms across time with externalizing symptoms at baseline and depressive status as covariates – parent report

Fixed Effects				
	F	P		
Intercept	22.347	< .001		
Time	2.157	.126		
Depressive Symptoms	4.132	.047		
CBCL externalizing Baseline	33.316	< .001		
Estimated Marginal Means				
	Estimated Mean	SE	95%-CI	
			Upper	Lower
Therapy Effect				
Δ t1-tE	6.76	1.80	3.16	10.35
Δ t1-FU1	10.24	0.86	8.51	11.96
Δ t1-FU2	8.53	1.76	5.01	12.06

CI = confidence interval, t1 = baseline/beginning of therapy, tE = end of therapy, FU1 = 6-month follow-up, FU2 = 12-month follow-up, Δ = difference.

follow-ups. Comparing ratings at the end of therapy to 6- and 12-month follow-ups, the main effect of time ($F = 2.157$; $p \leq .126$) was not significant, indicating that externalising ratings did not change significantly from end of therapy to the follow-ups. Severity of externalising symptoms at baseline was a significant moderator ($F = 33.316$; $p < .001$) with higher baseline values leading to greater change in the outcome. The main effect of depressive status was also significant ($F = 4.132$; $p \leq .047$), indicating that patients with additional depressive status had overall higher levels of improvement (see Tab. 5). To sum it up, parents perceived a significant reduction of child symptoms during the therapy interval and this reduction was stable across the 1-year follow-up. Pre-post effect sizes (Cohen's d) were large ($d = .85$) for the completed cases (CC) and moderate ($d = .69$) for the ITT sample. Pre-1-year FU effect sizes were large $d = .99$ (CC) or moderate $d = .77$ (ITT).

In terms of reliable change and clinical significance, 43.9% of the complete cases may be considered as *recovered* (passed both CS and RCI criteria), 26.8% as *improved* (passed RCI criteria alone, may have started in the normative range by either the parent- or the self-report), 24.4% as *unchanged/indeterminate* (passed neither), and 4.9% as *deteriorated* (passed RCI in the negative direction) by either parent or patient report.

3.3. Change in diagnostic status from pre-therapy to 1-year follow-up

At the 1-year follow-up, 22 patients (46.8%) could be re-assessed who participated in the K-SADS interview at the beginning of therapy (t1). The other 25 patients (53.2%) who participated in t1 could not be interviewed at the follow-up due to study drop-outs, relocation, stay abroad or refusal to participate. Where at the beginning, 100% of the sample had a psychiatric disorder, at the 1-year follow-up, only eight of the interviewed patients (36.3%) still met the criteria for a diagnosis. Of these, three patients (13.6%) still had a diagnosed externalising disorder at the 1-year follow-up, this compares to 53.2% at the beginning of therapy (McNemar test, $p \leq .008$). Comorbidity status was reduced to three patients (13.6%), this compares to 70.2% at commencement of therapy (McNemar test, $p \leq .001$). The drop-out analyses yielded no significant differences ($p \leq .10$) for age, gender, comorbidity status, externalising symptom outcome, parent-rated externalising symptoms, or externalising disorder at t1.

4. Discussion

The results of this partly controlled, naturalistic trial provide evidence that psychoanalytic therapy can significantly improve health status, reduce target symptoms in young patients with psychiatric disorders with externalising symptoms. However, the first therapy interval yielded no different results than the changes observed in the minimal supportive treatment control group.

The comparison of the minimal treatment/wait-list group with the first interval of treatment yielded a small but significant symptom reduction as reported by the parents for both groups and no significant change in externalising symptoms in the self-report. The intervention and the control group did not differ which might have

been due to the supportive sessions which the wait-list were able to receive as part of the naturalistic setting of the study. Thus, specific therapy interventions did not yield stronger effects than the unspecific effects of minimal supportive treatment and/or the relief experienced by parents. This effect of supportive attention is well documented in research (Norcross 2011). Future studies need to partial out this effect with a more rigorous study design. Additionally, we need to keep in mind that the sample size of the patient ratings was quite small with a post-hoc power of about 60%. Thus, a larger sample size might have yielded a different result.

