Original Article

Effectiveness of Usual-Care Cognitive Behavioral Therapy for Adolescents with School Absenteeism

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Summary: *Objective:* Highly-controlled, randomized controlled trials have provided considerable evidence for the efficacy of outpatient cognitive-behavioral therapy (CBT) for patients with school absenteeism and anxiety disorders. However, the effectiveness of outpatient CBT under routine-care conditions for youth with school absenteeism remains unproven. *Methods:* This observational study used file records to analyze the changes under routine CBT in a sample of $n = 49$ clinically referred adolescents aged 11 to 18 years with school absenteeism and mental disorders who were being treated in a university outpatient clinic. At the start and end of treatment, we assessed the severity of school absenteeism as well as mental health problems as rated by parents and by the adolescents themselves. *Results:* The analysis yielded a statistically highly significant decline in school absenteeism (large effect, Cohen's $r = 0.80$) and in mental health problems (small-to-large effect, Cohen's $d = 0.33$ to $d = 0.82$). However, a substantial proportion of the sample remained in the clinical range at the end of treatment. *Conclusions:* These findings suggest that CBT is effective for adolescents with school absenteeism when administered under routine-care conditions, though the results must be interpreted with caution because of the lack of a control condition.

Keywords: routine treatment, adolescent psychotherapy, school absenteeism, cognitive behavioral therapy

Die Wirksamkeit von Routine-Verhaltenstherapie bei Jugendlichen mit Schulabsentismus

Zusammenfassung: *Fragestellung:* Stark kontrollierte, randomisiert-kontrollierte Studien (RCT) beweisen die Wirksamkeit von ambulanter kognitiv-behavioraler Therapie (KBT) bei Patienten mit Schulabsentismus und Angststörungen. Demgegenüber wurde die Wirksamkeit dieser Intervention unter Routinebedingungen bei Patienten mit Schulabsentismus und vielfältigen psychischen Störungen bislang nicht gezeigt. *Methodik:* In dieser Beobachtungsstudie wurden die Veränderungen von Schulabsentismus und psychischen Auffälligkeiten an einer klinischen Inanspruchnahmestichprobe von $n = 49$ Jugendlichen im Alter von 11 bis 18 Jahren auf der Basis von Patientenakten untersucht. Die KBT wurde in der Psychotherapieambulanz des Ausbildungsinstituts AKiP durchgeführt. Dazu wurden zu Therapiebeginn und -ende der Schweregrad von Schulabsentismus und psychische Auffälligkeiten im Eltern- und Selbsturteil erhoben. *Ergebnisse:* Die Ergebnisse zeigen statistisch hochsignifikante Verminderungen von Schulabsentismus (großer Effekt, Cohens $r = 0.80$) und psychischen Auffälligkeiten (kleine bis große Effektstärken, Cohens $d = 0.33$ bis $d = 0.82$). Allerdings verblieb ein substanzieller Anteil der Stichprobe bei Therapieende im klinisch auffälligen Bereich. *Schlussfolgerungen:* Die Ergebnisse verweisen auf die Effektivität von ambulanter Routine-KVT bei Jugendlichen mit Schulabsentismus. Aufgrund einer fehlenden Kontrollbedingung müssen diese Ergebnisse aber zurückhaltend interpretiert werden.

Schlüsselwörter: Routinetherapie, Jugendliche, Schulabsentismus, kognitiv-behaviorale Therapie

Introduction

Many children and adolescents fail to regularly attend school, with absence rates ranging between approximately 5 % and 10 % of all pupils (Kearney, 2008b; Melvin et al., 2019; Vaughn et al., 2013). The duration of absenteeism can vary from a few lessons to several years (Walter & Döpfner, 2020). Despite a long research history, there are still many different definitions and concepts of school absenteeism behavior. Terms such as "school phobia," "school refusal," or "school anxiety" are used separately from one another, thus impeding the aggregation and integration of research findings (i. e., (Heyne et al., 2019; Walter, Hautmann, Rizk et al., 2010). The concept of "school absenteeism" is very broadly defined, describing the absence from school without permission regardless of its un-

derlying causes and therefore encompasses most forms of school-attendance problems (Walter, Hautmann, Rizk et al., 2010).

Prolonged school absenteeism poses a serious risk to the further development of the affected youth, since it is associated with a higher likelihood of delinquent behavior, lower academic achievement, premature school dropout as well as a broad range of economic, mental health, social, and partnership problems in adulthood (Heyne & Sauter, 2013; Maynard, Heyne et al., 2015).

