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Effects of long-term psychodynamic psychotherapy on life quality in mentally disturbed children

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Abstract

Objective: Long-term psychodynamic psychotherapy for children aims not only at improving symptoms but also at changing the quality of life. To our knowledge, no studies exist to date that focused on both aspects. In this paper, we investigated changes in problem behavior and health-related quality of life based on long-term psychodynamic psychotherapy with children suffering from emotional and behavioral disorders. **Method:** We investigated 76 children in the treatment group and analyzed pre- and post-treatment symptoms. Furthermore, we compared the outcome data with a control group of 27 children of similar age and diagnoses who received no psychotherapy, both under routine care conditions. The children included in the study were treated on average for 66 sessions. Parent and adolescent ratings on the Achenbach Scales and the Quality of Life Inventory for Adolescents were compared before and after treatment. **Results:** We found a highly significant improvement of internalizing symptomatology based on parent ratings with a large effect. Different from prior investigations based on short-term psychodynamic psychotherapy we found changes in quality of life with large effects. **Conclusion:** These findings indicate that long-term psychodynamic treatment can improve life quality in children beyond symptom change.

Keywords: children; routine treatment; psychodynamic psychotherapy; effectiveness; psychopathology; life quality

Clinical or Methodological Significance of the Article: This article can contribute to improving the knowledge of long-term child psychotherapy and its effects on changing the quality of life in children with different psychopathology. The results indicate that long-term psychodynamic psychotherapy can bring an add-on to pure symptom change for children suffering from mental disorders.

Introduction

Among children with emotional and behavioral psychiatric symptoms both psychodynamic and cognitive behavioral psychotherapies have been proved to be effective (Esser & Blank, 2011; Goodyer et al. 2017; Palmer, Nascimento & Fonagy, 2013; Walter et al., 2017; Weitkamp, Daniels, Romer & Wiegand-Grefe, 2017). Empirical superiority of short-term symptom reduction has been stressed by investigators

researching cognitive behavioral psychotherapy (Johnson & Friborg, 2015). The superiority of long-term effectiveness with respect to improving personality and family functioning is stressed by investigators focusing on psychodynamic psychotherapy (Kronmüller et al., 2005; Leichsenring & Rabung, 2008, 2011; Trowell et al., 2007). Few studies with children and adolescents have focused on the effects of long-term treatment.

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Muratori and co-workers (Muratori, Picchi, Bruni, Patarnello & Romagnoli, 2003) reported the benefits of both immediate and delayed onset long-term effects of time-limited psychodynamic psychotherapy in children with internalizing disorders. In adults with mood and anxiety disorders the Helsinki Psychotherapy Study found a superiority in the effectiveness of long-term over short-term psychodynamic psychotherapy (Knekt et al., 2008), especially on psychosocial functioning but not on the quality of life (Knekt et al., 2015). Target and Fonagy (1994) showed the efficacy of high-frequent psychoanalytic psychotherapy in children with emotional and disruptive disorders (Fonagy & Target, 1994). Their findings indicated that more intensive treatment led to greater improvements in children with emotional disorders, independent of treatment length and that younger children showed greater benefit than older ones (Target & Fonagy, 1994).

Moreover, effectiveness studies have focused almost entirely on symptom improvement in pre- and post-treatment comparisons. There is a lack of studies examining other parameters of improvement such as the children's and adolescents' general or health-related quality of life before and after treatment. Including such outcome criteria to assess treatment, effectiveness is especially indicated for psychodynamic psychotherapy since its aim is explicit to improve not only symptomology but also the general quality of relationships and the entire spectrum of emotional processing (Jakobsen et al., 2007).

Recently, clinical interventions increasingly demand quality of life as an additional outcome criterion for psychotherapy. Researchers point out that including quality of life conveys more information on the patients' well-being than only symptom improvement (Ravens-Sieberer et al., 2009, 2013). The few studies, which investigated life quality change in children with psychodynamic psychotherapy, have addressed components of the health-related quality-of-life construct. Nemirovski Edlund and co-workers (Nemirovski Edlund, Thorén & Carlberg, 2014) focused on symptom improvement and change of psychosocial functioning under outpatient routine care conditions administering psychodynamic psychotherapy to 207 children between 4 and 12 years of age with a large spectrum of psychiatric problems. Results showed an overall improvement regarding general functioning in daily life as well as a significant improvement of prosocial behavior after treatment. Another study included 218 adolescents and young adults from 14 to 24 years of age with anxiety and depressive symptoms and presented similar findings (Nemirovski & Carlberg, 2016). Weitkamp and co-workers (Weitkamp, Claaßen, Wiegand-Greve & Romer, 2014) reported that a

lack of life quality was attributed to internalizing pathology rather than externalizing pathology among children and adolescents. Only few studies included quality of life as an outcome criterion to evaluate the treatment effectiveness of cognitive behavioral psychotherapy among children and adolescents. In their research, Weidle, Ivarsson, Thomsen, Lydersen and Jozefiak (2014) showed that including quality of life served as a reliable external criterion to assess the treatment efficacy for children with obsessive-compulsive disorders.

