



Child therapists' views and experiences of video conference psychotherapy with children

Feyruz Usluoglu¹ · Elif Aybike Balik¹

Accepted: 26 May 2023 / Published online: 9 June 2023

© The Author(s), under exclusive licence to Springer Science+Business Media, LLC, part of Springer Nature 2023

Abstract

Although important research on remote psychotherapies was conducted for many years, the COVID-19 pandemic has accelerated the spread of remote therapies. However, studies focusing on children and the family population are still quite new. Exploration of therapists' views and experiences of using online psychotherapy interventions is of importance. In addition to these, confusion caused by referring to remote therapies with different names and using them for different purposes and forms makes it difficult to know which evidence is available for tools and forms. Therefore, this study aims to investigate psychotherapists' views and experiences of video conferencing psychotherapy (VCP) for children using a qualitative description method. In line with this purpose, semi-structured individual interviews were conducted with seven female specialists who conducted VCP with children in different cities in Turkey. Data collected from the interviews were analyzed using an inductive content analysis approach. Analysis results indicated two themes and ten sub-themes that described benefits, new opportunities as well as limitations and difficulties of VCP provided to children. Results showed that VCP enhanced accessibility for both therapists and children and their families, enabled comfort and flexibility, and was economic. Besides, such psychotherapy was found to increase fathers' participation in psychotherapy. On the other hand, difficulties are experienced in therapeutic relationships in the VCP process; the child's characteristics affected the applicability of the psychotherapy; maintaining focus became difficult; lack of materials and toys affected psychotherapy applications; children's connecting to psychotherapy from home caused privacy issues; and technological problems affected communication and sustainability.

Keywords Video conferencing psychotherapy · Child psychotherapy · Children · Remote psychotherapy

Introduction

Increased anxiety levels and lockdown policies implemented during the COVID-19 pandemic process increased the need for online psychotherapy services (Wang et al., 2020). This condition has affected the spread of professional therapeutic interventions in which the communication between psychotherapists and clients is provided via the internet (García et al., 2022; Konieczny, 2021; Liu et al., 2020). Online therapies spreading with these developments increased the

accessibility of therapists and clients from all over the world to each other (García et al., 2022; Schuster et al., 2020). On the other hand, the efficiency, benefits, and possibilities of online psychotherapy practices as well as their limitations and difficulties in the implementation process continue to be a topic of research and discussion.

Online therapies recommended to adult patients as a primary treatment procedure are reported to be highly accepted and welcomed by patients (Andrews et al., 2018). Some studies also revealed the applicability and efficiency of telehealth implementations including online therapies conducted with adults (e.g. Andrews et al., 2011; Cataldo et al., 2021; Etzelmueller et al., 2020; Karyotaki et al., 2021). People from almost all age groups were also reported to benefit from online therapies (Oktay et al., 2021). However, in terms of age groups, the literature reports the presence of fewer studies on the applicability and efficiency of online therapies in children compared to adults (Rooksby et al.,

✉ Elif Aybike Balik
e.aybike.turgut@gmail.com

Feyruz Usluoglu
feyruzusluoglu@gmail.com

¹ Psychology Department, Toros University,
Yenişehir, Mersin 33150, Turkey

2015). On the other hand, the literature on the applicability and efficiency of telehealth interventions including online therapies with children, adolescents, and their parents has been also expanding (Beet & Ademosu, 2022; March et al., 2009; Schlarb & Brandhorst, 2012; Shirotzuki et al., 2022; Udwin et al., 2021; Widdershoven, 2017; Vigerland et al., 2016).

Therapists highlight the flexibility of time and place as well as the increased accessibility and sustainability of online therapies for children, adolescents, and their families (Beet & Ademosu, 2022; Comer et al., 2015; Gloff et al., 2015). Hence, online therapies can be implemented in times of crisis such as the COVID-19 pandemic (Erlandsson et al., 2022; Udwin et al., 2021). Online psychotherapy is distinguished by its characteristics such as accessibility for patients who live in areas far away from the treatment centers, do not have access to face-to-face psychotherapy, or have difficulties in leaving their homes as well as the possibility of organizing sessions according to patients' conditions (Erlandsson et al., 2022; Myers et al., 2015; Racine et al., 2020; Stoll et al., 2020; Udwin et al., 2021). Additionally, with the anonymity it provides, online psychotherapy decreases stigmatization concerns (Stewart et al., 2020; Stoll et al., 2020), and with the flexibility of time and place, it increases participation in psychotherapy (Beet & Ademosu, 2022; Stewart et al., 2020; Stoll et al., 2020). The flexibility of time and place could decrease expenses for both parents/caretakers seeking help (e.g. asking for permission, transportation) and psychotherapists (e.g. office) (Racine et al., 2020; Stoll et al., 2020; Udwin et al., 2021).

Despite the benefits and possibilities for children and their families, online psychotherapy implementations also have several limitations and difficulties. Some of the difficulties and limitations indicated by therapists regarding online psychotherapy include equal access to services, difficulties in determining the right treatment and evaluating the risk due to the lack of physical proximity (not being in a clinically supervised office environment or the same physical environment), privacy, technological problems, therapeutic relationship issues, and effect components specific to psychotherapy (Avasthi et al., 2022; Bambling et al., 2008; Beet & Ademosu, 2022; Carneiro et al., 2022; García et al., 2022; Udwin et al., 2021; Widdershoven, 2017). In this regard, attention was drawn to the access to technology by clients from low socio-economic status (Markowitz et al., 2021; Udwin et al., 2021). Besides, clients' connecting to psychotherapy from their homes is quite different from a clinically supervised office environment. For example, therapists mention that not being in the same physical environment could cause a lack of control over the therapeutic environment and have negative effects on the risk assessment and intervention processes (Erlandsson et al., 2022;

Markowitz et al., 2021). Besides, little children need parents' support for participation in psychotherapy, and older children could have limitations in creating a special place at home. Therefore, therapists and researchers mention their concerns about privacy and finding a suitable place for privacy (Erlandsson et al., 2022; Trub, 2021; Udwin et al., 2021). This condition is reported to be a potential disadvantage for the assessment of trauma process where maltreatment is experienced (Racine et al., 2020). Concerns regarding the potential effects of parental interventions on little children's therapeutic processes during online psychotherapy were also mentioned (Erlandsson et al., 2022; Trub, 2021; Widdershoven, 2017).

Another effect of not being in the same environment include disruptions caused by various technical difficulties (like internet connection) as well as the child's intervention in the process in uncontrollable ways (e.g. switching off sound or screen) (Stewart et al., 2020; Trub, 2021; Udwin et al., 2021; Widdershoven, 2017). Online psychotherapy also means the loss of various tools such as games and creative materials that enhance communication and interaction with children (Erlandsson et al., 2022). Moreover, since only the face of the child is seen on the screen during online psychotherapy, therapists have more limited access to body language and nonverbal communication (Erlandsson et al., 2022). Therefore, they could experience limitations in interpreting the client's emotions and establishing real relational connections with the client (Udwin et al., 2021). This factor is reported to increase the risk of misunderstanding and have negative effects on the mutual dialogue, quality of the therapeutic relationship, and potentially the treatment process (Erlandsson et al., 2022).