Unsurprisingly, considerable research efforts have been undertaken to develop and evaluate the optimal treatments for this group. The results of control group studies investigating outpatient cognitive-behavioral therapy (CBT) have been mostly aggregated in reviews and meta-analyses (Kearney, 2008b; Maynard, Brendel et al., 2015; Maynard, Heyne et al., 2015; Pina et al., 2009; Reissner et al., 2015). The results revealed a large decline in school absence rates as well as the stability of these effects over a follow-up of up to 5 years. Although small-to-medium pre/post reductions of anxiety symptoms were found, the analyses did not consistently demonstrate a statistically significant decline in favor of the CBT condition compared to a routine-care or waiting-list condition. These findings, which appear counterintuitive at first glance, are discussed elsewhere in detail (Maynard, Brendel et al., 2015). All of these group studies were highly-controlled, randomized controlled trials (RCTs), focused on small, selected samples, examining mainly patients with anxiety disorders but mostly excluding those with externalizing disorders. Moreover, the treatment duration varied across studies, and as Maynard and coworkers pointed out in their systematic review and meta-analysis (Maynard, Heyne et al., 2015), most of the studies had a substantial risk of bias (e.g., resulting from inadequate blinding of participants and raters to study conditions). Nevertheless, these highly-controlled efficacy studies provided a first important step toward determining the efficacy of outpatient CBT interventions for a subgroup of youth with school absenteeism and anxiety.

In contrast, effectiveness studies examining psychotherapeutic interventions under routine-care conditions have played only a subordinate role within psychotherapy research in general (Carr, 2009; Weisz et al., 2005; Weisz et al., 2013). Effectiveness studies can provide information about how a specific intervention works under routine conditions and whether the results can be compared to those from efficacy studies. In this regard, it is important to note that results of highly-controlled studies cannot automatically be generalized to routine-therapy conditions, as patients, therapists, and treatments differ considerably (Weisz et al., 2005). Unsurprisingly, therefore, researchers are increasingly pointing out the need to replicate results from controlled studies within routine-care settings (Southam-Gerow et al., 2012; Weisz, Kuppens et al., 2013).

Our research group took a first step in this direction by investigating the effectiveness of routine CBT within different samples of clinically referred patients. Walter and coworkers (2017) investigated the effectiveness of outpatient CBT in adolescents with all forms of mental disorders, including patients with school absenteeism, and found small-to-large, statistically significant, and clinically relevant reductions of symptoms during treatment according to parent and self-ratings. Comparable results emerged when investigating a sample of children and adolescents with anxiety disorders (Goletz et al., 2013). Finally, several studies demonstrated the effectiveness of inpatient CBT in adolescents with chronic school absenteeism and emotional disorders (with and without conduct disorders) (Walter et al., 2011, 2013; Walter et al., 2014; Walter, Hautmann, Rizk et al., 2010; Walter, Hautmann, Ziegert et al., 2010).

To the best of our knowledge, to date no studies have investigated outpatient CBT for children or adolescents with school absenteeism under routine-care conditions, using a sufficiently large sample that includes a broad spectrum of mental disorders (e.g., internalizing/externalizing disorders). The goal of the present study was therefore to gain new insight into the effectiveness of outpatient CBT for adolescents with school absenteeism and mental disorders treated in a university outpatient clinic. Accordingly, we hypothesized a statistically and clinically significant decline in the severity of school absenteeism and of mental health problems during treatment under routine-care conditions.

Methods

Participants

The sample comprised children and adolescents who had been referred for outpatient treatment by their parents, by other inpatient/outpatient departments at the University of Cologne (such as the Department for Child and Adolescent Psychosomatics, Psychiatry and Psychotherapy or the Social-Pediatric Center), or by other clinics and private psychotherapy or psychiatry practices in the broader Cologne area (radius of less than 50 km from the city).

Outpatient treatment was offered to adolescents if they met the following criteria according to clinical judgment, which were examined during a 1–2-hour initial consultation by two of the authors (DW, CR): (1) fulfilling the ICD-

10 criteria for one or more mental disorder(s), (2) clinically relevant impairment in global functioning, (3) able to attend weekly treatment appointments, and (4) a positive prognosis for the outpatient treatment. We provided all patients with information about the treatment and about different effectiveness studies conducted within the outpatient clinic.

The participants for the present study were selected based on file records. To identify patients with potential school absenteeism, we selected the file records for a differentiated screening if (1) patients had a diagnosis of separation anxiety disorder or (2) a standardized clinical rating at the start of treatment provided hints at school absenteeism behavior (Clinical Assessment Scale for Child and Adolescent psychopathology (CASCAP-D; Döpfner et al., 1999)). The latter was the case if therapists had rated the items "runs away/skips school" or "separation anxiety" with at least 1 = *a little*.

