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RESEARCH ARTICLE

Empathy, working alliance, treatment expectancy and credibility in video and face-to-face psychotherapeutic first contact

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Abstract

Objective Video-based therapy has been used increasingly since the onset of the COVID-19 pandemic. Yet, video-based initial psychotherapeutic contact can be problematic due to the limitations of computer-mediated communication. At present, little is known about the effects of video first contact on important psychotherapeutic processes. **Method:** Forty-three individuals ($n_{video} = 18$, $n_{face\text{-}to\text{-}face} = 25$) were recruited via an outpatient clinic waiting list and were randomly assigned to video or face-to-face initial psychotherapeutic sessions. Participants rated treatment expectancy before and after the session, and the therapist's empathy, working alliance, and credibility after the session and several days later. **Results:** Empathy and working alliance ratings of patients and therapists were high and did not differ between the two communication conditions after the appointment or at follow-up. Treatment expectancy increased to a similar extent for the video and face-to-face modalities from pre to post. Willingness to continue with video-based therapy increased in participants who had video contact, but not in those with face-to-face contact. **Conclusion:** This study indicates that crucial processes related to the therapeutic relationship can be initiated via video, without prior face-to-face contact. Given the limited nonverbal communication cues in video appointments, it remains unclear as to how such processes evolve.

Trial registration: German Clinical Trials Register identifier: DRKS00031262..

Keywords: digital health; teletherapy; outcome predictors; internet-delivered therapy; computer-mediated communication (telepsychiatry)

Clinical or methodological significance of this article: Therapist- and working-relationship-related measures were similar for initial psychotherapeutic contacts via video as they were for face-to-face contacts in this study. Treatment expectancy was positive and increased to a similar extent after sessions in both formats. Crucial processes in the therapeutic relationship can thus be initiated via video even without prior face-to-face interaction.

Introduction

Video-based therapy has been available for many years (Shore, 2013). Since the beginning, concerns have been raised about the limited richness of computer-mediated communication, which could result in changes to the therapeutic processes and poorer outcomes. Video therapy was not established in many countries prior to the pandemic, and health insurers did not pay for video-based therapy sessions or restricted their use (Chen et al., 2020). For example, in Germany in pre-pandemic times, video-based contacts were forbidden at the beginning of therapy; currently they are highly restricted again.

One reason for this may be that video-based communication differs from face-to-face communication in several ways. First, the context of the communication is neither shared nor necessarily formal for all participants. All communication is mediated via an IP-based network which reduces and processes the recorded input for transmission via the network (Döring, 2008; Raake, 2007). This sending process follows certain rules with several consequences. One consequence is transmission delay, which can

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severely affect interpersonal interaction (Schoenenberg, Raake, Egger, et al., 2014). The final quality and richness of the output for the receiver is determined by the quality of the sending and receiving devices as well as different parameters in the processing chain (Raake, 2007). The recording and reproduction of communication particularly constrains nonverbal communication (Döring, 2008). Additionally, paralinguistic features, such as the tone of voice or the response speed, are distorted (Schoenenberg, 2016). Nonvocal nonverbal cues such as eye contact are almost not transmitted; posture, gestures, or mimics are transmitted to a very limited extent. Therefore, individuals can rarely use them to understand the meaning of content. In the psychotherapeutic context, a lack of nonverbal cues may have a negative impact, for example, on the formation of a bond or working alliance (Grondin et al., 2019).

Current meta-analyses and reviews do not confirm the inferiority of video-based therapy regarding therapy outcomes (Batastini et al., 2021; Berger, 2017; Fernandez et al., 2021). However, the number of high-quality studies on the issue is limited. In addition to the therapy outcomes, psychotherapy research also examines processes within therapy. *Empathy* is considered important in different therapeutic approaches. Elliott et al. (2018) described three processes that characterize *empathy*: emotional simulation, perspective taking, and emotion regulation. The *working alliance* is also frequently investigated. As Constantino et al. (2002, p. 86) noted, it "is generally agreed that the alliance represents interactive, collaborative elements of the relationship (i.e., therapist and client abilities to engage in the tasks of therapy and to agree on the targets of therapy) in the context of an affective bond or positive attachment." Furthermore, psychotherapy research encompasses two other central constructs: the treatment's outcome *expectancy,* that is, the patients' belief in the positive consequences of treatment on their personal mental health (Constantino, Vîslă, et al., 2018), and the treatment's *credibility*, that is, the patients' belief in their treatment's logic, suitability, and efficaciousness (Constantino, Coyne, et al., 2018). All of these variables predict future symptom-related therapy outcomes and are, therefore, central for treatment success (Constantino, Coyne, et al., 2018; Constantino, Vîslă, et al., 2018; Cuijpers et al., 2019; Elliott et al., 2018; Flückiger et al., 2018; Gibbons et al., 2003).