Therapists, particularly while working with children and adolescents, raised their concerns about issues such as difficulties in keeping children with behavioral and emotion regulation problems busy over screens and their increased distractibility (Udwin et al., 2021).

The literature reports that the child's mental disorder or psychological problem affects the applicability and intervention outcomes of distance therapies. Accordingly, children with low comorbidity (e.g. diseases such as obsessive-compulsive disorder or specific phobia and low anxiety levels) are reported to adapt to online psychotherapy well. On the other hand, conducting online psychotherapy was reported to be less suitable for children who have depression, neuropsychiatric disorders, and communication difficulties such as language disorders or language insufficiency (Erlandsson et al., 2022).

Purpose and goals of the study.

Although important studies on tele psychotherapy treatments have been conducted for many years, the COVID-19 pandemic accelerated the spread of tele psychotherapy

(García et al., 2022; Wade et al., 2020). In this process, online psychotherapy and consultancy services are reported to potentially become the most common type of psychotherapy (Hanley, 2021; Markowitz et al., 2021).

Although the literature on online psychotherapy has expanded, studies focusing on children and the family population are still quite new, and the need for evaluating online therapies for children has been reported in different contexts (Stewart et al., 2020; Udwin et al., 2021). Besides, the significant increase in the number of psychotherapists providing psychotherapy /consultancy is reported to bring the need for the investigation of the perceptions and experiences about the use of online psychotherapy interventions (Smith & Gillon, 2021). The majority of the publications reported that “telepsychotherapy” was not tele psychotherapy (Markowitz et al., 2021). In this regard, remote psychotherapy, online psychotherapy, or telepsychotherapy are used for different psychotherapy tools and forms (telephone, online voiced or video, etc.), and this concept causes confusion. This confusion makes it difficult to know for which tools and forms evidence is available (Erlandsson et al., 2022). This study aimed to investigate psychotherapists’ experiences and views of videoconferencing psychotherapy (VCP) conducted with children (Erlandsson et al., 2022; Rodgers et al., 2021). The findings of the study could provide valuable information regarding child therapists’ experiences of VCP. The results could help to determine the strengths and weaknesses of VCP. In this way, they can be used to help to provide information regarding the education, awareness, and skills development issues to psychotherapists currently using or hoping to use VCP.

Research questions.

- 1) What are child psychologists’ experiences of VCP?
- 2) What are child psychologists’ views about the suitability of VCP in psychological disorders?

Method

This study utilized qualitative description method to investigate psychotherapists’ views and experiences of VCP for children. Qualitative description design is used when there is a need for describing experiences and views about a phenomenon; the design is preferred as it is flexible in terms of theory, sample selection, and analysis styles (Colorafi & Evan, 2016; Sandelowski, 2000). In this way, it enabled the participants to share their experiences and views about conducting VCP in a comprehensive way. It also enables to describe experiences and views of the participants without interpreting them.

Participants

This study was conducted with 7 female therapists aged between 23 and 35 years who provided VCP services. All the participants provide both face-to-face and VCP services. All of them also give psychotherapy and psychological counseling services for children and adolescents in “Education and Psychological Counseling Centers”. Table 1 demonstrates findings concerning the participants’ characteristics.

As seen in Table 1, four participants had a postgraduate degree and three participants had an undergraduate degree; six participants were psychologists and one participant was a psychological counselor. Considering that it may affect therapeutic alliance and the VCP framework, Table 1 also presents information about the psychotherapy approaches adopted by the participants.

Procedures

After approval was obtained from the Scientific Research Ethics Committee of Toros University (reference number:28.01.2022/1/25), people who were determined to provide VCP were sent a message via Instagram inviting them to participate in this study. Hence, 24 individuals including 2 males living in different cities in Turkey were invited to participate in the study. Ten participants responded and indicated their approval to participate in the study. Three

Table 1 Participants

Case	Gender	Psychotherapy Approach	Level of education	Degree
P1	Female	CBT ¹ , Play therapy	Bachelor’s degree	Psychological Counseling
P2	Female	Eclectic, Play therapy	Bachelor’s degree	Psychologist
P3	Female	Eclectic, Play therapy	Master’s degree	Psychologist
P4	Female	CBT, Play therapy	Master’s degree	Psychologist
P5	Female	CBT, Play therapy	Master’s degree	Psychologist
P6	Female	EMDR ² , Play therapy	Bachelor’s degree	Psychologist
P7	Female	EMDR, Play therapy, CBT	Master’s degree	Psychologist

¹ Cognitive Behavioral Therapy

² Eye Movement Desensitization and Reprocessing

participants were excluded from this process because they did not have VCP experience with children. As a result, interviews were conducted with seven participants. No new participants were sought because of the difficulty in finding participants and the similarity of the participants' views in the interview process. The interviews were administered between January and March 2022.

Before the interviews were conducted, the participants were given information about the study and their consent was received. The interviews which took around 15–25 min were conducted through telephone or videoconference. Each participant responded to the open-ended questions independently. The participants were told that the interviews would be voice-recorded using a voice recorder /application connected to the telephone or laptop. All the interviews were voice recorded. Interviews and analysis processes were conducted parallelly. Due to the findings that were revealed in the last phase of the analyses indicating “parents' participation in the psychotherapy”, some of the participants were interviewed again. In this process, the participants were asked ‘What do you think about the effect of VCP on parents' participation in psychotherapy ?

Data collection

Data were collected through two open-ended questions during the interviews conducted through telephone/VC. The interview questions were prepared in line with the literature; expert views were obtained to analyze the comprehensibility and suitability of the interview questions, and a pilot interview was conducted. The participants were asked to answer the following questions regarding their VCP experiences conducted with children.

- 1) What do you think about conducting online psychotherapy with children?
- 2) For which psychological disorders do you think online psychotherapy with children can be suitable?

Data analysis

Data were analyzed according to the inductive content analysis process (Creswell, 2013). Accordingly, while the second author transcribed the voice recordings word for word to produce a written document, the first author checked the transcribed data. Notes were taken for potential codes by reading the text by the authors again. Grouping the codes and creating the themes were performed by two authors together. To do this, each participant's responses were first coded separately, and then all the codes were reviewed considering the responses given to each question by each participant as well as the codes concerning them. Themes were formed by listing the codes and grouping the similar and related codes.

The codes were reviewed again by quoting the participant responses including evidence for the themes. Explanations were made for the themes and sub-themes revealed from the analysis results, and the participant statements included direct quotations. To protect participants' confidentiality in the codes given, the participants were referred to using the letter “P” (Participant) and numbered from 1 to 7 (P1–P7). In the quotes, the eliminated parts were shown using “triple dot” as they were not related to the theme. In addition, the participants' quotes included the use of online therapy expression instead of VCP, mainly because “online therapy” is commonly used in the Turkish culture.