To be included in the present study, patients had to have met the following criteria at the start of treatment: (1) age between 11 and 18 years and (2) clinically-relevant school absenteeism behavior (see Methods). Moreover, the patients had to have completed their treatment. The exclusion criteria served as an indication for inpatient treatment and severe use of alcohol or other drugs. All participants and their parents in the outpatient clinic provided written informed consent, and the study was approved by the Ethics Committee of the University of Cologne.

We identified $N = 490$ adolescents who had begun treatment in the outpatient clinic between January 2006 and December 2018 and had completed their treatment, making them eligible to participate in the study. Those who had received fewer than 10 treatment sessions were excluded, as we deemed that this constituted "brief counseling" ($n = 91$). $N = 399$ adolescents had completed at least 10 treatment sessions; for $n = 209$ (52.4 %) of these patients, pretest and posttest data according to parent and self-rating were available, and we used their file records for further analysis. $n = 160$ of the patients were regularly attending school, while $n = 49$ (12.3 %) displayed school absenteeism behavior and were therefore used for the main analyses.

Procedure

The study was conceptualized as a one-group pre/posttest design. The first assessment occurred within the first five treatment sessions (preassessment) and consisted of clinical examination and standardized questionnaires completed by patients and their parents. The second assessment occurred at the end of the treatment and comprised ratings by patients and parents (postassessment).

Measures

Diagnostic Interviews

All clinical diagnoses were based on clinical examinations employing the clinical rating scales of the DISYPS-II/III (Doepfner & Goertz-Dorten, 2017; Goertz-Dorten & Doepfner, 2008) and drawing on the diagnostic criteria of the DSM-IV and ICD-10. Good internal consistencies (ranging from $\alpha r = .69–.95$) have been reported within clinical and field samples, and correlations between clinical ratings based on adolescent and parent interviews have been found to be in the moderate range (Doepfner & Goertz-Dorten, 2017).

School Absenteeism

School absenteeism was assessed at the beginning and end of treatment and was rated retrospectively based on file records. Two of the authors (DW, LH), who were blinded regarding the assessment timepoint, independently rated information on school attendance according to three severity levels: 0 – *regular school attendance*; 1 – *mild school absenteeism*; 2 – *severe school absenteeism*. The interrater reliability (Cohen's Kappa [Cohen, 1960]) was nearly perfect ($k = 0.87$, $p < .001$). Following suggestions by Kearney (2008a), we coded school absenteeism as 1 – *mild* if the patient had missed less than 2.5 days (25 %) of school within the last 2 weeks or less than 11 days (15 %) within the last 15 weeks before the start of therapy. If information on the number of days absent in this period was lacking, we recorded missed classes based on the most recent school report (less than 94 hours in total, based on the assumption of 6.5 lessons on average per day). In the case of missing file record information on school absence ($n = 9$, 18.4 %), the severity of school absenteeism was coded based on a combined parent, teacher, and self-rating of the item "skips school" of the German versions of the Teacher Report Form (TRF), the Child Behavior Checklist (CBCL), and the Youth Self Report (YSR) (Doepfner et al., 2014) at the start of treatment. This item can be rated as 0 (*not true*), 1 (*somewhat or sometimes true*), or 2 (*very true or often true*). The item codings of the three raters (parents, teachers, patients) were summed up, with a sum score between 1 and 3 coded as 1 = *mild school absenteeism* and a score greater than 3 being coded as 2 = *severe school absenteeism*.

Parent and Self-Rating Scales

To assess emotional and behavioral problems, we used the German versions of the CBCL and the self-rated YSR (Doepfner et al., 2014). The parent form (CBCL) consists of 118 items (self-report/YSR: 112 items), which are aggregated to form eight narrowband syndrome scales and three broadband scales (Internalizing problems, Externalizing problems, Total problems). Representative German

norms are available for both the CBCL and YSR, and the German versions have proven to be reliable and valid (Doepfner et al., 2014).

Basic Documentation Form

The standardized Basic Documentation Form (Doepfner & Steinhausen, 2012) can be used to record both sociodemographic data (i.e., age, sex) and treatment characteristics (i.e., number of sessions, treatment duration). In addition, the form includes the following clinical ratings: (1) global functioning (from 0 = *very good functioning in all areas* to 8 = *needs persistent support 24 hours per day*) at preassessment and at postassessment based on the Multiaxial Classification of Child and Adolescent Psychiatric Disorders, Axis Six (MCCAPD; World Health Organization, 1996); (2) overall clinical improvement (from 1 = *very much improved/ remitted* to 5 = *worsened*) (shortened version of the Clinical Global Impressions improvement scale (CGI; Busner & Targum, 2007); and (3) the cooperation of the children/adolescents and their parents (from 1 = *no cooperation* to 5 = *very good cooperation*).