In the current study, we investigated the change in emotional and behavioral problems and health-related quality of life among child and adolescent therapy patients with long-term psychodynamic treatment under routine care conditions in a semi-controlled study design, using parent and adolescent patient ratings. In accordance with the findings mentioned above, we expected a significant reduction in parent and patient-rated emotional and behavioral problems (1). Furthermore, we expected that the life quality of children and adolescents diagnosed with different mental disorders improves significantly with long-term psychodynamic treatment from a patient and parent perspective (2). The explicitly targeted treatment goals of psychodynamic treatment, such as improving general well-being as well as social and emotional functioning—as parameters of quality of life—were investigated.

Method

Participants

Treatment group. All participants were children and adolescents who sought psychodynamic treatment, who met ICD-10 criteria for at least one mental disorder, were able to attend weekly treatment appointments and had an overall positive prognosis for outpatient treatment according to clinical judgment. Although not measured systematically, based on routine referrals, to most patients psychotherapeutic treatment, in general, was recommended by referring pediatricians rather than suggesting psychodynamic treatment per se. Therefore, patients applied at the KBAP (Koeln Bonn Academy of Psychotherapy) mostly based on living vicinity rather than the explicit choice of psychodynamic psychotherapy.

Exclusion criteria were drug addiction, psychotic symptomology, and the need for inpatient treatment. The long-term treatment of all included children was authorized and paid by the German-public health insurance system, based on their ICD-10 diagnoses. The psychotherapy sessions of the child were accompanied by council sessions with a parent or

caregiver, every fourth session, according to the regulations of the German health care system. The study was approved by the Ethics Committee of the University Clinic of Cologne (Approval 07-194, 2008) and written informed consent was obtained from all children, youths, and parents who participated in the study, before testing.

The sample consisted of 76 children and adolescents who were included in the study at time one (T1) and completed either (56 CBCL) parent or (34 adolescent YSR) self-report assessments at time two (T2) after undergoing long-term psychodynamic treatment. Of the 34 YSR completers 15 of their parents filled out CBCL reports. In 20 cases only YSRs were completed but no CBCLs. This was based on the fact that in the treatment of older adolescents parents were no longer included. Of all 76 participants, at the beginning 61 were accompanied by parent (or caregiver-) sessions. The patients received, on average, 66 sessions of treatment ($SD = 21.3$; minimum of 16, maximum of 120 sessions) over the average duration of 30 months. All psychotherapies started out as long-term treatments, meaning that at the beginning over 50 sessions were approved by the health care insurance based on the diagnosis and treatment prognosis of each patient. Of all 76 treatments, 61 lasted over 50 sessions and 15 were finished or discontinued after 16–48 sessions. Therefore, the number of sessions ranged from 16 to 120.

The mean age of the participants in the treatment group at the beginning of treatment was 12 years ($SD = 3.7$; range 4–17 years). Of the 76 participants, 52 were girls (68%) and 24 boys (32%). Locus of education varied: $n = 6$ (7.9%) attended a basic level of public school or a special school for learning disabilities, $n = 26$ (34.2%) a medium level of public school and $n = 13$ (17.1%) a high level of the German-public school system (in 21 cases the information was missing). Ninety-two percent had German nationality and eight percent a different national background.

The diagnoses for both groups were routinely given by an experienced licensed child and adolescent psychotherapist according to ICD-10, based on the initial clinical evaluations with the patients and their parents. The majority of patients suffered from internalizing symptoms such as depression (15.8%), emotional disorders (15.8%), anxiety disorders (14.4%), and adjustment disorders (22.4%); fewer had externalizing symptoms such as hyperkinetic and conduct disorders (18.4%). Of all patients, 36.8% had a secondary diagnosis, mostly emotional disorders (25%).

The 45 participating psychotherapists held a master's degree in education, psychology, or social work and were under continuous training and supervision to become a psychodynamic child and

adolescent psychotherapist. They were, on average, 36.3 years old, had 4.7 years of psychotherapy education and practice; 43 were female and 2 male; 24 treated one patient of the sample, 15 therapists treated 2 participating children and six therapists treated 3 to 4 patients. Before starting to treat psychotherapeutic cases, the therapists had finished their intermediate examination, passed at least 50 h of training analysis, 200 h of theory and diagnostic assessment. All treatments were accompanied by a constant supervision at the ratio 1 h of supervision to 4 h of therapy. All supervisors were licensed psychodynamic child and adolescent psychotherapists, approved by the German administration.