Researcher roles

The first author of this study (FU) is a psychologist working as an assistant professor at the department of psychology and is experienced in conducting qualitative research. He received psychodrama and supportive psychodynamic psychotherapy education and a level-1 EMDR practitioner training. He also administers online (video conference) and face-to-face individual and group counseling/psychotherapy and face-to-face group psychotherapy services to adults in a consultancy center. The author previously worked as a psychologist in a public hospital for 12 years. In this process, he had the experience of working with children and adolescents and their families for eight years. The second author (EAB) is a psychologist and a student in the general psychology postgraduate program. She received courses on qualitative studies, solution-focused brief psychotherapy, and cognitive behavioral psychotherapy.

Trustworthiness

This study initially discussed psychotherapists' views and experiences about conducting VCP with children. As it was thought that the participants would share their views with their experiences, the study utilized the qualitative description method. Multiple strategies were utilized for enhancing the verifiability components of the study (Creswell, 2014; Guba & Lincoln, 1982). Hence, (a) the participants of the study were selected only among people who conducted VCP, (b) interviews conducted with the participants were voice recorded, (c) detailed information was given about how data were collected and analyzed in the process, (d) concepts frequently mentioned in the literature were preferred for the codes regarding the views and experiences for naming the themes and sub-themes, (e) participants' views about the sub-themes in the findings were presented, and (f) an expert who is not among the authors was asked to evaluate the findings, (g) finally, the analysis findings were reviewed considering the evaluations of two experts who

were not among the authors. Themes and sub-themes were revised and finalized in line with the suggestions of the experts.

Findings

Table 2 presents qualitative analysis results grouped under 2 themes and 10 sub-themes concerning psychotherapists’ views and experiences about conducting VCP with children.

Table 2 Themes and Sub-themes

Theme	Sub-theme	Codes	Number of participants*
1. Benefits and possibilities	1.1. VCP facilitates accessibility	Distance	7
		Patient characteristics	
		Crisis conditions	
		Therapist diversity	
		Sustainability	
1.2. VCP provides flexibility and comfort	1.2. VCP provides flexibility and comfort	Flexibility of Time	6
		Flexibility of Place and comfort	
1.3. Fathers’ participation in the psychotherapy increases	1.3. Fathers’ participation in the psychotherapy increases		4
2. Difficulties and limitations	1.4. VCP is economic		2
2.1. Difficulties are experienced in the therapeutic relationship	2.1. Difficulties are experienced in the therapeutic relationship	Borders and Rules	7
		Nonverbal reactions	
		Child’s mental disorder	
		Child’s age	
2.2. The child’s characteristics affect the applicability of the psychotherapy	2.2. The child’s characteristics affect the applicability of the psychotherapy		6
2.3. Maintaining focus becomes difficult	2.3. Maintaining focus becomes difficult		5
2.4. The lack of materials and toys affects the therapist’s implementations	2.4. The lack of materials and toys affects the therapist’s implementations		3
2.5. Connecting to the psychotherapy from home causes privacy problems	2.5. Connecting to the psychotherapy from home causes privacy problems	Parent intervention	2
		Private space	
2.6. Technological problems affect communication and sustainability	2.6. Technological problems affect communication and sustainability	Internet and electricity cut-offs	2

* Number of participants who indicated views

Themes, sub-themes, and codes presented in Table 2 demonstrate the benefits, new possibilities, limitations, and difficulties of VCP for children.

Benefits and possibilities

VCP facilitates accessibility

In this sub-theme, the participants stated that VCP provided for children and their families enabled them to overcome limitations caused by rural areas and pandemic restrictions limiting the possibilities of psychotherapy support. Besides, the participants mentioned that VCP provided therapists and consultants living in different cities and countries with a diversity of opportunities. In addition to these, VCP was reported to enable the sustainability of the psychotherapy interrupted during restrictions in the pandemic period and when the clients changed the city, they lived in. Regarding this theme, one of the participants stated that VCP facilitated access to the service.

...I believe that the most important advantage is for children who cannot access services. (P4)

One of the participants stated that VCP provided clients with a diversity of specialized therapists and enabled them to continue therapies in cases caused by the pandemic or changing cities.

Online therapies are much better in terms of accessing experts in other cities who are specialized in different topics... As I said, I could access my clients who were here but left due to the pandemic; we could maintain our contact and communication in different cities in or out of the country. (P7)

VCP provides flexibility and comfort

The therapists mentioned the comfort of participating in the sessions from home for both themselves and the clients and the convenience of planning the psychotherapy sessions. When the loss of time and tiredness caused by the city transportation difficulties were considered, one of the participants explained the convenience brought by VCP sessions as follows:

I live in Istanbul, and going from one side to the other is very difficult. They sometimes avoid bringing their child to therapy for this reason... The child feels sleepy, the traffic is bad, etc. Families mention

so many factors that saying "simply open Zoom" is much easier in these kinds of cases... (P1).

One of the participants stated that with the VCP option, therapists did not need to go to a consultancy center.

Instead of going to a therapy center, we can have therapy sessions for example in the evenings at home; this is a convenience for us. (P6)

Fathers' participation in the psychotherapy increases

The participants stated that especially fathers were more comfortable during VC therapies and cooperated with the therapist more. Compared to face-to-face therapies, they also reportedly participated in the psychotherapy sessions more by organizing their work. Two participants' views about fathers' participation in VCP are given below. While the first quote indicates that participating in therapies from their homemade fathers feel more comfortable, the second one highlighted that fathers could easily get organized.

... a father who would never speak in your clinic could disclose himself much more comfortably while drinking his tea in his own house... I think this is a great advantage. I experience many benefits of online therapy in terms of this issue. (P3)

I find online more convenient in terms of family participation. Fathers can also get organized more easily. Otherwise, they need to get permission from their workplace, or some of them are in another city. (P7)

VCP is economic

Some of the participants stated that VCP eliminated travel expenses for both therapists and families. The following quote indicates one participant's views:

...it brings many advantages financially, both for the therapist and the family... you have no travel expenses for example. (P3)

Difficulties and limitations

Limitations and difficulties are experienced in the therapeutic relationship

The participants stated that they had difficulties understanding emotions during VCP as they could not follow non-verbal reactions; they also said they experienced communication difficulties because they cannot protect the rules and borders necessary during therapy.

In the following quote, one participant stated that the child could not look at the camera while playing a game during play psychotherapy.

...we can have problems in establishing eye contact with the child because s/he is expected to play a game but at the same time look at the camera...how can it be possible? (P2)

One of the participants indicated the difficulty of protecting borders during VCP as follows:

For instance, regarding the borders, speaking at the screen can be quite difficult because you cannot set a physical border. The interventions in the play therapy room cannot be implemented, so working there can be a little difficult. (P5)

One participant's views about VCP given below indicate that the child has control in the psychotherapy, which makes the intervention of the therapist difficult when the child experiences difficult emotions and causes problems in maintaining the relationship.

