

Therapeutic alliance in psychotherapy across online and face-to-face settings: A quantitative analysis

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ABSTRACT

Lockdown enacted by government in response to the Covid-19 pandemic in Austria forced psychotherapy practice into an online-only setting for several months in 2020. Although there is evidence supporting the effectiveness of psychotherapy in remote settings, research investigating therapeutic alliance in online psychotherapy is still limited, with a specific need for research in assessing possible effects of changes in therapeutic setting from face-to-face to online and vice versa. We measured therapeutic alliance in client-therapist dyads using the Helping Alliance Questionnaire (HAQ) at the Adult Outpatient Clinic of Sigmund Freud University, Vienna. Eighty-seven dyads completed HAQ twice, assessing three time-points: after switching from face-to-face to online therapy, providing a retrospective assessment of their alliance before the setting change as well as a concurrent account of their experience during online therapy, then another assessment after switching back to face-to-face setting after lockdown restrictions were lifted. Data were analysed by fitting a multilevel linear model, where the variables *person* (client/therapist) and *time* (before online therapy; online therapy; back to face-to-face) were nested within the client-therapist dyad. We found a statistically significant small improvement in the quality of therapeutic alliance over time, but no differences due to change in therapeutic setting. Separate analysis of HAQ sub-scales revealed that clients rated their relationship statistically significantly higher than their therapists with medium effect size, while there were no differences in success ratings over time and settings, nor between clients and therapists. The findings support the feasibility of online therapy in terms of therapeutic alliance in general, and alternating between face-to-face and online therapy settings in particular.

1. Introduction

1.1. Background

Since the World Health Organization declared Covid-19 a pandemic on 11 March 2020 (WHO, 2020), governments around the world responded by placing various aspects of public life in lockdown in an attempt to curtail the spread of the virus. The Austrian federal government imposed a lockdown in response to the Covid-19 pandemic in spring 2020, which permitted leaving one's home only on certain occasions to reduce social contacts. Consequently, psychotherapeutic settings also had to be adapted, which required swift changes in practice at psychotherapeutic outpatient clinics. The Adult Outpatient Clinic of Sigmund Freud University (SFU) in Vienna swiftly established a helpline

to clients (Bric and Raile, 2020) and psychotherapists continued treatments in exclusively remote settings via Skype, Zoom or telephone.

It was expected that psychotherapy sessions would drop dramatically in number and some called for a timely mitigation (e.g., see Fiegl, 2020); however, later studies found that therapy provision normalized swiftly. For example, the pronova BKK health insurance company conducted a survey in Germany, according to which a mere 12.5 % of patients came less often or not at all during lockdown (Panke, 2020). Uhl et al. (2020) surveyed the dropouts of clients in psychotherapeutic practices in Austria during the initial phase of the pandemic and found that 43 % of psychotherapies did not take place in March 2020 (start of lockdown), 31 % at the peak in April, and only 13 % dropped out in May before lockdown measures were relaxed again. At the same time, remote treatments increased, as shown by an online survey of 1500 Austrian

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psychotherapists, which found that treatment numbers increased via telephone by 979 % and via Internet by 1561 % (Probst et al., 2020).

There is evidence of online therapy comparing favorably with traditional face-to-face settings regarding therapeutic outcome. For example, a recent meta-analysis (Fernandez et al., 2021) based on 56 within-group and 47 between-group studies found negligible differences between in-person and video-delivered psychotherapy in terms of therapeutic outcome across different therapeutic orientations and various diagnosis types.

The use of digital media in a psychotherapeutic context was discussed controversially from the start of the pandemic (Eichenberg, 2021). Nevertheless, based on a survey by the German Psychotherapist Association (DPTV) in April 2020, 77 % of the 4466 psychotherapists who completed the survey decided to offer remote therapy at short notice, although 59 % rated the effectiveness of video-based treatment worse than traditional face-to-face setting (Deutsche Psychotherapeut*innen Vereinigung, 2020). Similarly, an international longitudinal survey of therapists offering online service (Békés et al., 2021) identified challenges related to online therapy along four factors (emotional connection, distraction during sessions, ensuring adequate patient privacy, and maintaining boundaries during sessions) and concluded that although these challenges had an initial negative effect on the therapeutic relationship, therapists' view of online therapy became more positive over time. An online survey of 1162 Austrian psychotherapists conducted during the first weeks of lockdown found that remote treatment (therapy via telephone or video) was experienced more positively than expected, with web-based psychotherapy was rated more positively (in terms of comparability with face-to-face psychotherapy) than telephone-based psychotherapy (Humer et al., 2020).