Therapy Setting and Treatment

The study was conducted in the outpatient clinic of a school of child and adolescent cognitive behavioral therapy in Germany. The treatments were delivered by postgraduate students who held a Master's degree in psychology or education and were in the second half of their training in child and adolescent CBT. This training lasts for 5 years and encompasses the requirement of 600 sessions of psychotherapy to be delivered during the second half of the training. During the CBT training, the psychotherapy sessions are guided by an accredited CBT supervisor (one supervision session every four therapy sessions). All of the treatments provided were based on the currently recommended cognitive-behavioral methods for the treatment of adolescents with school absenteeism. The treatment costs for all patients were covered by the German statutory health-insurance system.

Statistical Analysis

To check the representativeness of the clinical sample already screened for school absenteeism, we compared the sample with at least 10 treatment sessions and complete data ($n = 209$) to the sample with incomplete data ($n = 190$; excluded because of missing data). The missing data were as follows: CBCL, $n = 68$ at preassessment, $n = 133$ at postassessment, $n = 144$ at both assessments; YSR, $n = 66$ at preassessment, $n = 127$ at postassessment, $n = 141$ at both assessments). The comparisons were conducted regarding sociodemographic and preassessment data in parent and self-rating, and regarding clinical ratings of treatment characteristics and effects, using *t*-tests for dependent samples in the case of continuous variables and chi-squared tests in the case of dichotomous variables. To determine the magnitude of differences, we calculated effect sizes for dependent samples ($(M_{incomplete}–M_{complete})/SD_{pooled}$) (Cohen, 1988) or odds ratios.

We conducted the main analyses for treatments received by youth with school absenteeism who had completed at least 10 sessions and for whom complete data were available for all of the measures described above ($n = 49$). Differences in the distribution of the severity levels of school absenteeism from preassessment to postassessment were tested using the Wilcoxon signed-rank test, and Cohen's *r* was computed as a measure of effect size ($r = z/\sqrt{n}$), with *r* between 0.1 < 0.3 indicating a small, 0.3 < 0.5 a medium, and r ≥ 0.5 a large effect (Cohen, 1988). To examine overall changes in mental health problems (CBCL, YSR) and in psychosocial functioning from preassessment to postassessment, we conducted *t*-tests for dependent samples and calculated effect sizes for dependent samples. The significance level was set at $\alpha < 5\%$ for all analyses.

To assess the clinical relevance of change, we combined the following two criteria (Jacobson & Truax, 1991): First, we examined whether the respective participant had changed to normal functioning ($T < 60$); second, we calculated the reliable change index (RCI; Jacobson & Truax, 1991) to analyze whether the changes were statistically reliable. These analyses were carried out for the broadband scales of the CBCL and YSR (Externalizing, Internalizing, Total score). Patients were divided into five groups based on the following criteria: (1) improved and clinically normalized; (2) improved but still in a clinical range; (3) unchanged and in a normal range; (4) unchanged and still in a clinical range; (5) worsened.

Results

Sample Description

Out of the total of 49 participants, $n = 27$ (55.1%) were female. The participants' mean age was $M = 14.20$ years ($SD = 1.99$). To measure participants' intelligence level, we used the Wechsler Intelligence Scale for Children (WISC; Petermann, 2017), the Kaufman Assessment Battery for Children-2 (K-ABC-II; Melchers & Melchers, 2015), or the Wechsler Adult Intelligence Scale (WAIS; von Aster et al., 2006). Alternatively, the intelligence level was based on clinical rating on the Multiaxial Classification of Child and

Adolescent Psychiatric Disorders according to the ICD-10 (ranging from 1 – *very high intelligence* to 8 – *very severe impairment of intelligence* (World Health Organisation, 1996)). *n* = 37 (75.5%) of the patients had an average intelligence level, *n* = 8 (16.3%) had below-average intelligence, and *n* = 4 (8.2%) had above-average intelligence. At the beginning of the study, the participants attended the following types of secondary school (according to the three-tier German school system): "Hauptschule" (lower-track, *n* = 6, 12.2%), "Realschule" (medium track, *n* = 17, 34.7%), "Gymnasium" (higher track, *n* = 18, 36.8%), "Gesamtschule" (comprehensive school, *n* = 1, 2.0%), "Förderschule" (special school for children with learning disabilities or emotional and behavioral problems, *n* = 7, 14.3%). *n* = 16 (32.7%) of the patients had repeated a school year at least once, and n = 12 (24.5%) had to change to a different school type.