Sometimes there can be problems in terms of establishing communication... on one side, of course mainly the child has control; for example, he may say "session over" and switch off the screen. Well, closing self could happen during face-to-face sessions as well, but there could still be a chance to contact when we are in the same room. In online sessions, when they have difficulties with challenging emotions, they have control, which makes the process difficult. (P7)

The child's characteristics affect the applicability of the psychotherapy

Almost all of the participants stated that VCP was unsuitable or very difficult in children with disorders classified under neurodevelopmental disorders in the DSM-5™ Handbook of Differential Diagnosis, such as attention-deficit/

hyperactivity disorder (ADHD), autism spectrum disorder, intellectual developmental disorder, and externalizing disorder. Besides, the child's age was also reported to affect the applicability of the VCP.

Two participants whose views are presented below reported difficulties in conducting VCP for some mental disorders.

I don't think that online psychotherapy works well with organic disorders such as mental deficiency or autism. For instance, if we want to treat anxiety disorder in children with mental deficiency, we can hardly manage this online. (P1)

Well, it is difficult to work with children with attention-deficit/hyperactivity disorder online. Attracting these children's attention can be very difficult because they are active and their attention span is very short. (P3)

Almost all of the participants reported that VCP is suitable for children and adolescents who have a low severity level of mental disorders. Hence, the participants stated that VCP could be conducted effectively with children who have anxiety, depression, eating and elimination problems and obsessive-compulsive disorder (OCD) diagnosis or who demonstrate symptoms related to these disorders, who have communication problems, and who need support for a grief process. Some participants' views are as follows:

If the child has anxiety and toilet problems...eating problems, depressive symptoms, or obsessive patterns, then I think the online therapy works very well. (P4)

Separation anxiety or grief process can be some examples. (P6)

One participant stated that the level of OCD was particularly important in VCP.

It can work in exam anxiety... In fact, we can say all anxiety disorders in general and phobias, I think... Some beneficial results can be obtained in OCD, but of course, its level is also important. Higher-level cases would probably be challenging. (P2)

One participant whose views are presented below stated that the change in VCP could be faster compared to face-to-face psychotherapy for a child who has social anxiety.

A child with social anxiety who does not play with you inside during sessions and does not communicate with you face-to-face can leap forward in his

communication with you during online therapy in his own house. I was so surprised when I experienced this. The child was so bad at this during face-to-face communication, but he was very good when he was online. Normally you expect just the opposite. (P3)

The participants stated that the child's age could cause difficulties in VCP.

No matter how well you know about the theory, working with little children is very difficult because keeping a child for 45 min in a room, especially in his own house, is almost impossible. Even if there are many toys in the room, it is very difficult to use them for therapy purposes. (P4)

Again, there can be some problems due to the age period. We may experience problems...the younger the child is, the more difficult it becomes to keep him in online therapy. We can have difficulties there...The age group is a criterion for me as I said. I cannot work with a 3-4-year-old on the screen. I cannot work with a 3-year-old even if the problem is anxiety. Ages 7-8 could be easier to work with if their cognitive skills are in line with their age. (P7)

Maintaining focus becomes difficult

This sub-theme includes participant views indicating that maintaining focus in VCP is more difficult than face-to-face psychotherapy, and the psychotherapy process is affected by this.

While the first participant below stated that the child's leaving the screen and having difficulty in focusing attention made the process more difficult, the second participant highlighted that children's active nature made maintaining focus during the VCP difficult.

Sometimes the child leaves the screen and is distracted. You try to make him/her focus again...Maintaining the child's attention is more difficult than it is during face-to-face therapies. (P1)

...as children are active in nature, it is difficult to keep them there, they can easily be distracted. (P3)

Lack of materials and toys affects therapists' implementations

The participants stated that some materials used in play therapies were not available in VCP sessions and play therapy implementations become difficult to apply because

these materials cannot be obtained by families. Views of two therapists about this are presented below:

Both therapists highlighted the problems caused by the unavailability of the necessary materials for play psychotherapy in the home environment.

... Unavailability of a room in the context of play therapy is quite natural and normal in-home environments. Of course, the child has toys, but there should be certain necessary toys available in the playroom. If the family does not have such an opportunity, it causes a problem in terms of therapy. (P2)

Providing children with the same possibilities, toys, and materials and creating these areas could be more difficult. (P5)

Connecting to the psychotherapy from home causes privacy problems

The participants stated that connecting to the psychotherapy from home causes privacy problems. Hence, they highlighted difficulties such as parents' intervention while working with younger children and the unavailability of a private space for older children. The following quote indicates the views of one therapist.

The most general problem is enhancing privacy; namely, providing children with a space... parents could intervene during the therapy session. No matter how hard you try to control, the presence of parents in the room or nearby causes unwanted factors in the therapy ... Providing children with the same possibilities, toys, and materials and creating these areas could be more difficult. Therefore, online therapy has some limitations. (P5)

Technological problems affect communication and sustainability

The participants stated opinions regarding the problems affecting the VCP process such as the quality of the internet connection and internet connection and electricity cut-offs. One participant stated the following view about this sub-theme. The participant highlighted those technological problems made communication in the psychotherapy and sustainability of the psychotherapy difficult.

Well, another very important, maybe the most important part... if your internet infrastructure is not strong... this can be a serious problem... electricity cut-off, the client's poor internet connection. For instance, I had

a client like this living in a village in Kilis. We had a lot of difficulties and could not maintain the sessions because we could not understand each other. (P3)

Discussion

This study revealed ten sub-themes grouped under two themes concerning the experiences and views of child psychologists about VCP. These sub-themes indicated the benefits and new possibilities of using VCP as well as the difficulties and limitations experienced by the therapists. Discussion of the findings was done according to the flow-chart given in Fig. 1.