1.2. Aims of the current research

While extensive literature exists on the crucial role of the therapeutic relationship in face-to-face psychotherapy (e.g., see Norcross, 2010), research on therapeutic alliance in online interventions remains limited (Simpson et al., 2020; also see Frittgén and Haltaufderheide, 2021 for a discussion of ethically relevant aspects of therapeutic relationships in online therapy). A systematic literature review of therapeutic relationship in e-therapy conducted in 2012 (Sucala et al., 2012) found that only a handful of available studies (eleven out of 840) investigated therapeutic relationship and carefully concluded that e-therapy seems equivalent to face-to-face therapy in terms of therapeutic alliance. Conversely, a systematic review and meta-analysis conducted by Norwood et al. (2018) found 12 studies dealing with working alliance in videoconferencing psychotherapy and concluded that working alliance was inferior to face-to-face delivery, although symptom reduction was equivalent.

More empirical work is needed into how the change in therapeutic setting affected the quality of therapeutic relationship. Specifically, little is known on an empirical basis about how therapists and clients experience the switch from the usual physical contact on-site in the practice to an online setting, and vice versa. Furthermore, such knowledge is not only valuable in the pandemic context, especially if one assumes an increase in the importance and prevalence of online therapies in the future.

To address the above, the current research explores changes in therapeutic alliance across two changes in setting: from face-to-face to online, and back again. The analysis presented here concentrates on the quantitative analysis of therapeutic alliance as reported by clients and their therapists over time and across settings. We also collected several non-standardised questions about participants' experiences regarding the setting changes; a qualitative analysis is of these questions is presented in a separate publication (Eichenberg et al., 2021). The analysis presented in the successive sections was conducted to answer the following research questions.

Research Question 1: Does change in therapeutic setting between face-to-face and online affect the self-reported quality of therapeutic alliance?

Research Question 2: Do clients and their therapists differ in their assessment of therapeutic alliance across settings?

The Adult Outpatient Clinic of the Sigmund Freud University offered a valuable field to address the above questions. The clinic has approximately 1200 patients from a diverse social background and with different diagnoses at any given time, treated by around 200 accredited and trainee therapists in 16 different languages and 7 different therapy orientations.

2. Methods

We used the German version of the Helping Alliance Questionnaire (Bassler et al., 1995) to measure the influence of the change of setting from traditional treatment to videotelephony and back to the traditional setting on the therapeutic relationship. The questionnaire can be used repeatedly at short intervals for process research, and it is available in a version for therapists (HAQ-F) and for patients (HAQ-S), consisting of 11 items each (Luborsky et al., 1985). To the authors' knowledge, HAQ has not been used to assess therapeutic alliance across changes in therapeutic setting in the context of the Covid19 pandemic.

2.1. Data collection

Data were collected with the SoSci Survey online survey tool (<https://www.soscisurvey.de>). Clients and therapists completed the HAQ directly after switching to an online setting (in March 2020); they provided both a retrospective evaluation pertaining to their face-to-face sessions before the switch and a concurrent evaluation related to their experience with online therapy. Thus, in the first of the two data collection sessions, they evaluated their face-to-face experience before the switch and their experience during online therapy. Participants completed the HAQ again in a second data collection session, after returning to a face-to-face setting (in June 2020), allowing for an assessment of the progression in therapeutic relationship over time and across settings. The study was approved by the Research Ethics Committee of SFU Vienna (Reference: GBP2T6AFAO1S5@87916).

2.2. Participants

Of the 150 trainee therapists at SFU Outpatient Clinic at start of data collection, 91 reported seeing their clients online; ten non-German speaking therapists were excluded, and 15 others for not changing settings (online only). We contacted the remaining 66 therapists and their 242 clients; 121 therapist-client pairs (dyads) completed all questionnaires (50 % response rate).

Of the 121 dyads, 87 completed HAQ at each time point. Of the 54 therapists represented in the dyads, 83.3 % ($n = 45$) were female; their mean age was 28.8 years ($SD = 5.3$); 44.4 % ($n = 24$) applied individual (Adlerian) therapy, 20.4 % ($n = 11$) systemic family therapy, and 16.7 % ($n = 9$) integrative Gestalt (additionally, four psychoanalytic therapy, three CBT, two existentialist therapy, and one person-centred therapy). Therapists led remote therapy sessions from their homes; 56 % conducted online therapy predominantly with video and 44 % predominantly with audio only.²

² There are no legal regulations in Austria regulating the location to conduct remote therapy at the time of writing. Because we did not control the delivery method (video/audio only) of online therapy in order to avoid interfering with the therapeutic process, and therapists adopted them over time and according to clients' needs, its effect is not analysed.