The clinical diagnoses were based on a semistructured clinical interview using DSM- and ICD-based diagnostic checklists (Doepfner & Goertz-Dorten, 2017). According to the ICD-10, the most frequent clinical diagnoses were as follows (first diagnosis on axis 1 of the Multiaxial Classification of Child and Adolescent Psychiatric Disorders according to the ICD-10, MAS; Remschmidt, Schmidt, & Poustka, 2012): depressive episode (*n* = 13; 26.5%), separation anxiety disorders (*n* = 7; 14.3%), conduct disorder (*n* = 5; 10.2%), social phobia (*n* = 4; 8.2%), other childhood emotional disorders (*n* = 4, 8.2%), and adjustment disorder (*n* = 3, 6.1%). *n* = 14 patients (28.6%) had an externalizing disorder on axis 1, *n* = 26 patients (53.1%) had two diagnoses, and *n* = 7 patients (14.3%) at least three clinical diagnoses.

Of the patients, *n* = 29 (59.2%) had separated parents, and *n* = 31 (63.3%) had at least one family member with a mental disorder. Global functioning at the start of treatment was assessed based on the MAS (Remschmidt et al., 2012). The global functioning scores in the sample were as follows (ranging from 0 – *superior functioning* to 8 – *persistent inability to maintain minimal personal hygiene/persistent danger of severely hurting self or others*): 1 – *satisfactory* (*n* = 1, 2.0%), 2 – *mild impairment* (*n* = 3, 6.1%), 3 – *moderate impairment* (*n* = 12, 24.5%), 4 – *serious impairment in at least one area* (*n* = 24, 49.1%), 5 – *serious impairment in most of the areas* (*n* = 8, 16.3%), 6 – *severe and profound impairment in most of the areas* (*n* = 1, 2.0%). *n* = 15 (30.6%) patients had already received at least one outpatient psychotherapy before the start of the study, and *n* = 16 (32.7%) had received at least one inpatient psychiatric treatment.

Treatment Characteristics

Information on the specific treatment modules, as rated by the therapists in the Basic Documentation Form at the end of treatment, is provided in Table 1.

Almost all treatments included both patient- and parent-focused interventions. Over half of the treatments included interventions in schools, delivered to teachers either by

Table 1. Most frequent interventions

Intervention	% of sample (*N* = 49)
Patient-focused interventions in total	98.0
Psychoeducation and cognitive methods	98.0
Token economy	75.5
Social-skills training	61.2
Exposure methods	57.1
Parent-/family-focused interventions in total	95.9
Psychoeducation and cognitive methods	95.9
Guidance to implement token economy at home	71.4
Methods to enhance the relationship between parents and children/adolescents	63.3
Guidance to implement exposure methods	40.8
School-focused interventions in total	59.2
Psychoeducation and cognitive methods	34.7
Guidance to implement token economy at school	20.4
Sociotherapeutic interventions in total	34.9
Medication in total	12.2

telephone or in school. One-third of all treatments incorporated sociotherapy-based interventions. Finally, $n = 6$ patients received additional pharmacotherapeutic treatment, mainly selective serotonin reuptake inhibitors. The mean duration of treatment was $M = 17.6$ months ($SD = 8.8$), with an average of $M = 43.5$ treatment sessions ($SD = 19.1$).

Representativeness of Complete Data

When we compared patients with complete data who were eligible for further screening for school absenteeism and participants with incomplete (missing) data who were excluded from these analyses, either no differences or statistically significant but small differences emerged ($d \leq .46$; $OR \leq 1.39$) (see Table 2). The statistically significant differences resulted in the following variables: The patients with missing data were older at the start of treatment ($d = .46$), more likely to have separated parents ($OR = 1.39$), and had higher externalizing problems as rated by the parents ($d = 0.39$) and by the youngsters themselves ($d = 0.44$). Furthermore, according to the therapists, the patients with missing data had a lower global functioning at the end of treatment ($d = 0.46$), lower treatment success ($d = 0.44$), poorer cooperation of youngsters ($d = 0.35$) and parents ($d = 0.35$), and fewer treatment sessions ($d = 0.43$).

Treatment Effectiveness

Figure 1 presents the distribution of the different levels of school absenteeism at both assessment points. There was a considerable decline in the number of patients with school absenteeism and in the severity of school absenteeism during treatment, with a highly statistically significant, large effect size ($r = 0.8$; $z = -5.6$; $p < .001$)

Mean comparisons between preassessment and postassessment on the broadband scales of the CBCL and YSR and on axis 6 of the MCCAPD (psychosocial functioning) yielded highly significant symptom reductions and improvement in psychosocial functioning, with mostly medi-

Table 2. Prescreening for youth with school absenteeism: comparison between patients with complete data preassessment and postassessment ($n = 209$) and those with incomplete data ($n = 190$)