The literature has documented many benefits and new possibilities of online psychotherapy services for both clients and therapists (Hanley, 2021; Kocsis & Yellowlees, 2018; Korkmaz & Şen, 2018; Regueiro et al., 2016; Stoll et al., 2020). In line with the findings in other studies, the child therapists participating in this study reported that VCP services enhanced accessibility for both children and their parents (Beet & Ademosu, 2022; Comer et al., 2015; Gloff et al., 2015; Stoll et al., 2020). In this way, the VCP service enables to overcome the limitations in face-to-face psychotherapy such as distance to the treatment center, crisis conditions, and children and parents having difficulties in leaving home (Erlandsson et al., 2022; Myers et al., 2015; Racine et al., 2020; Udwin et al., 2021). In addition, VCP supports the sustainability of face-to-face therapies in times of crisis conditions or parents' moving to other countries or cities. Besides, in case of access problems to encountering therapists specialized in different problems or psychotherapy approaches, it enables parents to access these therapists. VCP provides therapists with access to different populations and opportunities for mobilization. Being accessible online enables flexibility in terms of time and place for parents and psychotherapists (Drum & Littleton, 2014; Stoll et al., 2020), and reduces expenses (Racine et al., 2020; Stoll et al., 2020; Udwin et al., 2021). In addition to these, a notable finding of the present study is the therapists' views indicating fathers' increased participation in VCP compared to face-to-face therapies. The therapists explained fathers' higher participation and cooperation in VCP with their being in a more comfortable place in an online environment. Online connection is reported to enhance co-construction and participation of family members who generally do not participate in the psychotherapy (Beet & Ademosu, 2022). Fathers' increased participation in the psychotherapy could be associated with decreased or eliminated fear of stigmatization with the increase in the feelings of anonymity and privacy in remote psychotherapy services (Stewart et al., 2020; Stoll et al., 2020). Shortened travel durations and prevention of loss

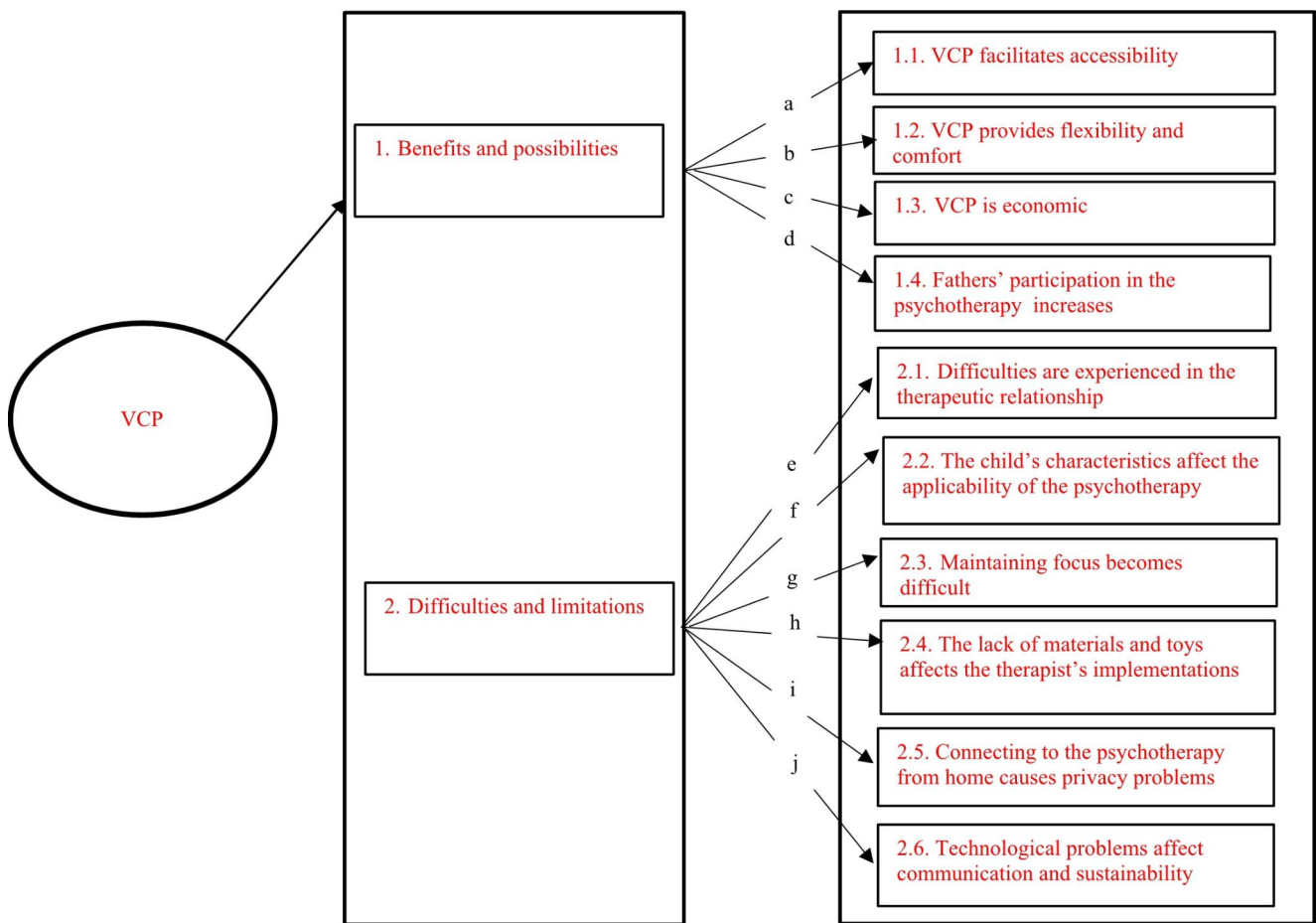


Fig. 1 Flowchart of the discussion

of time considering caretakers’ working problems and children’s school time might also be contributing factors (Stewart et al., 2020; Stoll et al., 2020). Another study reported that fathers’ participation in VCP increased because they felt responsible for the technology use or fixing technical problems (Widdershoven, 2017). Under any circumstances, the VCP service seems to support fathers’ taking a more active role in their children’s problems (Widdershoven, 2017). Considering the positive effect of fathers’ active participation in therapies for children on the treatment outcomes (Creswell & Cartwright-Hatton, 2007), higher participation levels of fathers in the psychotherapy service are considered to be an important finding.

The child therapists in this study mentioned difficulties and limitations of VCP implementations similar to the distant psychotherapy implementations reported in the literature (Békés et al., 2021; Cataldo et al., 2021; Haberstroh et al., 2007, 2008; Rochlen et al., 2004; Schuster et al., 2020; Stoll et al., 2020; Tanrikulu, 2009). On the other hand, there are difficulties and limitations specific to therapies conducted with children caused by the unavailability of a physical area and children’s participation in VCP from their own home environments. Hence, VCP includes problems

concerning privacy due to parental intervention (Erlandsson et al., 2022; Trub, 2021; Udwin et al., 2021). For instance, this condition may cause difficulties in tackling the child’s communication with family members. It may cause reluctant approaches, particularly for the analysis of children’s mistreatment conditions (Racine et al., 2020). On the other hand, only two participating therapists highlighted this issue, which can be considered to be associated with the perceived necessity of parental intervention. In any case, the presence of parents during psychotherapy is a topic of discussion about the potential therapeutic effects (Trub, 2021).

Parents could not obtain the toys and materials necessary for play psychotherapy available in the psychotherapists’ office, which was mentioned as a problem concerning VCP. Previous studies reported the loss of play and creative materials that enhance communication and interaction with children in VC therapies (Erlandsson et al., 2022; Trub, 2021; Widdershoven, 2017). This means that the therapists had difficulties in implementing the cooperation and psychotherapy methods and techniques they are used to and needed to make changes, indicating potential effects on the psychotherapy outcomes.

