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Satisfaction with videoconference-delivered CBT provided as part of a blended treatment approach for children and adolescents with mental disorders and their families during the COVID-19 pandemic: A follow-up survey among caregivers and therapists

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Abstract

Introduction: Psychotherapy delivered via videoconferencing (teletherapy) was a well-accepted treatment option for children and adolescents during the early phases of the COVID-19 pandemic. Information on the long-term satisfaction with teletherapy in routine clinical practice is missing.

Methods: Caregivers (parents) and psychotherapists of $n = 228$ patients (4–20 years) treated in a university outpatient clinic completed a follow-up survey on satisfaction with videoconference-delivered cognitive-behavioral treatment (CBT). The follow-up survey (T2) was conducted about 1 year after initial assessment of treatment satisfaction in 2020 (T1).

Results: At follow up, therapists reported that 79% of families had received teletherapy as part of a blended treatment approach including in-person and videoconference delivery of CBT. Wilcoxon tests revealed that satisfaction with teletherapy was stable over time. In addition, parent ratings of the impact of teletherapy on treatment satisfaction and the therapeutic relationship did not change over time. Therapists' ratings of the impact of teletherapy on the therapeutic relationship with the caregiver were more negative at T2 compared to T1. Satisfaction with teletherapy was higher for patients with less pandemic-related stress, less externalizing behavior problems, and older age (all $r < .35$).

Conclusion: The high level of satisfaction with teletherapy for children and adolescents treated in routine clinical practice reported in 2020 was maintained after social distancing regulations were eased in 2021. Teletherapy provided as part of a blended treatment approach is a well-accepted method of treatment delivery for youths with mental health problems. The study was registered in the German Clinical Trials Register (DRKS00028639).

Keywords

Telemedicine, teletherapy, psychotherapy, cognitive-behavioral therapy, treatment satisfaction

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Introduction

Children and adolescents were highly burdened during the global coronavirus disease 2019 (COVID-19) pandemic. Studies revealed significant increases in mental health problems due to infection protection measures (e.g. lockdown, school closures, and peer contact reductions) among children and adolescents.[1,2] Especially those with previous mental health problems were found to be highly vulnerable to experiencing psychological distress and worsening of symptoms during the pandemic.[3]

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Psychotherapy delivered via real-time, interactive videoconferencing (teletherapy) offered a unique opportunity to provide mental healthcare without the risk of spreading the COVID-19 virus. Cognitive-behavioral therapy (CBT) is the current gold standard of psychotherapy and videoconference-delivered CBT has been found to be a feasible and effective alternative to face-to-face CBT.[4,5] Pre-COVID-19 studies demonstrated that patients were equally satisfied with teletherapy as they were with face-to-face interventions,[6] although working alliance in teletherapy seemed to be inferior to face-to-face delivery.[7] Surveys conducted in 2020 revealed that psychotherapists were generally satisfied with teletherapy during the early phases of the COVID-19 pandemic and reported having a sufficient working alliance with their patient during online sessions.[8,9]

Unfortunately, most evidence regarding teletherapy derived from adult populations and there is relatively little published research on teletherapy for children and adolescents. This gap of knowledge is problematic because results regarding adults may not generalize to youths. Clinic records revealed that child mental health services returned more rapidly to face-to-face services after the COVID-19 lockdown than adult services, suggesting that telemedicine may be a less preferred method of service delivery for children.[10] Especially very young children and children unable to sit at screen due to attentional or behavioral difficulties have been described as being disadvantaged by remotely delivered mental health services.[11] In addition, clinicians reported missing the ability to rely on nonverbal communication in their interactions with children and have expressed patient safety concerns.[11,12]

Mental healthcare providers working with children and adolescents have also described many positive experiences with telemedicine. Advantages include an increased flexibility enabling families to overcome pre-existing barriers to in-person care (e.g. work commitments, childcare, and lack of transport), care providers being able to see the patient in their own home and to observe authentic parent–child interactions, and patients being able to talk more freely about their feelings and experiences.[11,13,14] Moreover, several pre-COVID-19 studies demonstrated that teletherapy is a feasible and effective method of treatment delivery for children and adolescents.[15] A few randomized controlled trials, albeit with small samples, have demonstrated that videoconference-delivered CBT is as effective as face-to-face treatment for youths with obsessive-compulsive disorder,[16,17] depression,[18] and tic disorder,[19,20] as well as for parents of children with attention-deficit/hyperactivity disorder.[21,22] Patients and parents who participated in these studies endorsed high levels of satisfaction with teletherapy[17,23] with no difference in satisfaction between teletherapy and face-to-face treatment.[16,19,21]

Similar findings were obtained during the early phases of the COVID-19 pandemic. In 2020 patients and providers reported being highly satisfied with videoconference-delivered CBT in routine child and adolescent mental healthcare.[24,25] Information regarding factors influencing satisfaction with teletherapy is limited. A recent survey found that therapeutic alliance and satisfaction with teletherapy increased with increasing age of the patient.[24] Another survey revealed that anxious/depressed adolescents had greater difficulties establishing a therapeutic alliance during videoconference sessions compared to adolescents with less internalizing symptoms.[26]