In face-to-face psychotherapy research, patients' ratings of the therapist's empathy are related to the therapeutic alliance (Nienhuis et al., 2018). More precisely, Malin and Pos (2015) found that early empathy ratings predict the working alliance and deepened emotional processing at later therapy phases. Early empathy ratings also predicted the working alliance quality which, in turn, predicted the final outcome in the treatment of depression (McClintock et al., 2018). Together, these studies highlight the importance of empathy early on in the patient-therapist relationship and alliance perceptions for later treatment success (Flückiger et al., 2013).

Besides empathy, early outcome expectancy is a robust predictor of post-treatment outcomes (Constantino, Vîslă, et al., 2018). Working alliance partially mediates the relationship between the early treatment outcome expectancy and the ultimate treatment outcome (Constantino et al., 2021). Consequently, how patients perceive the therapeutic relationship and the potential therapy success at the beginning may be important for later health improvements. Even though the relationship between early ratings of treatment credibility and treatment outcomes has been found to be less strong than expected (Constantino, Coyne, et al., 2018), overall, the first psychotherapy phase appears to be critical for treatment success.

Some recent studies have shown that a good working alliance can also be established in video-based therapy (e.g., Leuchtenberg et al., 2022; Simpson et al., 2021; Watts et al., 2020). Interestingly, experience with video technology have been associated with more positive attitudes toward its usage in psychotherapy (Békés et al., 2021; Boldrini et al., 2020; Connolly et al., 2020; Predmore et al., 2021). Nevertheless, it remains unclear as to how the video setting affects other relevant psychotherapy processes, such as empathy perception, and whether these processes show a comparable relationship to treatment outcomes as in a face-to-face setting. A recent meta-analysis of e-health treatment in general, which mainly includes studies on internet-based psychotherapy, identified a robust relationship between working alliance and treatment outcome, as has previously been shown for face-to-face interventions (Flückiger et al., 2018).

Despite initial research results that show a positive development of therapeutic processes in video therapy (Leuchtenberg et al., 2022; Simpson et al., 2021; Watts et al., 2020), the relationship between these processes and altered nonverbal communication is less clear. A recent experimental investigation revealed the importance of eye contact and gestures in video therapy (Pfender & Caplan, 2022). Based on research findings on face-to-face therapy, we can infer that nonverbal communication is important for therapeutic processes.

A study by Dowell and Berman (2013) investigated the role of eye contact and trunk lean on

empathy perception and treatment credibility in face-to-face psychotherapy, and linked more frequent eye contact and a forward trunk posture to increased perceived empathy and treatment credibility. In video communication, however, direct eye contact is not possible, although the impression of direct eye contact can be achieved by choosing a particular set-up (Grondin et al., 2021). Additionally, the trunk position and gestures can hardly be interpreted, as participants in video communication only see each other's face and shoulders. Several scholars have investigated how the patient-therapist relationship is formed through nonverbal aspects, for example, the synchrony of nonverbal bodily characteristics, in face-to-face therapy (Ramseyer & Tschacher, 2011). A study by Schoenherr et al. (2019), for example, demonstrated that low patient-therapist synchrony predicted early treatment termination in people with social anxiety. Additionally, Ramseyer and Tschacher (2011) showed that nonverbal synchrony was related to a better therapeutic relationship and treatment outcome. Immediacy of feedback also plays a crucial role in the context of empathy perception (Grondin et al., 2019). The natural synchronization of interaction, immediate reaction, and adaption of own interaction behavior are likely to be impaired in video-based communication, given the described transmission chain of video-based communication (Schoenenberg, Raake, and Lebreton, 2014; Seuren et al., 2021).

Given that video communication impairs the psychotherapeutic process, this impairment can be assumed to be more pronounced when communication partners are unfamiliar with each other (Schoenenberg, Raake, and Köppe, 2014), for example, in initial contacts. In such cases, the interaction partners cannot rely on previous shared face-to-face experience. Consequently, they are more likely to falsely attribute communication difficulties to negative attributes of the communication partner, instead of to properties of the technology (Roberts & Francis, 2013; Schoenenberg, Raake, & Köppe, 2014; Seuren et al., 2021; Thomaschke et al., 2018).

In sum, previous research suggests that video communication is different from face-to-face communication, particularly regarding nonverbal communication. Nonverbal communication, in turn, is associated with the psychotherapeutic process. The beginning of therapy has been described as an important phase, and patient-therapist interaction in this phase predicts therapy success. Thus, we aimed to illuminate the impact of early video-based (vs. face-to-face) psychotherapy on the therapeutic process with the aim of better understanding possible consequences for patients and therapists. To our knowledge, no empirical data exist that could serve as a basis for justifying the restriction or permission of video communication use for initial psychotherapeutic appointments. The present study could yield findings that allow corresponding decisions, for example, in guideline development, to be based on empirical data.