Variable	Incomplete data *M or% (SD)*	Complete *M or% (SD)*	Test statistic	Statistical significance *p*	Effect size (*d*) or odds ratio (OR)
Sociodemographic factors					
Age at start of treatment	14.28 (2.08)	13.33 (2.04)	$t = 4.57$	<.001	$d = 0.46$
Sex (% boys)	47.9	46.9	$\chi^2 = 0.02$	*ns*	$OR = 1.03$
Grouped intelligence	3.06 (0.70)	3.01 (0.53)	$t = 0.72$	*ns*	$d = 0.07$
Relationship status of parents:% separated	45.3	37.3	$\chi^2 = 13.67$	<.01	$OR = 1.39$
Parent rating (pre)[1]					
CBCL Internalizing	16.12 (8.79)	17.25 (8.65)	$t = -1.13$	*ns*	$d = 0.13$
CBCL Externalizing	15.07 (10.72)	11.23 (9.12)	$t = 3.45$	<.01	$d = 0.39$
CBCL Total	48.55 (23.64)	44.22 (21.80)	$t = 1.69$	*ns*	$d = 0.19$
Adolescent rating (pre)[2]					
YSR Internalizing	16.90 (11.43)	16.88 (10.58)	$t = 0.01$	*ns*	$d = 0.00$
YSR Externalizing	14.39 (10.14)	10.65 (7.49)	$t = 3.56$	<.001	$d = 0.44$
YSR Total	48.91 (25.62)	44.57 (21.80)	$t = 1.56$	*ns*	$d = 0.18$
Therapist rating					
Global functioning (pre)	3.50 (1.26)	3.49 (0.94)	$t = 0.08$	*ns*	$d = 0.01$
Global functioning (post)	2.80 (1.64)	2.11 (1.37)	$t = 4.62$	<.001	$d = 0.46$
Treatment success for overall situation (post)	3.80 (1.48)	3.25 (1.48)	$t = 4.05$	<.001	$d = 0.44$
Cooperation of youngster (post)	3.51 (1.17)	3.88 (1.17)	$t = -3.42$	<.01	$d = 0.35$
Cooperation of parent (post)	3.48 (1.51)	3.95 (1.51)	$t = -3.44$	<.01	$d = 0.35$
Number of treatment sessions	35.54 (21.75)	44.68 (20.61)	$t = -4.17$	<001	$d = 0.43$

Note: [1]Parent rating (raw scores): complete data of $n = 209$ cases were compared to $n = 122$ incomplete cases with preassessment data. [2]Adolescent rating (raw scores): complete data of $n = 209$ cases were compared to $n = 124$ incomplete cases with preassessment data.

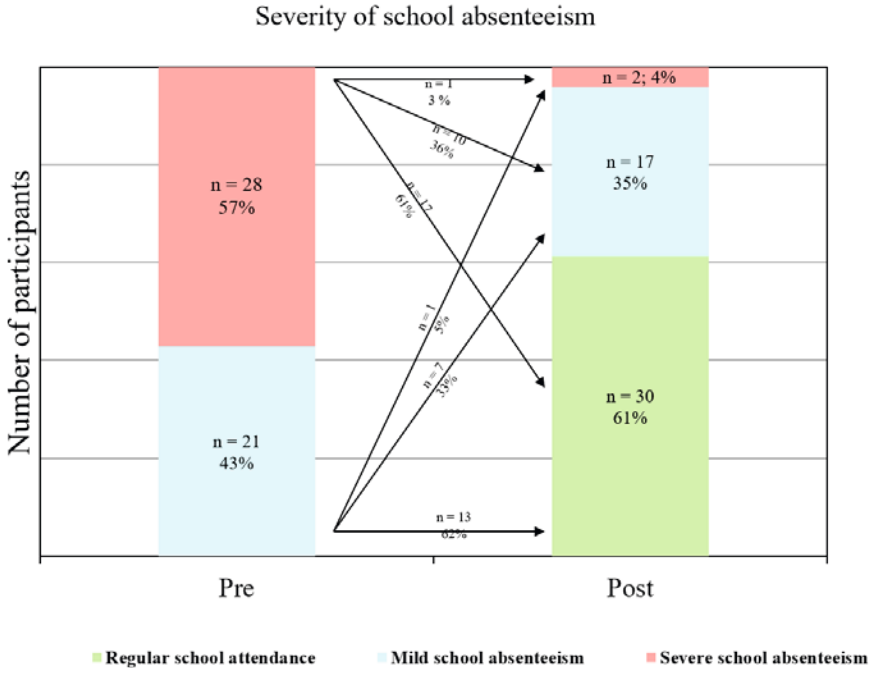

Figure 1. Distribution and trajectories of the severity of school absenteeism at preassessment and postassessment.

um-to-large effect sizes in parent, self-, and therapist ratings (range: $d = 0.33$ to $d = 0.86$; see Table 3).