In our own study,[27] we evaluated the implementation of teletherapy in a large sample of children and adolescents ($n = 643$, aged 3–20 years) treated in a university outpatient clinic in Germany in the first quarter of 2020. Following the outbreak of COVID-19, 73% of patients shifted from face-to-face CBT to videoconference-delivered CBT. Both parents and therapists reported high levels of satisfaction with teletherapy. The majority of therapists (73%) and parents (89%) reported being partially or fully satisfied with teletherapy sessions. Moreover, more than half of therapists (65%) and parents (75%) reported that the therapeutic relationship with the patient had not changed due to the use of teletherapy. These findings demonstrated that teletherapy was a feasible and well-accepted method of treatment delivery during the first wave of the COVID-19 pandemic.

However, it is unknown whether the high level of satisfaction with teletherapy found in 2020 is attributable to the situation in which psychotherapists found themselves. Face-to-face appointments with patients were difficult to realize during lockdown or may have been perceived as dangerous due to the risk of infection. Yet, psychotherapists may have felt committed to provide continuous care for their patients.[28] It is, therefore, possible that satisfaction with teletherapy in routine care decreased after social distancing regulations were eased, but longitudinal data on satisfaction with teletherapy during the COVID-19 pandemic has not yet been published.

The aim of the present study is to investigate the long-term satisfaction with videoconference-delivered CBT provided as part of a blended treatment approach that combined videoconference-delivered and in-person-delivered CBT for children and adolescents with mental health problems treated in routine clinical practice during the COVID-19 pandemic.

Methods

Participants

$N = 643$ patients treated at the outpatient unit of the School of Child and Adolescent Cognitive Behavior Therapy (AKiP) at the University Hospital Cologne, Germany, in the first quarter of 2020 had participated in the first survey (T1), which was conducted between July and October 2020. Of these, $n = 196$ were not asked to participate in the

follow-up (FU) survey (T2) on treatment satisfaction because they had completed outpatient treatment at T1. $N = 219$ of the remaining patients refused participation at T2. Figure 1 shows the flow of participants. A total of $n = 228$ patients (aged 4–20 years) participated in the FU survey, which was conducted between May and July 2021. Therapist ratings were available for 168 patients. Parent ratings were available for 92 patients. For 32 patients, both ratings were collected.

Intervention

All patients received CBT. Face-to-face treatment was delivered at AKiP. Teletherapy was delivered via real-time, interactive videoconferencing. Video sessions were delivered in accordance with the guidelines for webcam-based telemental health of the German National Association of Statutory Health Insurance Physicians using the software platform Arztkonsultation (www.arztkonsultation.de), which has been certified regarding data protection and security.[29] The therapists used a tablet or computer with webcam in the outpatient clinic. The patients and/or their parent/caregivers used their own computer with a webcam, laptop, tablet, or smartphone. $N = 128$ participants had completed treatment between the first survey (T1) and the FU survey (T2) (treatment duration in months: $M = 19.1$ ($SD = 8.1$), minimum = 6 months, maximum = 36 months). The remaining $n = 100$ participants were still receiving treatment at T2.