We aimed to explore possible differences between the two interaction modalities: video and face-to-face. Specifically, due to differences in nonverbal communication, we hypothesized that participants would report lower perceived therapist empathy and a lower perceived bond with the therapist (one dimension of the therapeutic working alliance) after a video-based first appointment compared to after a face-to-face first appointment with a psychotherapist. Relatedly, we expected patients to report lower treatment expectancy and credibility after a video-based first appointment compared to after a face-to-face first appointment. Nevertheless, outcome research does not support a general inferiority of video therapy, which may be due to other strengths of the video format. For this reason, we tested for potential differences between the modalities using undirected hypotheses.

Our second goal was to test whether the initial experiences with video therapy had a positive or negative effect on treatment expectancy and willingness to begin a video-based therapy. While there may be limitations to video-based communication, research reports a positive impact of prior experience with video technology on attitudes toward it. For this reason, we tested for undirected changes of treatment expectancy and willingness resulting from a video-based first appointment.

Method

Design

This experimental study had a between-subjects factor (*modality:* video vs. face-to-face) and a within-subjects factor (*time:* pre, post, follow-up). Treatment expectancy, willingness to begin a video or face-to-face therapy, general psychopathology, and sociodemographic information were rated just before the appointment. After this first questionnaire, the participants were randomly assigned to one of the modalities and informed about it.

The participants rated the perceived therapist empathy, working alliance, treatment expectancy, treatment credibility, and willingness to begin a video or face-to-face therapy directly after the appointment with the psychotherapist and at follow-up three to seven days later. Two female psychotherapists conducted the sessions and rated the

working alliance and perception of their own empathy after the appointment. The study is registered in the German Clinical Trials Register (DRKS00031262).

Sample

Adults waiting for a first appointment at the outpatient clinic of the University of Wuppertal were provided with basic information about the study. If they were interested in participating, more detailed information was offered. The outpatient clinic provides cognitive–behavioral therapy (CBT) to people with a broad spectrum of mental illnesses, for example, anxiety and affective disorders, obsessive-compulsive disorder, body image and eating disorders, and somatic symptom disorder. The clinic's CBT approach focusses on providing individual therapy for a duration of 12–24 weeks and typically includes behavioral techniques (e.g., diaries, behavioral activation, exposure) and cognitive techniques (observing automatic thoughts and cognitive errors, Socratic dialog, cognitive restructuring).

In the recruitment period, 29 people who contacted the clinic reported no interest in the study (five of them after receiving detailed information), and 56 were scheduled for an appointment (no randomization at this stage). Forty-seven individuals attended the appointment. Four participants had to be excluded from the study (one with technical problems, two appointments in the wrong modality according to randomization, one appointment with a non-study therapist). The final sample comprised 43 individuals. At the follow-up, one person responded too early, and one response was too late to be considered. Additionally, five people did not complete the follow-up questionnaire. Hence, 36 persons participated in the follow-up assessment.

The participants ($N = 43$) were on average 35.5 years old ($SD = 14.1$), and 48.8% were female (no diverse participants). Most participants reported holding a high school diloma (39.5%) or university degree (23.3%). Additionally, large proportions of the participants were either in a relationship or married (44.2%) or single (41.9%). Fifteen of the participants (34.88%) had prior experience with psychotherapy. The experience with video calls in private or work life within the last month was evenly distributed (never 25.6%, 1–2 times 23.3%, 3–5 times 9.3%, 5–10 times 20.9%, over 10 times 20.9%).

The therapists were both female, 31 and 40 years old. One psychotherapist held a Master's degree in psychology and one a PhD. Both were licensed for CBT and had one year of experience after their CBT training. Both therapists had some prior experience with video interactions (i.e., prior to the start of the study, one psychotherapist had conducted more than 10 video sessions, the other psychotherapist three to five video sessions in both private and professional contexts). One therapist conducted 12 and the other 13 face-to-face appointments, and both conducted nine video-based appointments.

Materials

Perceived empathy of therapists. The short version of the Barrett-Lennard Relationship Inventory (BLRI, Barret-Lennard, 1962, 2015) was used to assess the perceived empathy of the therapist. This questionnaire was translated to German and translated back to English by a professional English-speaking translator. Inconsistencies were discussed in a team of experts. The short BLRI consists of 24 items rated on a 5-point Likert-scale, ranging from −3 "no, I strongly feel that it is not true" to +3 "yes, I strongly feel that it is true." The sum of 12 items build the empathy score (the 12 further items are distractors). The Cronbach's alpha of the empathy scale was acceptable to good in this study ($\alpha = .72$ to $.88$).