Control group. The control group consisted of 27 child and adolescent patients who applied for a psychodynamic psychotherapy but were placed on a waiting list due to missing treatment availabilities. Timing of application determined treatment assignment. If treatment was available the patient entered the treatment group; if treatment was not available, the individual was assigned to a control condition. There was no prerequisite criterion that determined which patients entered the control group. During the assessment time of the control group, the patients did not receive any psychotherapeutic treatment. The treatment and the control group did not differ significantly regarding gender ($\chi^2 = 0.04$; $p = .851$) but differed in age ($t = 2.9$; $p = .004$). At the initial assessment (T1) the mean age of the 27 control patients was 14.3 years ($SD = 2.7$; range 8–17 years), 66.7% were girls and 33.3% were boys. The study period for the patients of the control group lasted on average 6.2 months ($Max = 13$ months; $Min = 3$; $SD = 2.5$). School attendance and family demographics did not differ between the study and control group ($\chi^2 = 1.0$ – 4.1 , $p = .090$ – $.673$). Of the control group, 96.3% had German nationality and 3.7% a different national background which did not differ from the study group ($\chi^2 = 0.55$; $p = .457$). Diagnoses did not differ in both groups ($\chi^2 = 5817$; $p = .121$). Patients of the control group had mostly depressive and emotional psychopathology (33.9%), adjustment disorders (18.5%), fewer hyperkinetic or conduct disorders (7.4%).

Procedure

The initial assessments of patients and their parents took place before referral to a psychotherapist or to the control group (T1t). The second assessment in the study group were conducted at the end of treatment, within the last two sessions of treatment (T2t). The psychodynamic psychotherapy was not accompanied by any other additional treatment. In

one case the therapy was interrupted for a couple of weeks by an inpatient treatment. One case in the treatment group received anti-stimulant medication for ADHD throughout the treatment. No one in the control group received this treatment.

The first assessment time (T1c) for the control group took place after the initial interview with an assigned and licensed child and adolescent psychotherapist. The therapist assessed the patient according to ICD-10, evaluated the indication for psychotherapy and transferred the patient to the control group if there were no availabilities at that time. At the end of the waiting period, the second assessment (T2c) was carried out before transferring the patient into an available treatment. No selection was made based on any characteristics of the patient. During the study period, no treatment or any type of psychological support was offered.

Instruments

Child Behavior Checklist (CBCL). The Child Behavior Checklist (Döpfner, Plück, Kinnen & Arbeitsgruppe Deutsche Child Behavior Checklist, 2014) is a well-validated 118-item parent report that measures behavioral problems and competencies in children and adolescents, aged from 4 to 18 years. The questionnaire is aggregated to eight narrowband syndrome scales and three broadband scales (Internalizing, Externalizing Problems, and Total Score). The CBCL provides standard values for age and gender. The standardization was conducted with students, psychiatric outpatients, and inpatients. The internal consistency ($\alpha > .90$), the retest-reliability five months later ($r_{tt} = 0.86\text{--}0.90$), as well as the satisfactory to good factorial validity, was proved for the German version of the CBCL (Döpfner et al., 2014).

The *Youth Self-Report* (Döpfner et al., 2014) is a well-established 112-item self-report instrument for adolescents ranging from 11 to at least 18 years of age and assesses competences and behavioral problems. It consists of the same scales as the CBCL. The Internalizing composite consists of the anxious/depressed, somatic complaints, and social withdrawal subscales. The Externalizing composite consists of aggressive and delinquent behavior subscales. The YSR is one of the most applied instruments to measure symptomatology in children and adolescents in German studies and presents a high internal consistency (mean Cronbachs $\alpha = .90$), and a sufficient test-retest-reliability after five months ($r_{tt} \geq .70$) (Döpfner et al., 2014).

Quality of live self-report questionnaire for children and adolescents, based on parent, child and adolescent perspective. (LKJ-E- KJ, Flechtner et al., 2002)

Flechtner and co-workers (Flechtner, Möller, Kranendonk, Luther & Lehmkuhl, 2002) developed an 86-item questionnaire to measure health-related life quality among children and adolescents from 10 up to 18 years of age. According to the concept of quality of life based on the well-known model by Aaronson and co-workers (Aaronson et al., 1993), the questionnaire addresses physical, mental-emotional, and social domains. The children's version is validated for an age spectrum from 10 to 14 years, the youth version for individuals between 14 and 18 years of age. The questionnaire is aggregated into four functional scales (one emotional and three social functioning scales) with four response categories which reflect emotional and social aspects of life quality and the *overall quality of life* scale (with seven categories from 1 = very bad to 7 = very good). In addition, the questionnaire contains symptom scales (emotional, physical, and social symptomatology) that were not included in the analyses in this article. The scale emotional functioning is operationalized to assess mood, anxiety, and self-esteem, the social functioning scales to assess social interaction and leisure time behavior regarding family, siblings, and peers.

The reliability of the instrument was measured based on a survey of 700 families and resulted in good internal validity ranging from $\alpha = 0.76$ to 0.91 (Flechtner et al., 2000).

In order to investigate construct validity (item-discriminant and item-convergent validity), the multi-trait scaling technique was used to determine if the items could be summarized into a smaller number of scales. Item-scale correlations were investigated and item convergent validity was defined as a Pearson's correlation coefficient of $r > 0.4$. Further item discriminant analysis was carried out, investigating the correlation of each item with all scales. Scaling success was defined as a higher item-scale correlation with the own scale than with other scales. The $r = 0.4$ criterion for item-scale convergent validity was surpassed in all cases and the tests regarding the item-discriminant validity revealed no scaling errors of items. Furthermore, predefined groups of patients were used to evaluate clinical validity, i.e., exploring to what extent the measure is able to discriminate between clinically distinct groups of patients (known-groups comparison) (Flechtner et al., 2000, 2002).