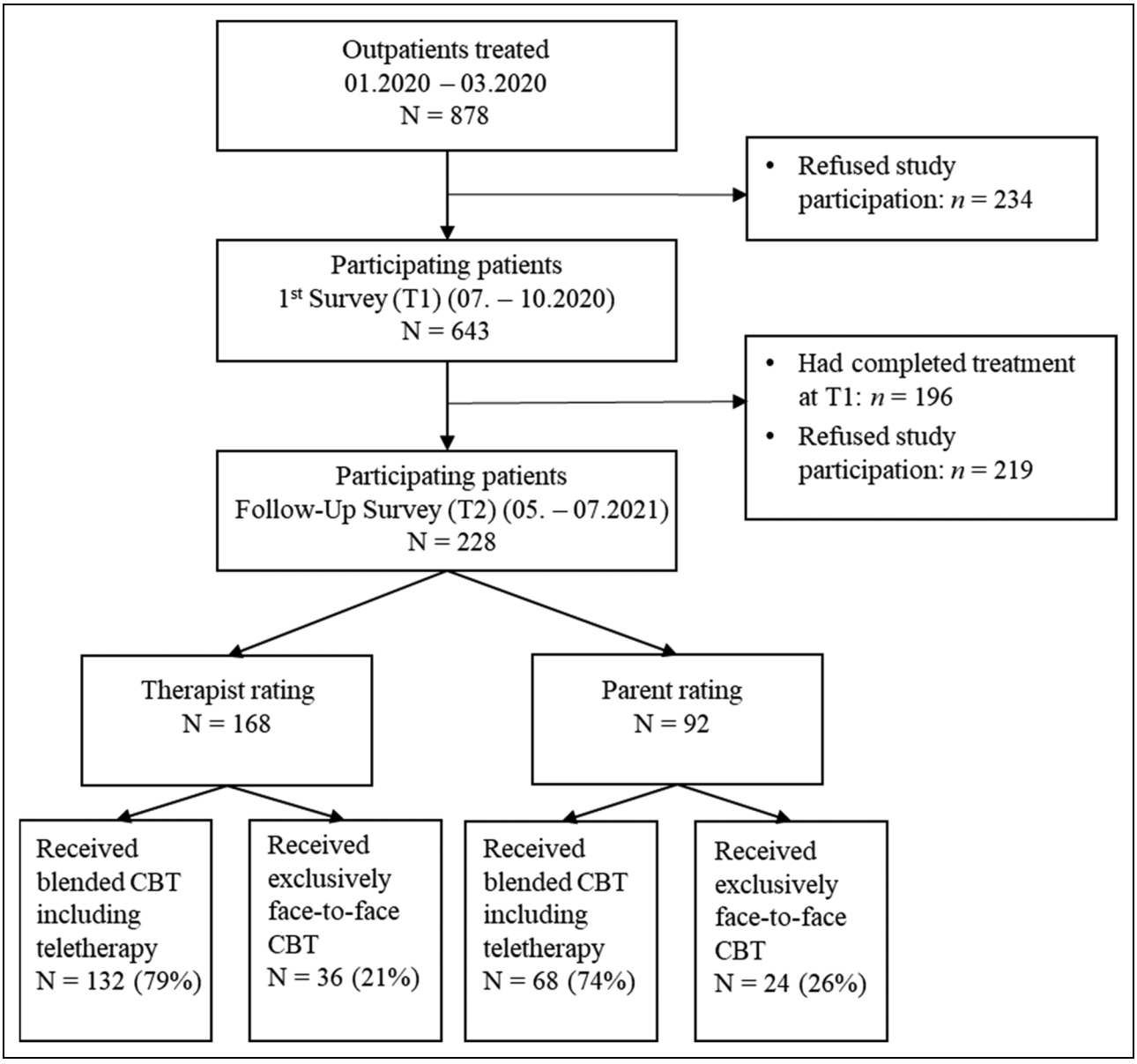

Figure 1. Flow of participants.

Measures

Questionnaire to assess the implementation of and satisfaction with teletherapy. This questionnaire was developed for the purpose of the study (see Electronic supplemental material (ESM) for a full list of items and detailed information on calculation of subscale scores). It contains 15 items in the therapist version (T) and eleven items in the parent version (P). At the start of both versions, respondents are asked whether teletherapy sessions have occurred since lockdown and if not, to provide reasons. If teletherapy sessions occurred, respondents are next asked to indicate the number of teletherapy sessions conducted (only therapist version) and the persons involved in the teletherapy (e.g. patient, caregiver). Treatment satisfaction is assessed with seven items in the therapist version and four items in the parent version. The satisfaction items assess (a) whether the internet connection was stable, (b) the satisfaction with teletherapy, and (c) whether the respondents intend to use teletherapy after the pandemic. Individual scores on the satisfaction items were averaged to obtain a *mean satisfaction score (MSS)*. In both versions, changes in treatment satisfaction and in the therapeutic relationship due the transition to teletherapy are assessed with four items rated on a five-point scale from *much worse* (−2) to *much better* (2) (see ESM). Individual scores on these items were averaged to obtain a *mean satisfaction change score (MCS)*. If respondents do not intend to use teletherapy in the future, the FU survey contained an additional item that asked to respondents to provide reasons (P12 / T16).

Corona Child Stress Scale (CCSS[30]). This questionnaire is based on the Coronavirus Health and Impact Survey (CRISIS[31]). For the present study, the parent version (14 items) and an analogously developed therapist version (six items) were used (see ESM). Both versions contain six items regarding pandemic-related changes in family relationships, school and learning, mental health symptoms, and therapy. The parent version also assesses changes in the child's peer relationships, daycare, leisure time, and psychopharmacotherapy, and parents' work and family situation. Items are rated on a five-point Likert scale from −2 to 2, with higher scores representing a higher pandemic-related burden. Internal consistency of the two versions was acceptable to good (Cronbach's $\alpha \geq .74$).[27,32]

Basic Documentation.[33] This therapist-completed scale records information about the patient at the time of admission. Psychosocial functioning rating is assessed with the Children's Global Assessment Scale.[3] For the present analyses, the following variables were extracted: child age, gender, socio-economic status, psychosocial functioning, and diagnosis.

German versions of Child Behavior Checklist (CBCL/ 6-18R) and Youth Self Report (YSR/ 11-18R).[35] These parent report (CBCL; patients ≥ 6 years) and self-report (YSR; patients ≥ 11 years) questionnaires contain 120 and 105 items, respectively, that ask about behavioral and emotional problems and physical complaints. They are rated on a three-point scale from *not true* (0) to *very true or often true* (2). Higher scores indicate greater symptom severity. Both questionnaires consist of eight problem scales and two broad-band syndrome scales assessing internalizing problems and externalizing problems (Cronbach's $\alpha > .80$[35]).