Working alliance. The short and revised version of the Working Alliance Inventory (WAI-SR) comprises the three scales: task, bond, and goal (Hatcher & Gillaspy, 2006; Munder et al., 2010). A patient version and a therapist version of the questionnaire are available. Each scale consists of four items rated from 1 "not true at all" to 5 "fully true." The sum score of each scale ranges from 5 to 20. The Cronbach's alphas were good for outpatients in the German validation study of the scale ($\alpha = .81$ to $.85$; Munder et al., 2010) and acceptable to good in the current study, ranging from .66 to .88 for the task scale, from .66 to .77 for the bond scale, and from .72 to .85 for the goal scale. In the questionnaire version used in this study, the word "therapy" was replaced by "consultation" (German "Sprechstunde") because the items referred to the initial appointment only.

Treatment expectancy and credibility. The Credibility and Expectancy Questionnaire comprises the two scales expectancy and credibility with three items each (Devilly & Borkovec, 2000). The first three and the fifth item are rated on a Likert scale ranging from 1 "not at all" to 9 "very much." The remaining items are rated as percent agreement. Due to the inconsistent scaling, the sum scores were calculated based on the percent of maximum

possible (POMP) score approach (Cohen et al., 1999). The internal consistency was good for both subscales in a previous study (α = .90 for expectancy, α = .86 for credibility; Devilly & Borkovec, 2000). The Cronbach's alpha in this study was good to excellent for the expectancy scale (α = .86 to .92) and acceptable to excellent for the credibility scale (α = .71 to .93).

Further measures. The Patient Health Questionnaire-8 (PHQ-8; Kroenke et al., 2009) and Generalized Anxiety Disorder 7 Questionnaire (GAD-7; Löwe et al., 2008) were rated by participants once before the appointment. Additionally, we asked participants to indicate in percent how much they would like to participate in a solely video-based psychotherapy or a solely face-to-face psychotherapy.

Procedure

The ethics committee of the University of Wuppertal approved the study (MS/BBL 210318_Schoenenberg). The participants were eligible to take part if they spoke German fluently, were between 18 and 69 years old, and interested in receiving cognitive behavioral therapy at the university's outpatient clinic. They were excluded if they reported having a known mental retardation, suicidal intention, substance abuse, schizophrenic or related disorder, or bipolar disorder. If people were interested in participating after being informed about the study, they were invited for an appointment at the outpatient psychotherapy clinic at the University of Wuppertal. Prior to the investigation, all participants were further informed in written and verbal format about the procedure of the study, data protection, and their rights as participants by a study assistant. We empathized that their responses would not be transferred to the psychotherapists or clinic staff and would have no impact on further treatment at the outpatient clinic. Neither the content nor possible diagnostic information of the session itself was gathered for the study for privacy reasons. After providing their informed consent, the participants responded to the first questionnaire. Afterwards, they were informed about the modality of their appointment (video or face-to-face) by the study assistant. The appointments for both modalities were held in an identical room, where the patient talked to the therapist either face-to-face or via a special and secure video connection. In the video communication condition, the psychotherapist was located in a neighboring room without any contact to the participant. After this appointment, the participants responded to the main questionnaire and were given a reminder note about the online follow-up questionnaire. Both study therapists conducted face-to-face and video-based appointments. They were unaware of the study's hypotheses and responded to their questionnaire on the same day. During the appointments, the therapists followed a standardized procedure which included a set of predefined topics that had to be addressed and documented (e.g., the beginning and course of the symptoms and sociodemographic questions). The therapists received supervision from a CBT-trained and experienced supervisor who was the head of the outpatient clinic.

Statistical Analyses

To test the first hypothesis, we conducted independent samples *t*-tests. For the second hypothesis, we performed paired samples *t*-tests (separate for each modality). No outliers were detected for any variable rated by the patients. The outlier analysis of the therapist reports yielded one outlier value for the empathy score and three for the WAI bond score in the video modality. These scores were checked for plausibility and kept because all of them were in line with other observations by the therapists.

When homogeneity of variance was not given based on the independent samples *t*-tests, we report the results from the Welch test. Normality was tested using the Shapiro–Wilk test. For some variables, normality was not given for all subgroups. In these cases, we backed all results with Mann–Whitney-*U*-Tests (independent samples) or Wilcoxon tests (paired samples). The alpha level was adjusted to .025 in all analyses because the patient data were used in two tests.