According to Oroba and co-workers (Oroba, Rodrigues, Myles, Zee, & Pater, 1998), a mean increase of 10–20 points on quality-of-life scales indicates a moderate and over 20 points a large change that is clinically significant.

Moreover, sociodemographic data were recorded using a self-report documentation form.

Statistical analysis

Analyses of skewness and kurtosis, as well as the calculation of Q–Q-plots, indicated that deviation from normality is practically noncritical and suggests no violation on any scale (Miles & Shevlin, 2007). As a result, parametric tests were applied to analyze differences prior and after treatment for each instrument using dependent *t*-tests. For the comparison of differences between the treatment group and the control group, we used covariance analysis adjusting for baseline.

In order to ensure that alpha error did not exceed the conventional risk of 5%, the significance level was adjusted by Bonferroni–Holm correction (Kowalski & Enck, 2010). The calculation of local alpha level for the treatment and control group yielded 73 conducted *t*-tests, leading to an alpha correction of $p = .00068$. Moreover, we calculated effect sizes using Cohen’s *d* for *t*-tests and partial eta-square (η^2_{part}) for covariance analyses (Cohen, 1988). According to Cohen $d = .20$ describes a small, $d = .50$ average and $d \geq .80$ a high effect. A partial eta-square of $\eta^2_{part} = .01$ applies for a small, $\eta^2_{part} = .06$ an average and $\eta^2_{part} \geq .14$ for a high effect. Note that in specific cases, η^2_{part} can be easily converted to *d* (Cohen, 1988). The clustering due to therapist was investigated by a linear mixed model allowing for separate residual variances in treatment groups. Intra-class correlation (ICC) due to therapist was calculated from estimated variance components. Since ICCs in the treatment group were generally negligible for all considered instruments, i.e., well below 0.001, only results from covariance analysis are given.

Statistical analyses were done with SPSS Statistics 25 (IBM Corp, Armonk, NY, USA) and Stata 15.1/SE (StataCorp LLC, College Station, TX, USA).

Results

(Hypothesis 1) Reduction in parent and patient-rated emotional and behavioral problems

- (a) *Pre–post comparison of symptoms within the treatment group.* Prior to treatment parents reported on average on broadband scales of the CBCL internalizing symptoms ($M = 17.3$) and total scores ($M = 50.2$) in the high clinical range ($T > 70$) and externalizing symptoms ($M = 13.9$) in a clinical range ($T > 64$). Patients reported their symptoms on the broadband scales of the YSR on average in a high clinical range ($T > 66$) regarding internalizing problems ($M = 22.8$) and the total score ($M = 85.3$) while their externalizing problems

($M = 16.3$) were in a clinical range ($T > 59$). In comparison, for the second testing time T2, the testing revealed a clinically significant symptom reduction based on parent ratings and self-report ratings by at least six points on average to a non-clinical range for parent’s evaluation (CBCL) ($T < 60$). Table I shows group change between normal, Borderline, and high clinical range of CBCL scores at time 1 and 2.

- (b) *Pre–post comparison of symptoms between the treatment and control group.* At time one (T1), no significant differences were found between the treatment and control group regarding mean values of CBCL and YSR scales. Internalizing scales on parent and patient reports did not differ in both groups (CBCL $t = 0.18$; $p = .852$; YSR: $t = 0.11$; $p = .909$), as well as Externalizing scale (CBCL: $t = 0.83$; $p = .407$; YSR: $t = 0.85$; $p = .397$) and Total score (CBCL: $t = 0.66$; $p = .506$; YSR: $t = 0.11$; $p = .913$). As Table II shows, analyses of post-treatment changes comparing the treatment with the control group revealed a highly significant reduction of internalizing symptoms based on parent CBCL ratings with a large effect. Although internalizing symptoms and the total score showed medium effects based on patient self-ratings, both comparisons were not significant. Age of patient was not associated with effectiveness on any CBCL or YSR scale ($F = 0.24–0.73$; $p = .396–.674$).

Hypothesis (2): Improvement of Quality of Life based on parent and patient self-reports

- (c) *Pre–post comparison of quality of life within the treatment group.* As Table III shows, comparing changes from pre- to post-treatment-assessment within the treatment group, analyses revealed the significant improvement of the general quality of life ($F = 4.21$; $p < .0001$; $d = .83$) with a high effect size based on parents’ ratings (LKJ-E). The reported mean change of general quality of life was over 19 points. A statistically significant effect was also found regarding parent’s ratings of their children’s emotional functioning after treatment which could not withstand Bonferroni–Holm correction. The changes within the social functioning scales did not show any statistically significant outcomes.