Procedure

The CCSS and the study questionnaire were conducted either online (using the LimeSurvey survey tool[36]) or by paper-and-pencil. Therapists received the questionnaires pseudonymized for each patient by email. Parents received the questionnaires by email ($n = 52$, 57% of $n = 92$) or by post if no email address was available ($n = 40$, 43%). The respondents received several reminders to participate.

$N = 643$ patients had participated in the first survey (T1). Respondents who participated in the FU survey ($n = 228$) had completed the first survey between July 27 and September 17, 2020 (parent rating) or between June 15 and August 18, 2020 (therapist rating). Parents completed the FU survey between June 1 and July 12, 2021. Therapists completed the FU between May 17 and July 4, 2021. The remaining rating scales are routinely collected at AKiP as part of the standard intake assessment. The study was approved by the Ethics Committee of the Medical Faculty of the University of Cologne, Germany. Information on missing data and the statistical analyses is provided in the ESM.

Results

Participants

The characteristics of the total sample with available therapist and/or parent rating ($n = 228$) and the two subsamples (parent rating ($n = 92$); therapist rating ($n = 168$)) are presented in Supplemental Table 1 (ESM). The patients were aged from 4 to 20 years. There were slightly more male patients (56%). Approximately 46% of patients had a clinical diagnosis of an externalizing disorder (e.g. attention-deficit/hyperactivity disorder, oppositional defiant disorder, and conduct disorder) at the time of admission. About 48% had an internalizing disorder (e.g. anxiety disorder, obsessive-compulsive disorder, and depressive disorder).

Implementation and acceptance of teletherapy at follow up

All patients received face-to-face sessions. Therapists of $n = 132$ patients (78.6% of $n = 168$) reported at T2 that they had

Table 1. Satisfaction with teletherapy (item scores, therapist rating).

	T1		T2		Frequencies at T2					
					n (%)					T1 vs T2[1]
Item	*N*[2]	*M (SD)*	*N*[2]	*M (SD)*	Not true (0)	Rather not true (1)	Partially true (2)	Very true (3)		
T5: stable internet connection	119	1.87 (0.81)	132	1.86 (0.81)	11 (8.3)	20 (15.2)	77 (58.3)	24 (18.2)		T1 = T2
T6: overall satisfaction patient	114	1.97 (0.89)	110	1.87 (0.94)	12 (10.9)	20 (18.2)	48 (43.6)	30 (27.3)		T1 = T2
T7: overall satisfaction caregivers	82	2.23 (0.82)	83	2.24 (0.64)	1 (1.2)	6 (7.2)	49 (57.8)	28 (33.7)		T1 = T2
T8: overall satisfaction therapists	119	1.76 (0.88)	132	1.67 (0.93)	18 (13.6)	32 (24.2)	58 (43.9)	24 (18.2)		T1 = T2
T9: restriction of therapeutic options[3]	119	1.01 (0.75)	132	1.02 (0.80)	10 (7.6)	13 (9.8)	78 (59.1)	31 (23.5)		T1 = T2
T10: extension of therapeutic options	119	1.27 (0.85)	132	1.23 (0.76)	22 (16.7)	61 (46.2)	45 (34.1)	4 (3.0)		
					No (0)	Yes, partly (1)	Yes, mostly (2)	Yes, exclusively (3)		
T15: teletherapy in future	119	0.57 (0.61)	132	0.71 (0.65)	52 (39.4)	66 (50.0)	14 (10.6)	0 (0.0)		T1 < T2*
Mean satisfaction score	119	1.40 (0.63)	132	1.42 (0.58)						T1 = T2
					Much worse (−2)	A little worse (−1)	unchanged (0)	a little better (1)	Much better (2)	
T11: change in patient satisfaction	114	- 0.19 (0.61)	110	−0.17 (0.65)	2 (1.8)	28 (25.5)	67 (60.9)	13 (11.8)	0 (0.0)	T1 = T2
T12: change in caregiver satisfaction	82	0.07 (0.44)	83	−0.11 (0.49)	0 (0.0)	15 (18.1)	62 (74.7)	6 (7.2)	0 (0.0)	T1 > T2*
T13: change in relationship patient-therapist	114	- 0.14 (0.65)	110	1.11 (1.10)	0 (0.0)	9 (8.2)	33 (30.0)	5 (4.5)	63 (57.3)	T1 < T2*
T14: change in relationship caregiver-therapist	82	0.15 (0.42)	83	−0.71 (0.79)	2 (2.4)	65 (78.3)	11 (13.3)	0 (0.0)	5 (6.0)	T1 > T2*
Mean change score	119	- 0.06 (0.29)	132	0.11 (0.63)						T1 < T2*

Note: n: absolute frequencies, sample size varies due to missings; %: percentage frequencies; *M* :mean, *SD:* standard deviation.