Results

Descriptive Statistics

The two groups—that is, the video-based and face-to-face first contact groups—did not differ regarding their age, general anxiety (GAD-7), or depression (PHQ-8; see Table I). The gender, education level, relationship status, experience with video calls, and experience with psychotherapy were similarly distributed in both groups (p's ≥ .32). The two study psychotherapists conducted a similar number of sessions ($n_{T1} = 21$, $n_{T2} = 22$) which were distributed equally over the two modalities, $\chi^2(1) = 0.02$, $p = .90$. Credibility correlated moderately to highly with the task and goal subscales for both modalities (face-to-face: $r = .39$ to .73; video: $r = .32$ to .63; see Electronic Supplement). In the video modality, the highest correlations were observed for the

Table I. Sample characteristics per modality at baseline.

	Range Min-max	Overall		Video		Face-to-face		
		M	SD	M	SD	M	SD	*t*(df)
Age	18–63	35.5	14.1	33.8	14.9	36.7	13.6	0.67 (41)
GAD-7	2–20	11.5	4.1	11.2	3.7	11.7	4.4	0.43 (41)
PHQ-8	0–21	11.8	5.6	11.7	5.0	11.9	6.1	0.12 (41)

Note. $^{**}p < .01$; $^{*}p < .05$. $n = 43$.

working alliance subscales goal and bond with empathy ($r = .19$ to $.82$; see Electronic Supplement). For the face-to-face modality, empathy was most strongly associated with bond ($r = .51$ to $.66$; see Electronic Supplement).

Effect of Interaction Modality

We compared the post ratings of the video communication group to the ratings of the face-to-face group to test the effect of the interaction modality (Table II). *T*-tests revealed no significant between-group differences in perceived empathy (Figure 1). Empathy was rated high by patients and therapists. There were also no significant between-group differences for any of the working alliance subscales (task, goal, bond) rated by the patients and therapists (Table II, Figure 2). The therapists rated bond slightly higher than patients, while their mean scores for the task and goal scales were slightly lower.

Treatment expectancy and credibility did not differ between the interaction modalities after the appointment (Table II, Figure 3). At follow-up, the interaction modality was found to have no effect on any of the assessed variables (see Electronic Supplement). Non-parametric Mann–Whitney-*U* tests confirmed all of the *t*-test results (Table II).

Pre to Post Changes

To assess the potential positive effects of participating in an initial video consultation on video-based psychotherapy, we compared the ratings for treatment expectancy and willingness to participate in video therapy prior to the appointment to the ratings after the appointment in the video communication group. *T*-Tests examining the pre–post changes showed a significant increase of treatment expectancy in both the video-based and face-to-face modalities from pre to post (Table III, Figure 3a). The willingness to begin a video-based therapy increased significantly between the pre and post assessments in the video modality only (Table III, Figure 4). All of the results were confirmed in non-parametric Wilcoxon tests.

Further Exploratory Results

The empathy ratings in the video condition dropped considerably, $t(15) = 2.26$, $p = .04$, $d = .56$, but not significantly due to alpha adjustment from post to follow-up (see Electronic Supplement). The treatment credibility dropped significantly in the video condition, $t(15) = 2.83$, $p = .02$, $d = .71$, from post to follow-up (Figure 2b, Electronic Supplement).

Table II. T-tests and Mann-Whitney-*U*-tests comparing interaction modalities post.

Variable	*t*	*df*	*p*	*d*	*U*	*Z*	*p*
Patients							
Empathy	−0.04	41	.97	−.01	218.50	−0.16	.87
Working alliance: Task	0.41	41	.68	.13	206.50	−0.46	.65
Working alliance: Goal	−0.65	41	.52	−.20	199.50	−0.64	.53
Working alliance: Bond	−0.64	41	.52	−.20	191.00	−0.85	.40
Treatment expectancy	−0.23	41	.82	−.07	218.50	−0.16	.87
Treatment credibility	−0.22	41	.83	−.07	224.50	−0.01	.99
Willingness video	−1.20	39.86	.24	−.34	189.00	−0.89	.37
Willingness face-to-face	0.28	41	.71	.12	182.00	−1.11	.27
Therapists							
Empathy	−0.37	41	.72	−.11	224.00	−0.03	.98
Working alliance: Task	−0.37	41	.72	−.11	186.00	−0.97	.33
Working alliance: Goal	0.14	41	.89	.04	201.50	−0.58	.56
Working alliance: Bond	−0.60	41	.55	−.18	172.00	−1.38	.17

Note. p: two-tailed.