Another effect of not being in the same physical environment during VCP is reported to be associated with enhancing and maintaining a therapeutic relationship. Accordingly, parallel to previous research in VCP, the therapists had difficulties in understanding emotions because they could not follow non-verbal reactions; rules and borders necessary in psychotherapy could not be protected; and they had difficulties in establishing communication (Erlandsson et al., 2022; Udwin et al., 2021). Establishing and maintaining a therapeutic relationship could involve disruptions in cases when there are neurodevelopmental disorders (attention-deficit/hyperactivity) and the child's age is young. Hence, enhancing physical rules in online psychotherapy becomes difficult due to problems such as the child's switching of the screen when s/he wants and leaving the frame of the camera, getting bored easily, and looking at another screen (Stewart et al., 2020; Udwin et al., 2021; Widdershoven, 2017). Although it was not among the findings of this study, distraction during the sessions for both patients and therapists was reported to be a relevant issue in the literature (Békés et al., 2021). Another condition affecting the maintenance of therapeutic relationships and session is related to technology. Similar to the findings in previous research, the psychotherapists reported that internet connection problems and electricity cut-offs made communication and maintenance of the sessions difficult (Erlandsson et al., 2022; Haberstroh et al., 2007, 2008; Rochlen et al., 2004; Stoll et al., 2020).

The child's mental disorder and age also affect the applicability of VCP. It is reported that online psychotherapy may not be suitable for some conditions and mental disorders (Madigan et al., 2021). This study also found that VCP may be unsuitable or very difficult for children who have neurodevelopmental disorder diagnosis and externalizing disorder symptoms. On the other hand, participating therapists stated that VCP could be conducted effectively with children who have anxiety, depression, eating and elimination problems, and obsessive-compulsive disorder (OCD) diagnosis or who demonstrate symptoms related to these disorders, who have communication problems, and who need support for a grief process. Studies in the literature also reported that even before the COVID-19 pandemic, various distant therapies and applications were used effectively in interventions for children, adolescents, and families for depression, anxiety, post-traumatic stress disorder, ADHD, tic disorder, OCD, and disruptive behavior disorder (Bolton et al., 2021; Udwin et al., 2021). Besides, a comprehensive analysis of the literature is reported to provide important support for the benefits of psychotherapy (Wade et al., 2020). On the other hand, the complexity and form of mental disorders and personal motivation are among the important factors that affect the success of VCP provided for children and adolescents (Erlandsson et al., 2022). Hence, children with low comorbidity (e.g. diseases such as obsessive-compulsive disorder

or specific phobia and patients with low anxiety levels) are reported to be more suitable for VCP. On the other hand, VCP involves some difficulties when it is conducted with patients with complicated disorders, depression, neuropsychiatric disorders, language disorders or insufficiency, and low motivation (Erlandsson et al., 2022).

Conclusion

The increase in the use of the internet has increased the interest in distance psychotherapy implementations that are referred to using various concepts and administered using different tools. Investigation of the experiences and views of psychotherapists working with children is important in terms of conducting effective and healthy psychotherapy. This study found that VCP has some benefits and possibilities as well as difficulties and limitations for children, their families, and therapists. The literature documented that as compared to older and clinically more experienced therapists, younger and less experienced therapists had more difficulties in transitioning to online psychotherapy (Békés et al., 2021). Studies also reported that preparation interviews with families about the predictable difficulties of online therapies including problem-solving methods regarding privacy and technology use could enable more effective online psychotherapy services (Udwin et al., 2021). In line with the study results and the related literature knowledge, it is important to provide young therapists with education on developing their VCP administration skills in order to use the benefits and new possibilities of VC therapies and decrease the difficulties encountered to a minimum.

Limitations and future research

Some limitations should be taken into consideration while interpreting the results of this study. First of all, this study included a small sample group composed of seven female therapists. Considering the increasing need for remote therapies, future studies could benefit from larger sample groups regarding VCP. Further studies may also analyze whether VCP administration views and experiences of male and female therapists demonstrate differences. In a similar vein, the views and experiences of therapists implementing different psychotherapy methods and techniques can also be investigated. Finally, despite the standards for psychotherapy administration competence and proficiency determined by a very limited number of psychotherapy associations in Turkey, there are no legal regulations for psychotherapy. Therefore, the participating therapists' psychotherapy competences, which standards they meet, and the effects of these on the results are not known.

Funding This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Data Availability The datasets generated during and/or analyzed during the current study are not publicly available due to individual privacy however are available from the corresponding author on reasonable request.

Declarations

Ethical approval Ethical approval to conduct the research was obtained by the Scientific Research Ethics Committee of Toros University (reference number 28.01.2022/1/25).

Conflict of Interest On behalf of author, the corresponding author states that there is no conflict of interest.