[1]Wilcoxon test to examine differences between T1 and T2, * $p < .05$.

[2]Sample sizes at T1 differ from those at T2 because $n = 11$ patients had started teletherapy after T1 and $n = 2$ therapists had not participated in the T1 survey.

[3]Answers to item T9 were recoded before satisfaction items were average to obtain the mean satisfacton score (MSS). After recoding, higher scores on item T9 reflect less restrictions (= higher satisfaction).

conducted blended treatment including both face-to-face sessions and teletherapy. If teletherapy had been conducted, therapists reported that the number of videoconference sessions ranged between 1 and 45 sessions ($M = 10.86$, $SD = 7.91$). For 11 patients (6.6% of $n = 168$), therapists had reported at T1 that they had not conducted teletherapy with this patient or the caregiver(s), suggesting that teletherapy was first conducted between T1 and T2.

At T2, therapists of $n = 61$ patients (46.2% of $n = 132$) reported that both the patient and his or her caregiver(s) participated in teletherapy sessions. Therapists of $n = 49$ patients (37.1% of $n = 132$) reported that only the patient participated in teletherapy. In $n = 22$ cases (16.7% of $n = 132$), only the caregiver(s) participated in teletherapy sessions. Overall, $n = 110$ patients (83.3% of $n = 132$) participated in teletherapy. Caregivers conducted teletherapy in $n = 83$ cases (62.9% of $n = 132$). The mother participated in $n = 77$ cases (58.3% of $n = 132$), the father in $n = 28$ cases (21.2% of $n = 132$), and another caregiver in $n = 8$ cases (6.1% of $n = 132$).

Similarly, $n = 68$ parents (73.9% of $n = 92$) reported that their child's treatment included teletherapy sessions. Nine of these parents (8.7% of $n = 92$) reported that they or their child had first received teletherapy between T1 and T2.

Satisfaction with teletherapy

Table 1 provides the descriptive statistics of therapists' satisfaction with teletherapy provided as part of a blended treatment approach at T1 and T2. Wilcoxon tests revealed that, for most items assessing treatment satisfaction, therapists' ratings of satisfaction with teletherapy did not change significantly from T1 to T2. At T2, 76.5% of therapists reported that the internet connection was at least partially stable (item T5). And 70.9% of therapists indicated that the patient was at least partially satisfied with teletherapy (item T6), 91.5% indicated that the caregiver was at least partially satisfied with teletherapy (item T7), and 62.1% indicated that they themselves were at least partially satisfied with teletherapy (item T8). However, 82.6% of therapists reported that teletherapy restricted their therapeutic options (item T9) and only 37.1% reported that teletherapy extended their therapeutic options (item T10). Therapists' intention to use teletherapy in the future (item T15) increased significantly from T1 to T2 ($p = .04$). At T2, the majority of therapists reported that they intend to use teletherapy partly (50.0%) or mostly (10.6%). At T1, only 46.2% of the therapists in the present sample had reported that they intended to use teletherapy in the future.

Therapists' ratings of changes in treatment satisfaction and in the therapeutic relationship due to the use of teletherapy revealed significant changes from T1 to T2 (Wilcoxon tests). Therapists' ratings of the impact of the use of teletherapy on caregivers' treatment satisfaction (item T12) worsened significantly from T1 and T2 ($p < .01$). At T2, most therapists (74.7%) indicated that caregivers' treatment satisfaction was unchanged, 18.1% reported that the caregivers' treatment satisfaction had become a little worse, and only 7.2% reported that caregivers' treatment satisfaction had become a little better. Similarly, the impact of the use of teletherapy on the therapeutic relationship with the caregivers (item T14) worsened significantly from T1 and T2 ($p < .001$). At T2, the majority of therapists indicated that the relationship with caregivers had become a little worse (78.3%) or much worse (2.4%).

In contrast, the therapist-rated impact of teletherapy on the therapeutic relationship with the patient (item T13) improved significantly over time ($p < .001$). At T2, more than half of the therapists indicated that the patient–therapist relationship was improved a little (4.5%) or much (57.3%) due to the use of teletherapy. Therapists' ratings of the impact of teletherapy on the patients' treatment satisfaction (item T11) did not change over time. At T2, most therapists (60.9%) indicated that patients' treatment satisfaction was unchanged, 27.3% reported that the caregivers' treatment satisfaction had become worse, and 11.8% reported that caregivers' treatment satisfaction had become a little better. The therapist-rated MCS was significantly higher at T2 compared to T1 ($p = .02$), suggesting that the impact of teletherapy on treatment satisfaction and the therapeutic relationship was viewed to be more positive at T2 compared to T1.

Table 2 provides the descriptive statistics of parents' satisfaction with teletherapy at T1 and T2. Wilcoxon tests revealed that parents' satisfaction with teletherapy did not change significantly from T1 to T2. At T2, 94.0% of parents reported that the internet connection was at least partially stable (item P4). The majority of parents (93.7%) were at least partially satisfied with teletherapy (item P5). Similarly, 87.9% of parents indicated that the child was at least partially satisfied with teletherapy (item P6). Parents' intention to use teletherapy in the future (item P11) was also stable over time. At T2, the majority of parents reported that they intended to use teletherapy partly (69.1%) or mostly (11.8%).