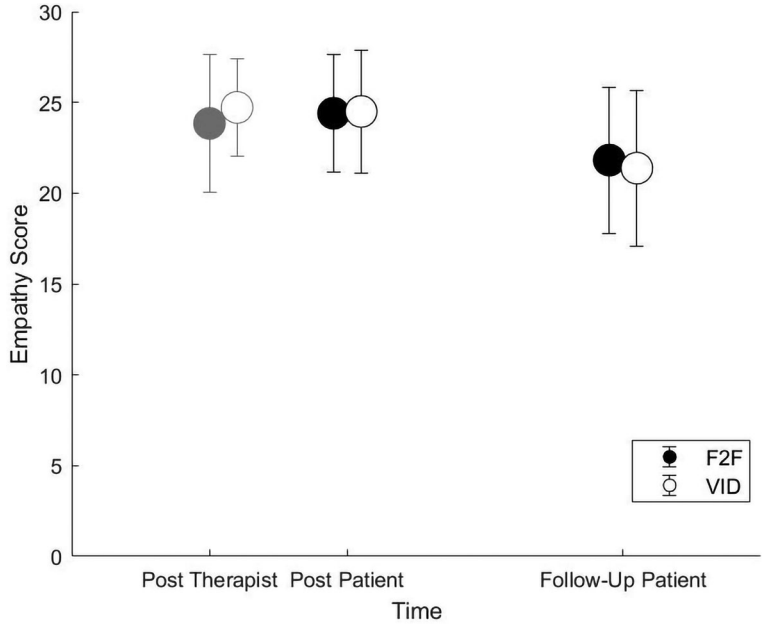

Figure 1. Means and 95% CIs on empathy of therapist rated by patients and therapists.

Willingness to begin a face-to-face therapy was rated higher than willingness to begin a video-based therapy on a descriptive level (Figure 4).

Discussion

In this study, we investigated variables of the therapeutic relationship and relevant outcome predictors for video-based and face-to-face first psychotherapeutic contact. We implemented an experimental design, randomly allocating participants to video-based or face-to-face appointments. Real therapeutic conversations in the admission process to an outpatient clinic were the basis for this study.

The two interaction modalities, video and face-to-face, did not differ with regard to any of the assessed therapeutic process variables. There were no differences in perceived empathy, the working alliance

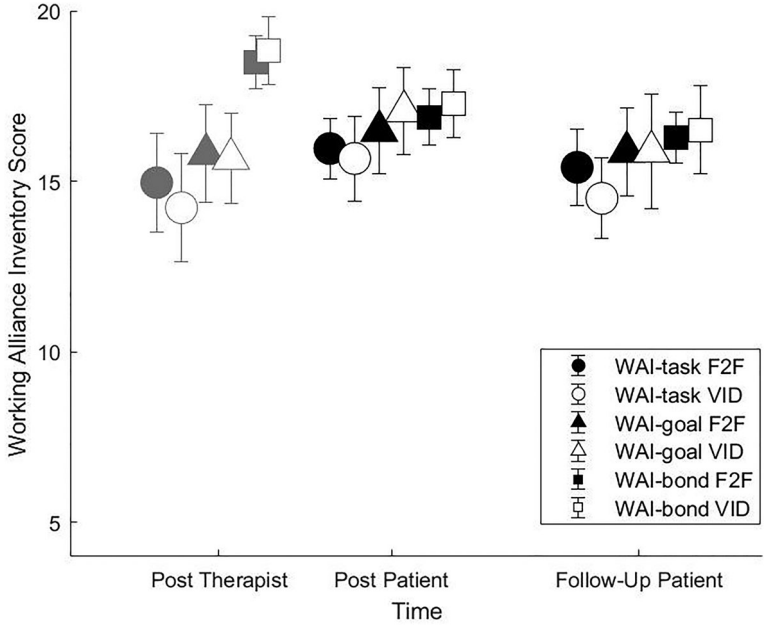

Figure 2. Means and 95% CIs on working alliance rated by patients and therapists.