Of the 87 clients, 60.9 % ($n = 53$) were female; mean age was 29.9 years ($SD = 9.9$, range: [18; 68]); 33.3 % ($n = 29$) had a university degree and 43.7 % ($n = 38$) completed their maturation; 11.5 % ($n = 10$) worked full-time and 17.2 % ($n = 15$) part-time, 31.0 % ($n = 27$) studied and 12.6 % ($n = 11$) were unemployed. In terms of relationship status, 43.7 % ($n = 38$) were single, 33.3 % ($n = 29$) had a partner, 6.9 % ($n = 6$) were married and 6.9 % ($n = 6$) were divorced and living with a partner. Registered therapists gave 38 of the clients (43.7 %) an F3 category diagnosis (mood/affective disorders) from the ICD-10, and 34 (39.1 %) an F4 diagnosis (anxiety, dissociative, stress-related, somatoform and other nonpsychotic mental disorders). Average number of therapy sessions (up to July 2020) was 46.7 ($SD = 39.9$; range: [6; 214]).

2.3. Analysis design

Client-therapist pairs (dyads) were used as units of observation, because the HAQ scores provided by clients and therapists over the measurement points were embedded in a shared context, and thus were treated as dependent. We analysed data by fitting a general linear model (GLM) with maximum-likelihood estimation (R version 4.1.0, nlme package, lme function), where the variables *person* (client/therapist) and *time* (T1: before online therapy; T2: during online therapy; T3: back to face-to-face therapy) were nested within the client-therapist dyad to account for autocorrelation resulting from using repeated measures (see Field et al., 2012). We used an alpha level of 0.05 for each statistical test (exact p values are reported). We set orthogonal planned contrasts for the *time* variable: one contrast was T1 and T3 versus T2, comparing HAQ scores in face-to-face settings to those collected during online therapy. Another contrast for *time* was comparing T1 to T3 (both face-to-face settings) to assess any change in HAQ scores over time.

Research Question 1 (effect of setting change on therapeutic alliance) is addressed by testing the main effect of the variable *time* on HAQ, in particular, that of the first contrast described above (T1 and T3 versus T2), according to the following (null) hypothesis:

H01. HAQ scores do not differ between therapeutic settings.

No a priori hypothesis was proposed for the second contrast of *time*, however, in absence of setting change, one may expect some improvement over time (assuming the therapeutic intervention is effective).

Research Question 2 (differences between clients and therapists) is addressed by testing the main effect of *person* on HAQ, as well as its interaction with *time*, according to the following (null) hypotheses:

H02. HAQ scores do not differ between clients and their therapists.

H03. HAQ scores of clients and their therapists are not affected differently over time.

The total HAQ scale value describes the quality of therapeutic alliance, and it is defined as the sum of all eleven items. HAQ also has two sub-scales (Bassler et al., 1995), which describe respondents' satisfaction with the therapeutic relationship and with therapeutic success, respectively (henceforth: HAQ Relationship and HAQ Success). The total HAQ score (henceforth: HAQ Total or HAQ) is the sum of the two sub-scales (11 items scored on a 6-point scale from -3 to 3 without a neutral centre point). In the following sections, we describe the psychometric and theoretical reasons for the individual consideration of sub-scales, followed by an analysis of HAQ Total and the separate analyses of the sub-scales.

3. Results

3.1. Descriptive statistics and scale properties

The descriptive statistics of HAQ and its sub-scales are presented in Table 1.

The Relationship and Success sub-scales were moderately correlated at each time point for clients, and strongly for therapists; furthermore, the Relationship and Success sub-scales had a statistically significantly higher correlation in therapists than in clients at each time point (Table 2).

Both HAQ Total and each sub-scale had acceptable internal consistency for clients and therapists across all time points (Cronbach's alphas between 0.71 and 0.79). Although we lacked an appropriate sample size for confirmatory factor analysis, we explored the factor structure of HAQ with separate principal component analyses for clients and therapists (a separate analysis at each time point), using parallel analysis (Horn, 1965) to decide the number of components to extract.

In the case of clients, a clear factor structure emerged, with the exception of items 1 and 2 producing cross-loadings and low loadings on their respective scales. Across the time points, the extracted components accounted for between 59.5 and 64.5 % of variance in the items. We used oblique rotation (direct oblimin); the components had a correlation between 0.294 and 0.335 across time points. Overall, these exploratory analyses support the factor structure of HAQ in clients. In case of therapists, a single-component structure emerged at each time point. The extracted components accounted for between 47.8 and 50 % of variance in the items across the time points, with each item loading above 0.40 on the single component. These findings, along with the sub-scale correlations in Table 2, indicate that the quality of therapeutic alliance for therapists, as measured by HAQ, is a more unified concept, where relationship and success are strongly interrelated.