Parents' ratings of changes in treatment satisfaction and in the therapeutic relationship due to the use of teletherapy also did not change significantly from T1 to T2. At T2, most parents (77.9%) indicated that their treatment satisfaction was unchanged, 11.8% reported that their treatment satisfaction has become a little worse, and only few reported that caregivers' treatment satisfaction has become a little (4.4%) or much (5.9%) better. Similarly, the majority of parents indicated that their child's treatment satisfaction was unchanged (66.2%), about one-fifth (22.1%) reported that their child's satisfaction had become a little worse, and only few parents reported that their child's treatment satisfaction had become a little (5.9%) or much (5.9%) better. In addition, 92.2% of parents reported at T2 that

Table 2. Satisfaction with teletherapy (item scores, parent-rating).

	T1		T2		Frequencies at T2					
					n (%)					T1 vs T2[1]
Item	*N*[2]	*M (SD)*	*N*[2]	*M (SD)*	Not true (0)	Rather not true (1)	Partially true (2)	Very true (3)		
P4: stable internet connection	43	2.30 (0.77)	67	2.33 (0.64)	1 (1.5)	3 (4.5)	36 (53.7)	27 (40.3)		T1 = T2
P5: overall satisfaction caregiver	43	2.40 (0.62)	64	2.47 (0.62)	0 (0.0)	4 (6.3)	26 (40.6)	34 (53.1)		T1 = T2
P6: overall satisfaction patient	39	2.05 (0.86)	58	2.26 (0.66)	0 (0.0)	7 (12.1)	29 (50.0)	22 (37.9)		T1 = T2
					No (0)	Yes, partly (1)	Yes, mostly (2)	Yes, exclusively (3)		
P11: teletherapy in future	43	0.95 (0.72)	68	0.93 (0.56)	13 (19.1)	47 (69.1)	8 (11.8)	0 (0.0)		T1 = T2
Mean satisfaction score	43	1.84 (0.57)	68	1.88 (0.41)						
					Much worse (−2)	A little worse (−1)	Unchanged (0)	A little better (1)	Much better (2)	
P7: change in caregiver satisfaction	43	0.02 (0.51)	68	0.04 (0.63)	0 (0.0)	8 (11.8)	53 (77.9)	3 (4.4)	4 (5.9)	T1 = T2
P8: change in patient satisfaction	43	0.00 (0.62)	68	−0.04 (0.72)	0 (0.0)	15 (22.1)	45 (66.2)	4 (5.9)	4 (5.9)	T1 = T2
P9: change in relationship caregiver-therapist	43	0.12 (0.50)	68	0.00 (0.36)	0 (0.0)	3 (4.7)	59 (92.2)	1 (1.6)	1 (1.6)	T1 = T2
P10: change in relationship patient-therapist	43	0.02 (0.67)	68	−0.07 (0.50)	0 (0.0)	10 (14.7)	54 (79.4)	3 (4.4)	1 (1.5)	T1 = T2
Mean change score	43	0.08 (0.41)	68	−0.02 (0.41)						T1 = T2

Note: n: absolute frequencies, sample size varies due to missings; %: percentage frequencies; *M*: mean, *SD*: standard deviation.
[1]Wilcoxon test to examine differences between T1 and T2, * $p < .05$.
[2]Sample sizes at T1 differ from those at T2 because $n = 8$ patients had started teletherapy after T1 and $n = 17$ parents had not participated in the T1 survey.

the therapeutic relationship between the therapist and themselves was unchanged. Similarly, the majority of parents (79.4%) indicated that the therapeutic relationship between the therapist and the child was unchanged at T2.

Factors associated with treatment satisfaction

Overall, correlations between parent-rated or therapist-rated satisfaction with teletherapy at T2 and measures of (a) stress due to the COVID-19 pandemic, (b) emotional and behavioral problems, (c) psychosocial functioning, (d) socioeconomic background, (e) the number of teletherapy sessions, and (f) children's age were low (see Supplemental Table 2 in the ESM). Lower therapist-rated satisfaction with teletherapy (MSS) was significantly related to higher stress due to the COVID-19 pandemic at T2 (rated by therapists) ($r = -.26$, $p = .003$, $n = 131$) and more externalizing problems at intake (rated by patients) ($r = -.26$, $p = .04$, $n = 64$). Lower therapist-rated satisfaction with teletherapy (MSS) was also associated with having conducted less teletherapy sessions ($r = .19$, $p = .03$, $n = 132$). Therapist-rated changes in treatment satisfaction and in the therapeutic relationship (MCS) were correlated with parent-rated externalizing problems of the patient at intake. The correlation coefficient was negative ($r = -.20$, $p = .03$, $n = 118$), suggesting that a higher level of externalizing problems of the patient was associated with a negative impact of teletherapy on treatment satisfaction and the therapeutic relationship (represented by a lower MCS score). Finally, there was a significant correlation between the therapist-rated MCS and children's age ($r = .33$, $p < .001$, $n = 132$), demonstrating that younger age was associated with a negative impact of teletherapy on treatment satisfaction and the therapeutic relationship. There were no significant correlations between the abovementioned measures and parent-rated treatment satisfaction (MSS and MSC). In addition, there was no difference between boys and girls in therapist-rated or parent-rated treatment satisfaction.