References

- Andrews, G., Davies, M., & Titov, N. (2011). Effectiveness randomized controlled trial of face to face versus internet cognitive behaviour therapy for social phobia. *Australian and New Zealand Journal of Psychiatry*, 45(4), 337–340. <https://doi.org/10.3109/0048674.2010.538840>.
- Andrews, G., Basu, A., Cuijpers, P., Craske, M. G., McEvoy, P., English, C. L., & Newby, J. M. (2018). Computer therapy for the anxiety and depression disorders is effective, acceptable and practical health care: An updated meta-analysis. *Journal of Anxiety Disorders*, 55(August 2017), 70–78. <https://doi.org/10.1016/j.janxdis.2018.01.001>
- Avasthi, A., Grover, S., & Anil, N. (2022). Ethical and legal issues in psychotherapy. *Indian Journal of Psychiatry*, 64(1), 47–61. https://doi.org/10.4103/indianjpsychiatry.indianjpsychiatry_50_21.
- Bambling, M., King, R., Reid, W., & Wegner, K. (2008). Online counselling: The experience of counsellors providing synchronous single-session counselling to young people. *Counselling and Psychotherapy Research*, 8(2), 110–116. <https://doi.org/10.1080/1473>.
- Beet, N., & Ademosu, T. (2022). Keeping connected: Family therapists' experiences of working online during the COVID-19 pandemic. *Journal of Family Therapy*. <https://doi.org/10.1111/1467-6427.12421>.
- Békés, V., Aafjes-van Doorn, K., Luo, X., Prout, T. A., & Hoffman, L. (2021). Psychotherapists' challenges with online therapy during COVID-19: Concerns about connectedness predict therapists' negative view of online therapy and its perceived efficacy over time. *Frontiers in Psychology*, 12, <https://doi.org/10.3389/FPSYG.2021.705699>.
- Bolton, C. A., Thompson, H., Spring, J. A., & Frick, M. H. (2021). Innovative play-based strategies for teletherapy. *Journal of Creativity in Mental Health*, 1–12. <https://doi.org/10.1080/15401383.2021.2011814>.
- Carneiro, L., Afonso, J., Clemente, F., & Frontini, R. (2022). Web-based psychotherapy and exercise interventions for depressive and anxiety disorders. In *Digital Therapies in Psychosocial Rehabilitation and Mental Health* (pp. 93–114).
- Cataldo, F., Chang, S., Mendoza, A., & Buchanan, G. (2021). A perspective on client-psychologist relationships in videoconferencing psychotherapy: Literature review. *JMIR Mental Health*, 8(2), e19004. <https://doi.org/10.2196/19004>.
- Colorafi, K. J., & Evan, B. (2016). Qualitative descriptive methods in health science research. *Journals Sagepub Com*, 9(4), 16–25. <https://doi.org/10.1177/1937586715614171>.
- Comer, J. S., Furr, J. M., Cooper-Vince, C., Madigan, R. J., Chow, C., Chan, P. T., Idrobo, F., Chase, R. M., McNeil, C. B., & Eyberg, S. M. (2015). Rationale and considerations for the internet-based delivery of parent-child interaction therapy. *Cognitive and Behavioral Practice*, 22(3), 302–316. <https://doi.org/10.1016/J.CBPRA.2014.07.003>.
- Creswell, J. W. (2013). *Qualitative inquiry and research design: Choosing among five approaches*. In SAGE publications, Inc: Vol (3rd ed.). SAGE Publications, Inc.
- Creswell, J. W. (2014). *Research Design: Qualitative, quantitative, and mixed methods approaches: Vol* (4th ed.). SAGE Publications Inc.
- Creswell, C., & Cartwright-Hatton, S. (2007). Family treatment of child anxiety: Outcomes, limitations and future directions. *Clinical Child and Family Psychology Review*, 10(3), 231–252. <https://doi.org/10.1007/s10567-007-0019-3>.
- Drum, K. B., & Littleton, H. L. (2014). Therapeutic boundaries in telepsychology: Unique issues and best practice recommendations. *Professional Psychology: Research and Practice*, 45(5), 309–315. <https://doi.org/10.1037/a0036127>.
- Erlandsson, A., Forsström, D., Rozental, A., & Werbart, A. (2022). Accessibility at what price? Therapists' experiences of remote psychotherapy with children and adolescents during the COVID-19 pandemic. *Journal of Infant Child and Adolescent Psychotherapy*, 21(4), 293–308. <https://doi.org/10.1080/15289168.2022.2135935>.
- Etzelmueller, A., Vis, C., Karyotaki, E., Baumeister, H., Titov, N., Berking, M., Cuijpers, P., Riper, H., & Ebert, D. D. (2020). Effects of internet-based cognitive behavioral therapy in routine care for adults in treatment for depression and anxiety: Systematic review and meta-analysis. *Journal of Medical Internet Research*, 22(8), e18100. <https://www.jmir.org/2020/8/e18100/https://psyarx>.
- García, E., Di Paolo, E. A., & De Jaegher, H. (2022). Embodiment in online psychotherapy: A qualitative study. *Psychology and Psychotherapy: Theory Research and Practice*, 95(1), 191–211. <https://doi.org/10.1111/papt.12359>.
- Gloff, N. E., Lenoue, S. R., Novins, D. K., & Myers, K. (2015). Telemental health for children and adolescents. *International Review of Psychiatry*, 27(6), 513–524. <https://doi.org/10.3109/09540261.2015.1086322>.
- Guba, E. G., & Lincoln, Y. (1982). Epistemological and methodological bases of naturalistic Inquiry. *ECTJ*, 30(4), 233–252.
- Haberstroh, S., Duffey, T., Counseling, M., Gee, R., & Trepal, H. (2007). The experience of online counseling. *Meridian Allenpress Com*, 29(3), 269–282. <https://doi.org/10.17744/mehc.29.3.j344651261w357v2>.
- Haberstroh, S., Parr, G., Bradley, L., Morgan-Fleming, B., & Gee, R. (2008). Facilitating online counseling: Perspectives from counselors in training. *Journal of Counseling and Development*, 86(4), 460–470. <https://doi.org/10.1002/J.1556-6678.2008.TB00534.X>.
- Hanley, T. (2021). Researching online counselling and psychotherapy: The past, the present and the future. *Counselling and Psychotherapy Research*, 21(3), 493–497. <https://doi.org/10.1002/capr.12385>.
- Karyotaki, E., Efthimiou, O., Miguel, C., BERPohl, F. M. G., Furukawa, T. A., Cuijpers, P., Riper, H., Patel, V., Mira, A., Gemmil, A. W., Yeung, A. S., Lange, A., Williams, A. D., Mackinnon, A., Geraedts, A., Van Straten, A., Meyer, B., Björkelund, C., Knaevelsrud, C., & Forsell, Y. (2021). Internet-based cognitive behavioral therapy for depression: A systematic review and individual patient data network meta-analysis. *JAMA Psychiatry*, 78(4), 361–371. <https://doi.org/10.1001/JAMAPSYCHIATRY.2020.4364>.
- Kocsis, B. J., & Yellowlees, P. (2018). Telepsychotherapy and the therapeutic relationship: Principles, advantages, and case examples. *Telemedicine and E-Health*, 24(5), 329–334. <https://doi.org/10.1089/TMJ.2017.0088>.