Clinical Significance

Table 4 presents the results regarding the clinical significance of the changes on the CBCL and YSR broadband scales. Only in a relatively small proportion of the total sample (2.0 % to 12.2 %) did we find a clinically significant deterioration at the end of treatment. Between 6.1 % and 47.0 % of the sample were rated as improved and clinically normalized at the end of treatment. A further 2.0 % to 57.2 % were in the clinically normal range and did not show a clinically significant change during treatment. According to the parent-rated CBCL total score, 49.0 % of the sample lay in the normal range at the end of treatment and 51.0 % remained in the clinical range, with a symptom level of $T \geq 60$. According to the adolescent-rated YSR total score, 55.1 % of the sample was in the normal range and 44.9 % was still in the clinical range at the end of treatment.

Discussion

This effectiveness study investigated the course of school absenteeism, parent- and adolescent-rated behavioral and emotional symptoms as well as therapist-rated psychosocial functioning in a sample of referred adolescents with mental disorders who had undergone routine outpatient CBT. The participants showed severe impairments: In accordance with Kearney (Kearney, 2008a), over half of the sample had severe school absenteeism and half had an irregular school career. Moreover, two-thirds of the youngsters had more than one mental disorder, and many of them had received at least one outpatient or inpatient psychiatric treatment before the study. Over one-third of the participants had an externalizing disorder – such patients had been excluded from most of the previous studies in this area. In the present study, the treatment had been delivered in an outpatient clinic by psychologists and educationalists with advanced training in CBT. Besides investigating changes during treatment, we also assessed the clinical relevance of these changes.

The results revealed a statistically highly-significant, large reduction in the severity of school absenteeism after an average of 43 treatment sessions. Only two adolescents continued to show severe school absenteeism at postassessment, whereas over 60 % of the sample were regularly attending school at the end of the treatment. Additionally, we found a statistically highly-significant decline in behavioral and emotional problems as rated by parents or the youngsters themselves, with small-to-medium effect sizes. This was comparable to the symptom reductions previously found in a large sample of clinically-referred adolescents with a broad range of disorders receiving routine CBT (Walter et al., 2017) and to pre/post changes found within highly-controlled RCTs investigating outpatient CBT in patients with school absenteeism and anxiety

Table 3. Changes in mental symptoms and psychosocial functioning during treatment within the sample of youth with school absenteeism (n = 49)

	Preassessment		Postassessment		t-test	
	M	*SD*	*M*	*SD*	*t*	*d**
Parent rating						
CBCL Internalizing problems	19.00	8.30	11.76	9.40	5.26	0.82
CBCL Externalizing problems	13.00	10.01	8.63	8.09	4.20	0.48
CBCL Total problems	48.96	21.29	31.00	22.52	5.70	0.82
Adolescent rating						
YSR Internalizing problems	19.12	11.84	12.91	9.36	3.67	0.58
YSR Externalizing problems	13.31	8.39	10.65	7.56	2.27	0.33
YSR Total problems	52.16	25.03	37.16	23.17	3.88	0.62
Therapist rating						
Psychosocial functioning	3.78	0.94	2.74	1.42	6.26	0.86

*All $p < .001$.

Table 4. Clinical significance of changes in parent and adolescent ratings on the broadband scales of CBCL and YSR

			Worsened	Unchanged and still in a clinical range	Unchanged and in a normal range	Improved and still in a clinical range	Improved and clinically normalized
		N	*n* (%)	*n* (%)	*n* (%)	*n* (%)	*n* (%)
Parent rating (CBCL)	Internalizing Problems	49	4 (8.16)	15 (30.61)	3 (6.12)	10 (20.41)	17 (34.70)
	Externalizing Problems	49	1 (2.04)	12 (24.49)	22 (44.90)	11 (22.45)	3 (6.12)
	Total Problems	49	6 (12.24)	10 (20.41)	1 (2.04)	9 (18.37)	23 (46.94)
Adolescent rating (YSR)	Internalizing Problems	49	2 (4.08)	19 (38.78)	11 (22.45)	5 (10.20)	12 (24.49)
	Externalizing Problems	49	3 (6.12)	9 (18.37)	28 (57.15)	3 (6.12)	6 (12.24)
	Total Problems	49	5 (10.20)	12 (24.49)	4 (8.16)	5 (10.20)	23 (46.95)

disorders (Maynard, Heyne et al., 2015). Overall, our results suggest the effectiveness of routine outpatient CBT for youth with school absenteeism and therefore support the findings of RCT studies investigating the efficacy within selected samples of patients only with anxiety disorders. As such, our results extend previous findings by focusing on patients with a broader spectrum of mental disorders and investigating CBT within a routine-care setting. It is important to keep in mind that the treatment intensity in the present study was notably higher than in the studies included in the aforementioned RCTs, which encompassed a very limited number of treatment sessions (4–12). One potential explanation for this higher treatment intensity is that our sample was very heterogeneous regarding symptoms and comorbid disorders, as it is well known that comorbidity may negatively affect treatment outcome (e.g., Weersing & Weisz, 2002). A further explanation may lie in the fact that our therapists were in advanced training in psychotherapy – their limited experience might have led to a higher number of treatment sessions required to achieve results comparable to those of the highly-trained therapists examined in RCTs.