Reasons for not intending to use teletherapy in the future

Detailed information on therapist and parent reported reasons for not intending to use teletherapy in the future is provided in the ESM.

Discussion

This study investigated therapists' and parents' satisfaction with videoconference-delivered CBT provided as part of a blended treatment approach for children and adolescents with mental health problems treated in routine clinical practice about 1 year after the first COVID-19 pandemic-related lockdown in early 2020. Results revealed that teletherapy sessions were continued to be used in 2021. At follow up, the majority of families (79%) had received blended treatment including face-to-face and teletherapy sessions. Patients and/or their caregivers had received 11 teletherapy sessions on average. The number of teletherapy sessions per family ranged from 1 to 45, demonstrating considerable interindividual variation.

We then examined changes in satisfaction with teletherapy over time. At the 1-year FU, the majority of parents reported that they were satisfied with teletherapy (94%) and that they would opt to use teletherapy in the future (81%). The parents of 92% felt that the therapeutic relationship with the therapist was maintained after the transition from in-person to teletherapy sessions. Parents also provided largely positive feedback regarding their child's treatment satisfaction: Most parents (88%) reported that their child was satisfied with videoconference-delivered CBT and more than half of the parents (59%) felt that neither their child's treatment satisfaction nor the therapeutic relationship between the therapist and their child had changed due to the changeover to teletherapy. However, 22% of parents indicated that their child's treatment satisfaction was a little worse after the use of teletherapy and 15% indicated that the therapeutic relationship between the therapist and their child worsened a little after the use of teletherapy. Yet, there were no significant changes from T1 to T2 on any of the parent-rated items on treatment satisfaction suggesting that the level of satisfaction with videoconference-delivered CBT sessions reported in 2020 was maintained after social distancing regulations were eased and the urgency of conducting teletherapy was reduced.

Somewhat different findings emerged when we analyzed therapists' ratings of treatment satisfaction. At the 1-year FU, only 62% of the therapists indicated being satisfied with teletherapy and 83% felt that teletherapy restricts their therapeutic options. Yet, therapists' intention to use teletherapy in the future increased between 2020 and 2021.

Interestingly, therapists' ratings of the impact of teletherapy on the therapeutic relationship changed significantly over time. In 2020, most therapists reported that the therapeutic relationship with the child and the parent(s) or caregiver(s) was maintained after the transition to teletherapy. At FU, most therapists reported positive impacts of teletherapy on the therapeutic relationship with the child, but not on the relationship with parent(s) or other caregiver(s). More specifically, 62% of therapists indicated that the therapeutic relationship with the child improved due to the use of teletherapy, while 81% of the therapists indicated that the relationship with the parent or other caregiver had deteriorated due to the use of teletherapy.

The latter finding contradicts the results obtained from parents, who mostly reported that they were satisfied with teletherapy and that the therapeutic relationship did not change due to the transition to teletherapy. It is possible that parents experience more benefits from teletherapy

(e.g. no travel time and costs) than therapists. It is also possible that the high level of satisfaction reported by parents was caused by a selection bias. Parents who were more satisfied with the treatment and who felt more connected to their child's therapist may have felt more committed to participate in the FU survey, leading to an overestimation of the level of parents' satisfaction with the teletherapy and the therapeutic relationship. However, T1 ratings of treatment satisfaction did not differ significantly between T1 participants who completed the T2 questionnaire on treatment satisfaction ($n = 43$) and those who did not ($n = 123$) (MSS: $T_{(164)} = -1.05$, $p = .30$; MCS: $T_{(164)} = -1.05$, $p = .30$), demonstrating that initial satisfaction was not associated with parents' decision to participate in the FU survey. It is also possible that ratings of treatment satisfaction were influenced by the questionnaire administration time.[37] There is evidence that the level of treatment satisfaction is overestimated on questionnaires completed before discharge.[38] However, parents of patients who had completed treatment at T2 ($n = 34$) and parents of patients who were still in treatment at T2 ($n = 34$) did not provide significantly different ratings of satisfaction with teletherapy and the therapeutic relationship at T2 (MSS: $T_{(66)} = 1.0510, p = .28$; MCS: $T_{(66)} = 0.73, p = .47$), suggesting that questionnaire administration time did not influence the present results.