As Table III shows, children’s ratings (LKJ-J/K) revealed also significant improvements regarding

Table I. Treatment sample, mean scores of CBCL scales, comparing the number of patients ending in clinical or normal range pre- and post-treatment, based on parent ratings.

	T1t			T2t		
	$M_{\text{Internalizing}}$	$M_{\text{Externalizing}}$	M_{Total}	$M_{\text{Internalizing}}$	$M_{\text{Externalizing}}$	M_{Total}
Normal	5.67 ($n = 12$)	5.33 ($n = 15$)	15.80 ($n = 5$)	4.38 ($n = 24$)	4.27 ($n = 26$)	14.26 ($n = 23$)
Borderline	11.33 ($n = 6$)	11.53 ($n = 15$)	33.17 ($n = 12$)	11.14 ($n = 7$)	11.08 ($n = 12$)	32.67 ($n = 9$)
Clinical	21.87 ($n = 38$)	20.31 ($n = 26$)	59.85 ($n = 39$)	18.92 ($n = 25$)	21.39 ($n = 18$)	56.79 ($n = 24$)

Note. $M_{\text{Internalizing}}$, $M_{\text{Externalizing}}$, M_{Total} = Mean Scores of CBCL Scales; T1 = pretreatment, T2 = post-treatment, t = treatment group.

their perceived quality of life with medium-to-high effects for the emotional functioning scale and general life quality. Emotional functioning increased on average up to 14 points from pre- to post-treatment, the general quality of life up to 15 points.

- (a) *Pre-post comparison of quality of life between treatment and control group.* Comparing the treatment and control group, covariance analyses revealed highly significant differences for General Quality of Life based on parent's ratings (see Table IV).

As Table IV shows, social functioning within the family did not show a significant difference comparing treatment and control group but revealed a medium effect. We found a significant effect only on General Quality of Life parent rated ($F = 9.77$, $p = .001$), not on any of the other life quality parameters (Emotional Functioning $F = 2.10$; $p = .131$; Social Functioning Family $F = 1.90$; $p = .159$; Social Functioning Siblings $F = 2.10$; $p = .131$; Social Functioning Peers $F = 1.60$; $p = .209$).

In Table IV patient's ratings show a significant improvement for emotional functioning ($p = .024$; $\eta_{\text{part}}^2 = .138$) with a large effect that was also found regarding *general quality of life* but did not reach statistical significance ($p = .060$; $\eta_{\text{part}}^2 = .098$).

Discussion

The current study focused on the treatment effectiveness of long-term psychodynamic psychotherapy for children and adolescents with mental disorders under routine care conditions. In accordance with the explicit interest of psychodynamic psychotherapy (Jakobsen et al., 2007) we focused not only on symptom change but especially on health-related quality of life as a meaningful indicator for change regarding general quality of relationships and the entire spectrum of emotional processing in children. This study was undertaken to examine statistically and clinically significant changes in parent and patient ratings of emotional and behavioral symptoms and quality of life after long-term psychodynamic child treatment that lasted on average 60 sessions. The treatment group was compared to an untreated quasi-randomized control group of equivalent child and adolescent patients in terms of age and symptoms, but not treatment length. The children in the treatment group showed internalizing symptoms and total scores in a high clinical range before treatment, based on parent (CBCL) and adolescent ratings (YSR).

As predicted, in comparison with a waitlist control group our results demonstrated significant symptom reductions with respect to internalizing symptoms according to parents. Comparing our results with preliminary findings on short-term

Table II. Pre-post comparison of symptoms between treatment and control group at T2, CBCL and YSR.

Instrument	Treatment group ($n = 56$)		Control group ($n = 24$)		F	p	η_{part}^2
	M	SD	M	SD			
CBCL							
Internalizing	11.71	7.80	16.12	10.29	5.49	.022*	.07
Externalizing	11.23	8.94	12.41	8.65	0.01	.925	.00
Total	35.45	23.14	44.42	24.24	1.99	.162	.03
YSR	($n = 34$)		($n = 23$)				
Internalizing	15.52	12.14	19.39	8.24	2.19	.145	.04
Externalizing	11.88	8.08	14.74	5.97	1.41	.240	.03
Total	63.70	31.96	73.22	20.79	2.02	.161	.04

Note. * = $p < .05$.

Table III. Pre–post comparison of quality of life within treatment group: Parents’ perspective (LKJ-E) and patient’s perspective (LKJ-K/J).