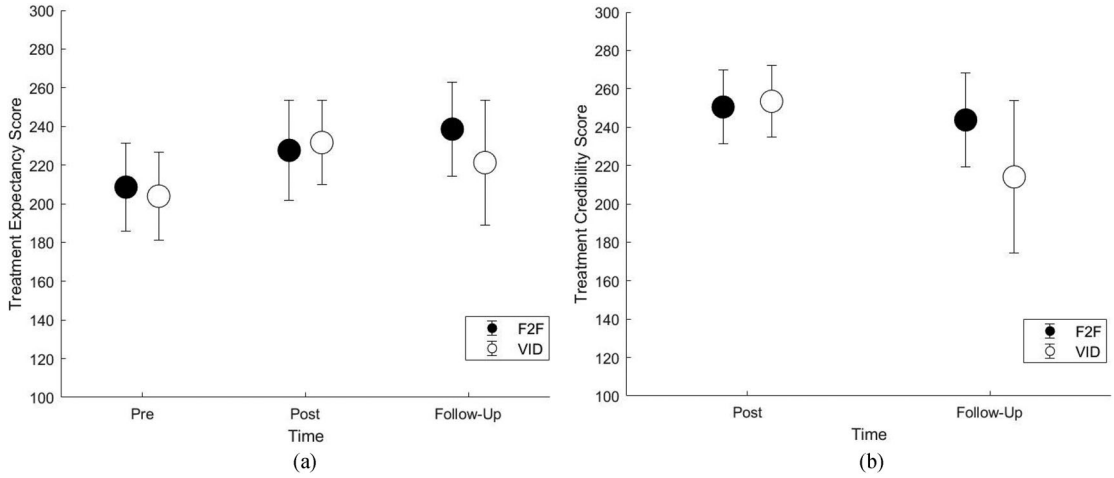

Figure 3. (a) Means and 95% CIs on treatment expectancy. (b) Means and 95% CIs on treatment credibility.

subscales goal, task, bond, treatment expectancy, or treatment credibility. Although video-based and face-to-face interaction differ strongly, for example, due to the lower number of nonverbal interaction cues, these differences did not impact the formation of an empathic psychotherapeutic relationship and bond. Future research is needed to explore whether interaction behavior is automatically adapted to the respective communication modality and how the lacking nonverbal communication cues are compensated for to allow the formation of a good therapeutic relationship. Objective measures could help to enhance the understanding of the communication processes in video-based therapy, such as a conversation analysis assessing the verbal and nonverbal features of the conversation and other methods for investigating nonverbal behavior, for example, behavior synchrony measures. Cipolletta et al. (2018) provided a first description of video-based therapeutic conversations and the formation of a working alliance using conversation analysis. Such approaches should be investigated further to better understand how online consultations work, which issues arise, and how therapeutic processes can be optimized in video settings.

Table III. T-tests and Wilcoxon-tests comparing measurement times prior to post.

Variable	*t*	*df*	*p*	*d*	*Z*	*p*
Video						
Treatment expectancy	−3.72	17	.01	−.88	−3.18	.01
Willingness video	−3.29	17	.01	−.77	−2.83	.01
Willingness face-to-face	−1.19	17	.25	−.28	−1.10	.27
Face-to-face						
Treatment expectancy	−2.67	24	.01	−.54	−2.56	.01
Willingness video	−0.90	24	.38	−.18	−0.13	.90
Willingness face-to-face	−1.69	24	.11	−.34	−1.70	.09

Note. p: two-tailed.

Our results are in line with current studies and reviews that report a good working alliance in video-based psychotherapies (Simpson et al., 2021; Watts et al., 2020). A previous review and meta-analysis comparing video-based to face-to-face therapy programs identified studies reporting a worse working alliance in video therapy and studies reporting no differences in the working alliance between the two modalities (Norwood et al., 2018). Importantly, the meta-analytic finding that the working alliance was worse in video-based psychotherapy was based on a single study (Ertelt et al., 2011) in which the therapists (but not the patients) rated the working alliance as better in the face-to-face modality compared to in the video-based interaction modality (Norwood et al., 2018). Additionally, the meta-analysis found no indication of inferior treatment outcomes of video-based compared to face-to-face-psychotherapy. Based on the low number of high-quality studies available for this synthesis of previous research, these meta-analytic findings need to be treated cautiously and seen as a preliminary insight.

Concerning our second hypothesis, positive experience of the therapeutic video appointment impacted the treatment expectancy and willingness to participate in future video-based therapy. Initial sessions in both modalities, video and face-to-face, enhanced the attitudes toward psychotherapy in general and to a similar extent. Yet, only individuals who experienced a video appointment were more

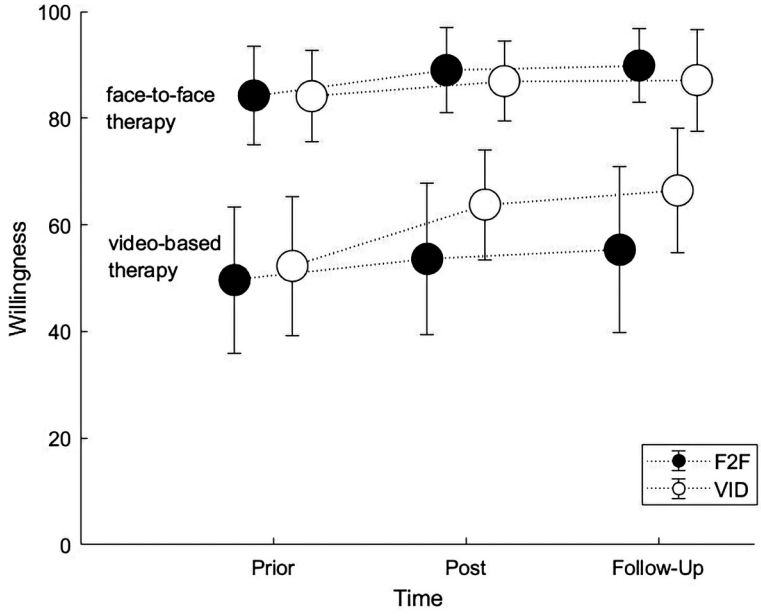

Figure 4. Means and 95% CIs on willingness to begin a face-to-face or video-based therapy.