We therefore conclude that therapists in the present sample were generally more critical than were the parents. This interpretation is consistent with previous research demonstrating that therapists provide more critical ratings of the quality of the therapeutic relationship in videoconference-delivered CBT for children and adolescents than patients and their caregivers.[24] Moreover, a recent review on the therapeutic relationship in teletherapy concluded that adult patients were generally satisfied with teletherapy in terms of the relationship with their therapists, while therapists continued to highlight difficulties in maintaining the quality of the therapeutic relationship.[39] Therapists' tendency to be more critical than their patients has also been reported for traditional face-to-face treatment. For example, two recent studies found that therapists revealed a lower degree of treatment satisfaction following clinic-based CBT than patients and their caregivers.[40,41]

We also examined factors associated with respondents' satisfaction with teletherapy at FU. Therapists were less satisfied with teletherapy when treating patients with more stress due to the COVID-19 pandemic ($r = -.26$) and more externalizing behavior problems ($r = -.26$). In addition, therapists reported a more severe impact of teletherapy on treatment satisfaction and the therapeutic relationship for patients with more externalizing behavior problems ($r = -.20$) as well as for younger patients ($r = .33$). This finding is consistent with the study by Bernheim et al.[24] who found that therapist ratings of therapeutic alliance and satisfaction with teletherapy were lower in younger children compared to older children and adolescents. A possible explanation may be that limited attentional resources and motor restlessness lead to difficulties in maintaining attention during videoconference-delivered CBT.

Finally, there was a correlation between therapist reported satisfaction with teletherapy and the number of teletherapy sessions ($r = .19$). Having more conducted more teletherapy sessions was associated with higher treatment satisfaction. This finding is consistent with results from a survey among adult patients, which revealed that therapists who held more positive attitudes toward teletherapy tended to have previous experience with teletherapy.[8] It is possible that experience with teletherapy increases therapists' technological proficiency, which may in turn lead to a preference for video treatment.[42] Another possible interpretation may be that therapists who were satisfied with teletherapy continued to use teletherapy, while therapists who were dissatisfied returned more rapidly to face-to-face treatment.

Lastly, we examined reasons for not intending to use teletherapy in the future. At T2, 39% of the therapists and 19% of the parents indicated that they do not plan to use teletherapy in the future. The most commonly cited reasons were (a) difficulties implementing child-focused intervention, (b) difficulties maintaining a positive therapeutic relationship, (c) technical difficulties, and (d) concerns about negative impacts of teletherapy on treatment satisfaction. Future research is needed to investigate how and for whom these barriers can be overcome in order to facilitate the long-term implementation of teletherapy in routine care.

Several limitations are worth mentioning. First, we did not assess patients' self-reported treatment satisfaction due to the large number of young children in our sample. A recent study suggested that adolescents and their caregivers provide comparable ratings of their experiences with teletherapy.[26] However, more research is needed to investigate if and in which ways younger patients' ratings of teletherapy differ from caregiver and therapist ratings. Second, there was a high attrition rate from T1 ($n = 643$) to T2 ($n = 228$), which could have biased the results. However, as we have noted above, T1 ratings of satisfaction with teletherapy did not differ significantly between parents who completed the T2 questionnaire on treatment satisfaction and those who did not, suggesting that initial satisfaction with teletherapy did not influence parents' decision to participate in the FU survey.

Finally, it is important to note that patient satisfaction is a necessary but not sufficient indicator of the quality of mental healthcare.[37,43] A complete evaluation of the quality of mental healthcare should also include measures of the patients' symptoms and functioning. Numerous studies demonstrated that face-to-face delivered CBT for children and adolescents significantly reduces patients' symptoms.[44–47] Research on

the effectiveness of videoconference-delivered CBT for children and adolescents is still sparse. Existing studies were conducted before the COVID-19 pandemic and used very small samples.[16,18,19,22,23] Given the current trend toward remotely delivered psychotherapy in routine care, which is probably not going to wane, further research evaluating the effectiveness of teletherapy for children and adolescents in routine care settings is critically needed.

Conclusions

Results from our first survey[27] revealed that the majority of children and adolescents treated in a university outpatient unit received videoconference-delivered CBT following the outbreak of the COVID-19 pandemic. The present FU survey demonstrated that therapists' and parents' ratings of satisfaction with teletherapy remained high, even after social distancing restrictions were eased in 2021. Consistent with previous studies,[24,39] therapists were more critical raters of treatment satisfaction than were parents. However, the majority of respondents was satisfied with teletherapy, felt that patient satisfaction with treatment was maintained after the transition to teletherapy, and indicated that they intent to use teletherapy in the future. Together, these findings demonstrate that teletherapy is a feasible and well-accepted alternative to face-to-face CBT, especially for older children and those with less externalizing problems. Teletherapy offers several advantages, including an increased ecological validity of treatment and improved access to treatment, which make teletherapy a promising treatment for use in routine clinical care after the COVID-19 pandemic. Future studies should therefore investigate the effectiveness of videoconference-delivered CBT for children and adolescents in routine clinical practice.

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Supplemental material

Supplemental material for this article is available online.

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