Instrument	N	T1t		T2t		F	p	d
		M	SD	M	SD			
LKJ-E								
Emotional functioning	46	61.49	20.44	68.42	16.16	2.49	.016*	.38
Social functioning (parents/family)	46	49.48	22.66	54.34	22.43	1.57	.123	.22
Social functioning (siblings)	46	40.22	37.77	45.47	32.94	1.06	.295	.15
Social functioning (peers)	46	70.29	24.65	73.80	19.81	1.11	.270	.16
General quality of life	46	51.21	23.85	68.11	16.07	4.21	<.001***	.83
LKJ-K/J								
Emotional functioning	26	60.44	22.31	75.09	14.68	3.43	.002**	.78
Social functioning (parents/family)	26	51.52	11.37	53.14	11.85	.51	.608	.14
Social functioning (siblings)	26	48.65	19.79	55.19	19.53	1.44	.162	.33
Social functioning (peers)	26	79.17	20.57	72.56	23.32	1.23	.228	.30
General quality of life	26	48.93	25.28	64.31	20.01	3.02	.006**	.67

Note. *= $p < .05$, **= $p < .01$, ***= $p < .001$; T1 = pretreatment, T2 = post-treatment, t = treatment group.

psychodynamic psychotherapy (Krischer et al., 2013) within a similar sample our findings indicated that larger effects were associated with longer treatment duration. Thus, the current results can blend into the literature indicating that long-term psychodynamic psychotherapy can clinically and statistically improve internalizing symptomatology of children and adolescents with different psychiatric problems under routine care conditions (Midgley et al., 2017). The missing statistical significance in YSR ratings might be based on the small sample size.

In order to extend these findings, we focused on treatment effects of health-related quality of life in children and adolescents after long-term psychodynamic treatment. As psychodynamic psychotherapy aims not only at changing symptoms but also at solving inner conflicts that prevent from high quality of life, it was a specific research focus of this study to investigate whether long-term psychodynamic child psychotherapy attains its treatment goal to change the quality of life. A former study of short-term psychodynamic psychotherapy did not reveal changes regarding the quality of life after 25 sessions of treatment (Krischer et al., 2013). Our findings indicate that emotional functioning increases significantly with long-term psychodynamic psychotherapy based on self-ratings and general quality of life based on parent ratings, both showing large statistical effects. As described above, the construct of emotional functioning focuses on general mood, satisfaction, well-being, self-confidence, and social skills (Flechner et al., 2000). Further research is needed to shed light on this finding. Comparing mean adolescent ratings pre- and post-treatment, patients reported an average improvement of these parameters over 10 points after treatment which indicates a moderate clinical effect.

The results correspond with previous control group studies that could verify improvement of general functioning in children and adolescents with psychiatric problems based on psychodynamic psychotherapy (Nemirovski Edlund & Carlberg, 2016). By this means, our findings provide evidence that long-term psychodynamic treatment can change not only internalizing symptoms but also the quality of life in a clinically relevant way. In accordance with the study of Weitkamp and co-workers (Weitkamp et al., 2014) the present findings support the assumption that health-related quality of life in children with psychiatric disorders is elicited by long-term psychodynamic treatment.

In summary, our results indicate that psychodynamic long-term child treatment enables to not only improve symptoms but also increase the quality of life for children and adolescents suffering from a psychopathological disorder in a meaningful way. This finding can add to the research discussion by showing that—compared to short-term—only long-term psychodynamic treatment was associated with improving the quality of life in children and adolescents with psychopathology. Based on our findings it would be of great interest for future research to systematically assess benefits that are associated with long-term as compared to short-term psychodynamic treatment in a sufficiently powered randomized clinical trial.

Limitations

The findings are based on self-report instruments, implying the danger of mono-method bias. Clinical interviews by experienced clinicians would have added to the validity of the data. Diagnoses were given by a clinician based on a routine method

Table IV. Pre–post comparison of symptoms between treatment and control group at T2, parent’s perspective (LKJ-E) and patient’s perspective (LKJ-J/K).

Instrument	Treatment group (<i>n</i> = 46)		Control group (<i>n</i> = 22)		<i>F</i>	<i>p</i>	ηp^2
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
LKJ-E							
Emotional functioning	68.42	16.16	63.41	21.81	2.31	.133	.03
Social functioning (parents/family)	54.34	22.43	45.88	17.42	3.61	.062	.05
Social functioning (siblings)	45.47	32.94	34.46	26.63	2.38	.128	.04
Social functioning (peers)	73.80	19.81	66.45	26.91	1.87	.176	.03
General quality of life	68.11	16.07	47.97	25.05	15.34	<.001***	.19
LKJ-J/K	TG(<i>n</i> = 26)		CG(<i>n</i> = 12)				
Emotional functioning	75.09	14.68	62.28	23.21	5.59	.024*	.14
Social functioning (parents/family)	53.14	11.85	56.36	15.33	0.13	.722	.00
Social functioning (siblings)	55.19	19.53	52.75	18.25	0.00	.973	.00
Social functioning (peers)	72.56	23.32	69.25	28.81	0.72	.790	.00
General quality of life	64.31	20.01	55.27	20.43	3.78	.060	.10

Note. *=*p* < .05, ***=*p* < .001.

without a standardized diagnostic instrument. The sample sizes were rather small which restricts the generalization of the findings. Due to ethical issues, we could not include a parallelized long-term control group of children who did not receive any treatment for a parallel length of time. Therefore, greater change in the treatment group could simply be a result of the longer time-period than in the control group. This restricts the generalizability of the findings. Moreover, the absence of a post-treatment follow-up restricts the findings insofar as to test whether the changes in quality of life and symptoms are maintained after treatment. Moreover, the life quality instrument is well-validated but data with respect to the question of treatment effectiveness are missing.