- Konieczny, K. (2021). Online psychotherapy during COVID-19 pandemic—experiences of psychotherapists. *Research Review Archives of Psychiatry and Psychotherapy*, 12, 5–5. <https://doi.org/10.12740/APP/143999>.
- Korkmaz, B., & Şen, G. (2018). Psikoterapistlerin çevrimiçi yürütülen psikoterapilere yönelik algılarına ilişkin bir tematik analiz çalışması. *Klinik Psikoloji Dergisi*, 2(3), 140–152. <https://doi.org/10.31828/kpd2602443829092018m000004>.
- Liu, S., Yang, L., Zhang, C., Xiang, Y. T., Liu, Z., Hu, S., & Zhang, B. (2020). Online mental health services in China during the COVID-19 outbreak. *The Lancet Psychiatry*, 7(4), e17–e18. [https://doi.org/10.1016/S2215-0366\(20\)30077-8](https://doi.org/10.1016/S2215-0366(20)30077-8).
- Madigan, S., Racine, N., Cooke, J. E., & Korczak, D. J. (2021). COVID-19 and telemental health: Benefits, challenges, and future directions. *Canadian Psychology/Psychologie Canadienne*, 62(1), 5–11. <https://doi.org/10.1037/CAP0000259>.
- March, S., Spence, S. H., & Donovan, C. L. (2009). The efficacy of an internet-based cognitive-behavioral therapy intervention for child anxiety disorders. *Journal of Pediatric Psychology*, 34(5), 474–487. <https://doi.org/10.1093/JPEPSY/JSN099>.
- Markowitz, J. C., Milrod, B., Heckman, T. G., Bergman, M., Amsalem, D., Zalman, H., Ballas, T., & Neria, Y. (2021). Psychotherapy at a distance. *American Journal of Psychiatry*, 178(3), 240–246. <https://doi.org/10.1176/APPI.AJP.2020.20050557>.
- Myers, K., Vander Stoep, A., Zhou, C., McCarty, C. A., & Katon, W. (2015). Effectiveness of a telehealth service delivery model for treating Attention-Deficit/Hyperactivity disorder: A community-based randomized controlled trial. *Journal of the American Academy of Child & Adolescent Psychiatry*, 54(4), 263–274. <https://doi.org/10.1016/J.JAAC.2015.01.009>.
- Oktay, S., Merdan, E., Karaca, P., & Erden, G. (2021). Examination of online psychotherapy methods on the basis of different groups (adult, child and adolescent, family). *Klinik Psikoloji Dergisi*, 5(3), 1. <https://doi.org/10.5455/KPD.26024438M000046>.
- Racine, N., Hartwick, C., Collin-Vézina, D., & Madigan, S. (2020). Telemental health for child trauma treatment during and post-COVID-19: Limitations and considerations. *Child Abuse and Neglect*, 110. <https://doi.org/10.1016/J.CHIABU.2020.104698>.
- Regueiro, V., Mcmartin, J., Schaefer, C., & Woody, J. M. (2016). Efficacy, efficiency, and ethics in the provision of telepsychology services: Emerging applications for international workers. *Journal of Psychology and Theology*, 44(4), 290–302. <https://doi.org/10.1177/009164711604400404>.
- Rochlen, A. B., Zack, J. S., & Speyer, C. (2004). Online therapy: Review of relevant definitions, debates, and current empirical support. *Journal of Clinical Psychology*, 60(3), 269–283. <https://doi.org/10.1002/jclp.10263>.
- Rodgers, B., Tudor, K., & Ashcroft, A. (2021). Online video conferencing therapy and the person-centered approach in the context of a global pandemic. *Person-Centered and Experiential Psychotherapies*, 20(4), 286–302. <https://doi.org/10.1080/14779757.2021.1898455>.
- Rooksby, M., Elouafkaoui, P., Humphris, G., Clarkson, J., & Freeman, R. (2015). Internet-assisted delivery of cognitive behavioural therapy (CBT) for childhood anxiety: Systematic review and meta-analysis. *Journal of Anxiety Disorders*, 92, 83–92. <https://doi.org/10.1016/j.janxdis.2014.11.006>.
- Sandelowski, M. (2000). Focus on research methods whatever happened to qualitative description? *Research in Nursing & Health*, 23. <https://doi.org/10.1002/1098-240X>.
- Schlarb, A. A., & Brandhorst, I. (2012). Mini-KiSS Online: An internet-based intervention program for parents of young children with sleep problems—influence on parental behavior and children's sleep. *Nature and Science of Sleep*, 4, 41–52. <https://doi.org/10.2147/NSS.S28337>.
- Schuster, R., Topooco, N., Keller, A., Radvogin, E., & Laireiter, A. R. (2020). Advantages and disadvantages of online and blended therapy: Replication and extension of findings on psychotherapists' appraisals. *Internet Interventions*, 21, 100326. <https://doi.org/10.1016/J.INVENT.2020.100326>.
- Shirotaki, K., Sugaya, N., & Nakao, M. (2022). Descriptive review of internet-based cognitive behavior therapy on anxiety-related problems in children under the circumstances of COVID-19. *BioPsychoSocial Medicine*, 16(1), 1–6. <https://doi.org/10.1186/S13030-021-00233-Y/FIGURES/1>.
- Smith, J., & Gillon, E. (2021). Therapists' experiences of providing online counselling: A qualitative study. *Counselling and Psychotherapy Research*, 21(3), 545–554. <https://doi.org/10.1002/CAPR.12408>.
- Stewart, R. W., Orenge-Aguayo, R., Young, J., Wallace, M. M., Cohen, J. A., & de Arellano (2020). Feasibility and effectiveness of a telehealth service delivery model for treating childhood post-traumatic stress: A community-based, open pilot trial of trauma-focused. *Journal of Psychotherapy Integration*, 30(2), 274–289. <https://doi.org/10.1037/int0000225>.
- Stoll, J., Müller, J. A., & Trachsel, M. (2020). Ethical issues in online psychotherapy: A narrative review. *Frontiers in Psychiatry*, 10(993). <https://doi.org/10.3389/fpsy.2019.00993>.
- Tanrikulu, I. (2009). Counselors-in-training students' attitudes towards online counseling. *Procedia - Social and Behavioral Sciences*, 1(1), 785–788. <https://doi.org/10.1016/J.SBSPRO.2009.01.140>.
- Trub, L. (2021). Playing and digital reality: Treating kids and adolescents in a pandemic. *Psychoanalytic Perspectives*, 18(2), 208–225. <https://doi.org/10.1080/1551806X.2021.1896308>.
- Udwin, S., Kufferath-Lin, T., & Prout, T. A. (2021). Little girl, big feelings: Online child psychotherapy during the COVID-19 pandemic. *Journal of Infant Child and Adolescent Psychotherapy*, 20(4), 354–371. <https://doi.org/10.1080/15289168.2021.1999158>.
- Vigerland, S., Lenhard, F., Bonnert, M., Lalouni, M., Hedman, E., Ahlen, J., Olén, O., Serlachius, E., & Ljótsson, B. (2016). Internet-delivered cognitive behavior therapy for children and adolescents: A systematic review and meta-analysis. *Clinical Psychology Review*, 50, 1–10. <https://doi.org/10.1016/J.CPR.2016.09.005>.
- Wade, S. L., Gies, L. M., Fisher, A. P., Moscato, E. L., Adlam, A. R., Bardoni, A., Corti, C., Limond, J., Modi, A. C., & Williams, T. (2020). Telepsychotherapy with children and families: Lessons gleaned from two decades of translational research. *Journal of Psychotherapy Integration*, 30(2), 332. <https://doi.org/10.1037/INT0000215>.
- Wang, C., Pan, R., Wan, X., Tan, Y., Xu, L., Ho, C. S., & Ho, R. C. (2020). Immediate psychological responses and associated factors during the initial stage of the 2019 coronavirus disease (COVID-19) epidemic among the general. *International Journal of Environmental Research and Public Health*, 17(5), 1729. <https://doi.org/10.3390/ijerph17051729>.
- Widdershoven, M. A. (2017). Clinical interventions via Skype with parents and their young children. *Infant Observation*, 20(1), 72–88. <https://doi.org/10.1080/13698036.2017.1378528>.

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Springer Nature or its licensor (e.g. a society or other partner) holds exclusive rights to this article under a publishing agreement with the author(s) or other rightsholder(s); author self-archiving of the accepted manuscript version of this article is solely governed by the terms of such publishing agreement and applicable law.