The significant symptom reduction of the intervention group was in the range of moderate to large effect sizes, with stable effects in the follow-up interval. This improvement is comparable to a reported benchmark of moderate effect sizes ($ES = .68$) of parenting programmes in regular care (Lee et al. 2013). No benchmark data on follow-up effect sizes are available to date. The stable follow-up effects are also mirrored in the diagnostic status at one year follow-up where about 64% of the patients did not have any psychiatric disorder. These results seem quite promising since comorbidity was high at beginning of therapy and diagnostic status was 100%.

In the current sample, about 44% of the children and adolescents may be considered as recovered, a further 27% as improved. About 5% deteriorated during the course of therapy. In the Winkelmann study (2005) the short-term psychodynamic therapy yielded no recovered case after 25 sessions of therapy and 31% improved cases based on clinical expert ratings of the level of impairment. The parent ratings showed no overall significant improvement of externalising symptoms (Winkelmann et al. 2005). This discrepancy to our data might be due to the longer treatment duration in our sample with an average of more than 90 sessions. The current data seem to suggest that longer duration of therapy leads to a higher number of recovered or improved children and adolescents. Even with such extensive therapy, for about a quarter of the patients the level of externalising symptoms remained unchanged. Deterioration of symptoms was reported for about 5%. In the adult psychotherapy literature comparable rates were reported. Lambert and Ogles (2004) stated a rate of 5–10% negative effects of psychotherapy treatments and 25–30% of patients with a missing improvement of their symptoms. Hence, our findings seem to be fairly typical of psychotherapy research. However, we should always be concerned about negative effects of therapy. More research is called for to understand why some children and adolescence deteriorate during treatment.

Therapy discontinuation was quite low (9%), especially for this sample with externalising symptoms. This compares to a drop-out rate of 21% for mainly parenting programmes in a benchmark study on effectiveness trials (Lee et al. 2013). The low drop-out rate in our sample might have been due to the type of treatment or just as well to the highly motivated therapists who were not blinded to the patient participation in the study.

5. Limitations of the study

This naturalistic trial, however, had several limitations. Firstly, the sample was not randomized to the treatment and wait-list control group. However, the two groups did not

differ significantly at the first measurement point, suggesting that group allocation was not systematically biased. The different time intervals between minimal treatment/wait-list and intervention group limit the explanatory power of the results. Another limitation was the fact that some of the wait-list control patients did get some therapeutic support by the therapists during the wait-list interval. This means that the comparator group might be better understood as a minimal treatment than an untreated control-group. Due to ethical reasons, a longer waiting period for the control-group was not feasible. Additionally, therapy doses within the therapy group varied greatly. Since only a small group of patients received short-term treatments no post-hoc comparisons of short- and long-term therapy intervals could be carried out. We chose to use ratings of externalising symptoms rather than externalising diagnosis or level of impairment as inclusion criterion and outcome measures. However, it is interesting to note that the majority of the sample scoring above cut-off on the externalising measure was not formally diagnosed with an externalising disorder. Future studies should discuss the effect of diagnosis vs. symptom severity as inclusion criteria. Although these aforementioned limitations pose a risk to the internal validity of the results, the external validity of this study was very high: naturalistic access paths, unselected patient groups, no strictly manualised treatment, and 'real-life' therapists in their own psychotherapy practices mirroring the current state of mental health services in Germany.

To conclude, the results show that psychoanalytic therapy can be successfully implemented and tested in a naturalistic setting. In the first therapy interval psychoanalytic therapy had no advantage over minimal supportive treatment. Thus, specific therapy interventions did not yield stronger effects than the unspecific effects of minimal supportive treatment within the first phase of therapy for externalising symptoms. Across the whole long-term therapy interval about 70% of the patients improved or recovered. Particularly noteworthy is the stability of the symptom improvement over time. However, due to the missing control-group for the long-term treatments this positive development could not be controlled for alternative explanations like regression to the mean or maturation.

Conflict of interests

The Vereinigung analytischer Kinder- und Jugendlichen-Psychotherapeuten e. V. (VaKJP) funded the study but had no influence on study design, administration, or data analyses. The authors have no conflict of interests.

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