Furthermore, the patient sample is a heterogeneous group which has the advantage of a natural health care context but limits the conclusion for particular psychiatric disorders and the quality and scientific relevance of the study. The study lacks randomization and a manualized intervention and disorder-specific outcome criteria. Moreover, the absence of experienced and licensed children and adolescent’s psychotherapists instead of psychotherapists in training reduces the scope of the study.

Conclusion

In summary, with this study, we could show that clinically referred child patients with a mixed set of difficulties can benefit from long-term psychodynamic psychotherapy under routine care conditions. Our findings indicated that in accordance with its explicit aim long-term psychodynamic treatment can improve not only symptoms but also the quality

of life, including general mood, satisfaction, well-being, and self-confidence, based on parent and self-ratings.

Disclosure statement

The authors report no conflict of interest.

References

- Aaronson, N. K., Ahmedzai, S., Bergman, B., Bullinger, M., Cull, A., Duez, N. J., ... Takeda, F. (1993). The European organization for research and treatment of Cancer QLQ-C30: A quality-of-life instrument for use in international clinical trials in oncology. *Journal of the National Cancer Institute*, 85(5), 365–376.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). New York, NY: Academic Press.
- Döpfner, M., Plück, J., Kinnen, C., & Arbeitsgruppe Deutsche Child Behavior Checklist (2014). *Manual of the German versions of the Child Behavior Checklist for school-aged children and adolescents by Thomas M. Achenbach. Child Behavior Checklist (CBCL/6-18R), Teacher Report Form (TRF/6-18R), Youth Self-Report (YSR/11-18R)*. Göttingen, Deutschland: Hogrefe.
- Esser, G., & Blank, S. (2011). Efficacy of psychotherapy in childhood and adolescence. *Praxis für Kinderpsychologie und Kinderpsychiatrie*, 60, 626–638.
- Flechtner, H., Hellmann-Mersch, B., Kranendonk, S., Luther, S., Möller, K., & Lehmkuhl, G. (2000). Assessment of quality of life in child and adolescent psychiatry. The parent report “LKJ-E” out of the self-report system “LKJ” (quality of life in child and adolescent psychiatry). In M. Bullinger, J. Siegrist, & U. Ravens-Sieberer (Eds.), *Life quality research from medicine psychological and sociological perspective* (pp. 247–273). Göttingen: Hogrefe.
- Flechtner, H., Möller, K., Kranendonk, S., Luther, S., & Lehmkuhl, G. (2002). The subjective quality of life of children and adolescents with psychiatric disturbances: Development and validation of a new assessment tool. *Praxis der Kinderpsychologie und Kinderpsychiatrie*, 51, 77–91.