Several of our previous studies have investigated the effectiveness of inpatient routine CBT in adolescents with school absenteeism (Walter et al., 2011, 2013, 2014; Walter, Hautmann, Rizk et al., 2010; Walter, Hautmann, Ziegert et al., 2010). At discharge, about 90 % of the sample regularly attended school, and at a 2-month follow-up, we found medium-to-large symptom reductions compared to the start of treatment. Relative to these findings, the results of the present study are smaller, with 61 % of regular school attenders and small-to-medium symptom reduc-

tions at the end of treatment. These differences may be explained by the more intense treatment of the inpatient treatment modality. Moreover, it is important to consider that, although most of the inpatient sample of the previous studies regularly attended school, nearly half of them attended a special school, which was only the case for 14 % of the sample in the present study.

According to our analyses of clinical significance, at the end of treatment, approximately half of the sample was in the subclinical range based on parent- and self-rated behavioral and emotional problems, and approximately half remained in a clinical range. Future analyses should examine differential effects to determine which patients most benefit from the treatment provided. Moreover, research should also investigate how the treatment could be improved to reduce the rate of youth with school absenteeism and the proportion of adolescents who remain in a clinical range regarding behavioral and emotional problems according to either informant (parents, self) at the end of treatment.

Several limitations of the present study should be mentioned. First, the most important limitation of our observational study is the lack of a control condition, meaning that we cannot rule out whether the observed changes were caused by confounding factors other than the treatment, such as natural developmental trends. Nevertheless, a high stability of mental disorders and of school absenteeism in adolescents over 1–3 years has been demonstrated in several studies. For instance, in a representative cross-sectional study assessing nearly 3,000 4–18-year-olds in Germany, no significant decreases in behavioral and emotional problems (assessed using the CBCL and YSR) with increasing age over 2–3 years were reported (Doepfner et al., 1997), and King and coworkers (1998) demonstrated the stability of school absenteeism without treatment. Moreover, several RCTs have demonstrated the efficacy of outpatient CBT for patients with school absenteeism and anxiety disorders (Maynard, Heyne et al., 2015). It is therefore unlikely that the changes found in the present study can be attributed solely to confounding factors.

Second, the operationalization of the severity of school absenteeism must be considered. The classification was based on information derived from file records ex post hoc. It is therefore unclear whether this information was based on the information provided by the parents, the youngsters, the teachers, or a mixture thereof. Moreover, in $n = 9$ cases, the classification had to be based on one item of the CBCL/YSR/TRF ("skips school"). A prospective rating based on teacher information may have resulted in a more valid classification, although the interrater reliability of the level of school absenteeism in the present study was nearly perfect.

Third, we did not formally assess treatment integrity, although the therapists (in training) in the present study were guided by supervisors in implementing the CBT and had regular discussions about the treatment sessions.

Fourth, while the therapies took place in a routine-care setting at a university outpatient clinic, and were delivered by therapists with advanced CBT training, future studies should investigate whether this type of therapy differs from that delivered by therapists in outpatient clinics or in private practice under routine-care conditions.

A further limitation pertains to the representativeness of the analyzed data: Because of missing data, it was not possible to include every treatment in the analysis. The results of the present analyses are thus restricted to school-absenting patients who were able to attend weekly treatment sessions, were treated for at least 10 treatment sessions, and for whom complete pre/post data were available. When comparing patients included in the screening for potential school absenteeism to be included in the further analysis with those who were excluded from this screening because of missing data, we found that excluded patients were significantly older, were more likely to have separated parents, reported more externalizing symptoms, had a lower global functioning at the end of treatment, and therapists rated a lower treatment success and less cooperation of parents and patients. While these differences were small, we cannot rule out a possible overestimation of the effectiveness of routine CBT in youth with school absenteeism. Moreover, it would have been more appropriate to focus only on school-absenting youth within the representativity analysis – which was not possible because of missing information on school-absenting behavior in the subsample with missing data. To analyze how dropouts might be reduced, future studies should therefore examine the most common reasons for treatment dropout. Finally, future research should include a standardized teacher rating, and follow-up assessments are needed to assess the stability of the changes observed during treatment.

To conclude, the present effectiveness study is the first to demonstrate the potential benefits of routine CBT for adolescents with school absenteeism and mental disorders delivered within a natural treatment setting. Thus, our results support the findings of RCTs that demonstrated the efficacy of CBT under highly-controlled but less representative settings.

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