positive about video-based psychotherapeutic treatment in the future. This result is in line with former studies which found previous experience with video treatment to enhance the positive attitude toward it (Békés et al., 2021; Boldrini et al., 2020; Predmore et al., 2021).

On average, the participants in our study preferred face-to-face therapy to video-based therapy for future treatments. This finding is not surprising since face-to-face psychotherapy is still the most common and best-known treatment format. Unfortunately, we did not assess willingness to engage in mixed therapy. Such a mixed approach could be an extremely useful and valid alternative to restrictive solutions that allow only one modality.

We formulated no a-priori hypotheses regarding the development of the assessed processes at follow-up. Our exploratory analyses revealed that treatment credibility decreased for people with a video-based first contact. There was also a non-significant trend for empathy ratings to decrease from post to follow-up for video appointments. These preliminary results are indicators that the therapeutic relationship developed in video-based contact might be less stable, which should be explored further in future studies.

The results need to be considered in the light of the methods used. For ethical reasons, people participated voluntarily in the study. Thus, the sample might be subject to a selection bias. People who did not participate may be more skeptical about video communication or may experience greater difficulty using it. The sample size limited the statistical power of the study; hence, only large effects could be detected. In addition, the sample characteristics were not fully representative for outpatients. For example, the proportion of female versus male persons was more balanced here compared to the otherwise higher proportion of female persons in help-seeking populations. Moreover, to ensure similar internet connection properties for all participants, we decided to hold the appointments in our outpatient clinic. The effects may be different when patients are in their home environment. For example, patients may be distracted, feel that the communication is less confidential than in a professional environment, and behave in a less formal way. Furthermore, the technical equipment and internet connection may be less reliable. All these factors may have an additional negative impact on the processes studied. Future studies should investigate the impact of the environment and the internet connection properties on video treatment processes and outcomes.

We ensured the therapists' fidelity to the treatment by using a standardized procedure and by providing a study assistant to assist them with conducting the study. However, we did not directly examine the therapists' allegiance. Therapists might have adjusted, for example, the questions in one of the modalities or might have had a more positive charisma in one of the modalities if they preferred it. The therapists in this study conducted the sessions in both modalities to a comparable extent. However, the possible impact of these factors should be considered in future research.

Furthermore, due to the pandemic situation during the study period, the participants and therapists in the face-to-face condition had to wear face masks. Consequently, some of the non-verbal information that would otherwise be visible in the mouth region of the other person was accessible in the video-based condition but not in the face-to-face condition.

This study did not investigate the impact of supervision. The supervisor's attitude toward and experience with video therapy could influence how well therapists are able to, for example, express empathy or establish a good working alliance via video communication.

The scope of this study was limited to a single first contact session, with a post and short follow-up evaluation. It would be highly interesting to explore how the described processes evolve over time and whether differences in trajectories can be observed. Watts et al. (2020) published a first study focusing on working alliance. Tracking multiple facets of the therapeutic process is important to understand the differences in more detail. In such research it would be interesting to examine the latent structure (Finsrud et al., 2022) of process factors in relation to the outcome and compare the structures between modalities.

In summary, this study investigated the differences between video-based and face-to-face first psychotherapeutic contact between patients and therapists who were not familiar with each other. There were no substantial differences in the ratings of empathy, working alliance, and treatment-related expectancy and credibility between the two modalities after the appointment. These findings can serve as a basis for discussing the use of video for initial psychotherapeutic appointments as an effective alternative to conducting them face to face.

Research on video-based psychotherapy is still limited, and it is unclear whether conducting appointments remotely per video could be beneficial or detrimental in certain phases. Besides, there have been few approaches to adapt manuals or communication strategies for face-to-face therapy for the video context. From a feasibility perspective, video therapy is more easily accessible for people with impairments, disabilities, or other restrictions. Consequently, illuminating the processes and boundary conditions for video-based psychotherapy to be successful is an important endeavor for future research.

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Author 1: Conceptualization; Data curation; Formal analysis; Methodology; Project Administration; Visualization; Writing—Original Draft Preparation; Author 2: Conceptualization; Resources; Supervision; Writing, Reviewing, and Editing.

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