- Fonagy, P., & Target, M. (1994). The efficacy of psychoanalysis for children with disruptive disorders. *Journal of the American Academy of Child & Adolescent Psychiatry*, 33(1), 45–55.
- Goodyer, I. M., Reynolds, S., Barrett, B., Byford, S., Dubicka, B., Hill, J., ... Senior, R. (2017). Cognitive-behavioural therapy and short-term psychoanalytic psychotherapy versus brief psychosocial intervention in adolescents with unipolar major depression (IMPACT): A multicenter, pragmatic, observer-blind, randomized controlled trial. *Health Technology Assessment*, 21(12), 1–94.
- Jakobsen, T., Rudolf, G., Eckert, J., Huber, D., Klug, G., Grande, T., ... Leichsenring, F. (2007). Results of psychoanalytic long-term therapy in specific diagnostic groups: Improvement in symptoms and interpersonal relationships. *Zeitschrift für Psychosomatische Medizin und Psychotherapie*, 53(2), 87–110.
- Johnsen, T. J., & Friborg, O. (2015). The effects of cognitive behavioral therapy as an anti-depressive treatment is falling: A meta-analysis. *Psychological Bulletin*, 141(4), 747.
- Knekt, P., Heinonen, E., Härkäpää, K., Järvikoski, A., Virtala, E., Rissanen, J., ... Helsinki Psychotherapy Study Group (2015). Randomized trial on the effectiveness of long- and short-term psychotherapy on psychosocial functioning and quality of life during a 5-year follow-up. *Psychiatry Research*, 229(1–2), 381–388.
- Knekt, P., Lindfors, O., Härkänen, T., Välikoski, M., Virtala, E., Laaksonen, M. A., ... Helsinki Psychotherapy Study Group (2008). Randomized trial on the effectiveness of long- and short-term psychodynamic psychotherapy and solution-focused therapy on psychiatric symptoms during a 3-year follow-up. *Psychological Medicine*, 38(5), 689–703.
- Kowalski, A., & Enck, P. (2010). Statistical methods: Multiple significance tests and the Bonferroni procedure. *Psychotherapie, Psychosomatik, Medizinische Psychologie*, 60(7), 286–287.
- Krischer, M. K., Trautmann-Voigt, S., Kaspers, S., Voigt, B., Flechtner, H., & Lehmkuhl, G. (2013). Effectiveness of psychodynamic psychotherapy in children and juveniles—results of a pilot study. *Zeitschrift für Kinder- und Jugendpsychiatrie und Psychotherapie*, 41(2), 87–97.
- Kronmüller, K. T., Postelnicu, I., Hartmann, M., Stefini, A., Geiser-Elze, A., Gerhold, M., ... Winkelmann, K. (2005). Efficacy of psychodynamic short-term psychotherapy for children and adolescents with anxiety disorders. *Praxis der Kinderpsychologie und Kinderpsychiatrie*, 54(7), 559–577.
- Leichsenring, F., & Rabung, S. (2008). Effectiveness of long-term psychodynamic psychotherapy. A meta-analysis. *Journal of the American Medical Association*, 300(13), 1551–1565.
- Leichsenring, F., & Rabung, S. (2011). Long-term psychodynamic psychotherapy in complex mental disorders: Update of a meta-analysis. *The British Journal of Psychiatry*, 199(1), 15–22.
- Midgley, N., ÓKeefe, S., French, L., & Kennedy, E. (2017). Psychodynamic psychotherapy for children and adolescents: An updated narrative review of the evidence base. *Journal of Child Psychotherapy*, 43, 307–329.
- Miles, J., & Shevlin, M. (2007). A time and a place for incremental fit indices. *Personality and Individual Differences*, 42(5), 869–874.
- Muratori, F., Picchi, L., Bruni, G., Patarnello, M., & Romagnoli, G. (2003). A two-year follow-up of psychodynamic psychotherapy for internalizing disorders in children. *Journal of the American Academy of Child & Adolescent Psychiatry*, 42(3), 331–339.
- Nemirovski Edlund, J., & Carlberg, G. (2016). Psychodynamic psychotherapy with adolescents and young adults: Outcome in routine practice. *Clinical Child Psychology and Psychiatry*, 16(1), 66–80.
- Nemirovski Edlund, J., Thorén, A., & Carlberg, G. (2014). Outcome of psychodynamic child psychotherapy in routine practice. *European Journal of Psychotherapy & Counselling*, 16(3), 228–244.
- Osoba, D., Rodrigues, G., Myles, J., Zee, B., & Pater, J. (1998). Interpreting the significance of changes in health-related quality-of-life scores. *Journal of Clinical Oncology*, 16(1), 139–144.
- Palmer, R., Nascimento, L. N., & Fonagy, P. (2013). The state of the evidence base for psychodynamic psychotherapy for children and adolescents. *Child and Adolescent Psychiatric Clinics of North America*, 22(2), 149–214.
- Ravens-Sieberer, U., Klasen, F., Bichmann, H., Otto, C., Quitmann, J., & Bullinger, M. (2013). Assessment of health-related quality of life in children and adolescents. *Das Gesundheitswesen*, 75(10), 667–678.
- Ravens-Sieberer, U., Torsheim, T., Hetland, J., Vollebergh, W., Cavallo, F., Jericek, H., ... Erhart, M. (2009). Subjective health, symptom load and quality of life of children and adolescents in Europe. *International Journal of Public Health*, 54, 151–159.
- Target, M., & Fonagy, P. (1994). The efficacy of psychoanalysis for children with emotional disorders. *Journal of the American Academy of Child & Adolescent Psychiatry*, 33(3), 361–371.
- Trowell, J., Joffe, I., Campbell, J., Clemente, C., Almqvist, F., Soininen, M., ... Tsiantis, J. (2007). Childhood depression: A place for psychotherapy. An outcome study comparing individual psychodynamic psychotherapy and family therapy. *European Child & Adolescent Psychiatry*, 16(3), 157–167.
- Walter, D., Dachs, L., Faber, M., Goletz, H., Goertz-Dorten, A., Hautmann, C., ... Doepfner, M. (2017). Effectiveness of outpatient cognitive-behavioral therapy for adolescents under routine care conditions on behavioral and emotional problems rated by parents and patients: An observational study. *European Child & Adolescent Psychiatry*, 27, 65–77.
- Weidle, B., Ivarsson, T., Thomsen, P. H., Lydersen, S., & Jozefiak, T. (2014). Quality of life in children with OCD before and after treatment. *European Child & Adolescent Psychiatry*, 24(9), 1061–1074.
- Weitkamp, K., Claaßen, S., Wiegand-Grefe, S., & Romer, G. (2014). Operationalized psychodynamic diagnostics in childhood and adolescence (OPD-CA): The axis during psychoanalytic child- and adolescent psychotherapy. *Praxis der Kinderpsychologie und Kinderpsychiatrie*, 63(10), 831–843.
- Weitkamp, K., Daniels, J. K., Romer, G., & Wiegand-Grefe, S. (2017). Psychoanalytic psychotherapy for children and adolescents with severe externalizing psychopathology: An effectiveness trial. *Zeitschrift für Psychosomatische Medizin und Psychotherapie*, 63, 251–266.