Based on our exploratory analyses of the factor structure and the internal consistency of each (sub) scale, the analysis of HAQ Total is fully justified. As for the case of therapists in sub-scale level analyses, although our findings did not support the original factor structure (see Nübling et al., 2017), we posit that the items represent an internally consistent sub-set of the single HAQ factor, and thus may be compared with client scores. Furthermore, we posit that perceptions of therapeutic success may not change so much in the limited duration of the study, while the perceived quality of therapeutic relationship may be more sensitive to setting change (note that the same hypotheses apply, just on different facets of the outcome metric).

3.2. HAQ Total

The effects of *person* and *time* on mean HAQ scores (and on each sub-scale) are presented in Fig. 1. Table 3 shows a comparison of the baseline model including only the intercept (Model 1) to the model including the variable *person* (Model 2); then, the variable *time* (Model 3) and the interaction between *person* and *time* are also added (Model 4). *Person* did not contribute significantly to the model, $\chi^2(1) = 3.214$, $p = .073$, *ns*, which indicates no statistically significant differences in overall HAQ scores between clients and their therapists (H_02 retained), though the relationship can be treated as a tendency (see Fig. 1). Conversely, adding the variable *time* led to a statistically significant improvement in the model, $\chi^2(2) = 9.223$, $p = .010$. Additionally, there were no statistically significant interaction effects between the predictors (H_03 retained). Planned contrasts (as regression parameters of the model containing all effects) are presented in Table 4.

Planned contrasts revealed a statistically significant increase in HAQ scores between T1 and T3, $t(344) = 2.803$, $p = .005$, $r = 0.149$ (small),³

³ We interpret r effect sizes according to Cohen (1988): 0.10 – small, 0.30 – medium, 0.50 – large.

Table 1
Descriptive statistics of HAQ sub-scales, grouped by *person* (client/therapist) and *time* (T1/T2/T3).

Scale	Person	Time	n	Mean	SD	Q25	Median	Q75	I-Q range	Min	Max	Range
HAQ	Client	T1	87	22.115	6.848	17.5	24	27.5	10	4	33	29
		T2	87	22.540	6.876	18	24	27.5	9.5	0	33	33
		T3	87	22.897	6.788	17.5	24	28	10.5	5	33	28
	Therapist	T1	87	20.460	7.539	16	20	27	11	-7	33	40
		T2	87	20.310	7.882	15	22	26	11	-4	33	37
		T3	87	21.828	7.215	18	22	27	9	-5	33	38
Relationship	Client	T1	87	14.138	3.438	12	15	17	5	6	18	12
		T2	87	14.529	3.330	12	16	17	5	6	18	12
		T3	87	14.828	3.335	13	16	17.5	4.5	5	18	13
	Therapist	T1	87	12.667	3.614	11	13	15	4	2	18	16
		T2	87	12.770	3.595	11	13	15	4	1	18	17
		T3	87	13.184	3.509	11	13	16	5	-2	18	20
Success	Client	T1	87	7.977	4.648	5	9	11	6	-3	15	18
		T2	87	8.011	4.914	5	9	12	7	-6	15	21
		T3	87	8.069	4.680	5	9	12	7	-5	15	20
	Therapist	T1	87	7.793	4.496	5	8	11.5	6.5	-9	15	24
		T2	87	7.540	4.901	5	9	11	6	-6	15	21
		T3	87	8.644	4.245	6.5	9	12	5.5	-3	15	18

Note: HAQ items are scored using a 7-point scale from -3 to 3.

Table 2
Differences in correlation (Spearman's rho) of the Relationship and Success sub-scales between clients and therapists over time.

Time	r_s client	r_s therapist	z difference	p (two-tailed)
T1	0.397	0.705	-2.962	.003
T2	0.361	0.706	-3.248	.001
T3	0.407	0.735	-3.289	.001

Note. All r_s values $p < .001$.

indicating a small improvement in therapeutic alliance over time. However, the interaction of this contrast with the variable *person* was not statistically significant, $t(344) = 0.764, p = .445, r = 0.041$ (small), indicating that therapists and their clients were not affected differently. There was no statistically significant difference in HAQ scores between online (T2) and face-to-face (T1 and T3) settings, $t(344) = -1.203, p = .230, r = 0.065$ (small) (H_0 retained). Overall, these findings supporting the feasibility of switching to online therapy in terms of the quality of therapeutic alliance.

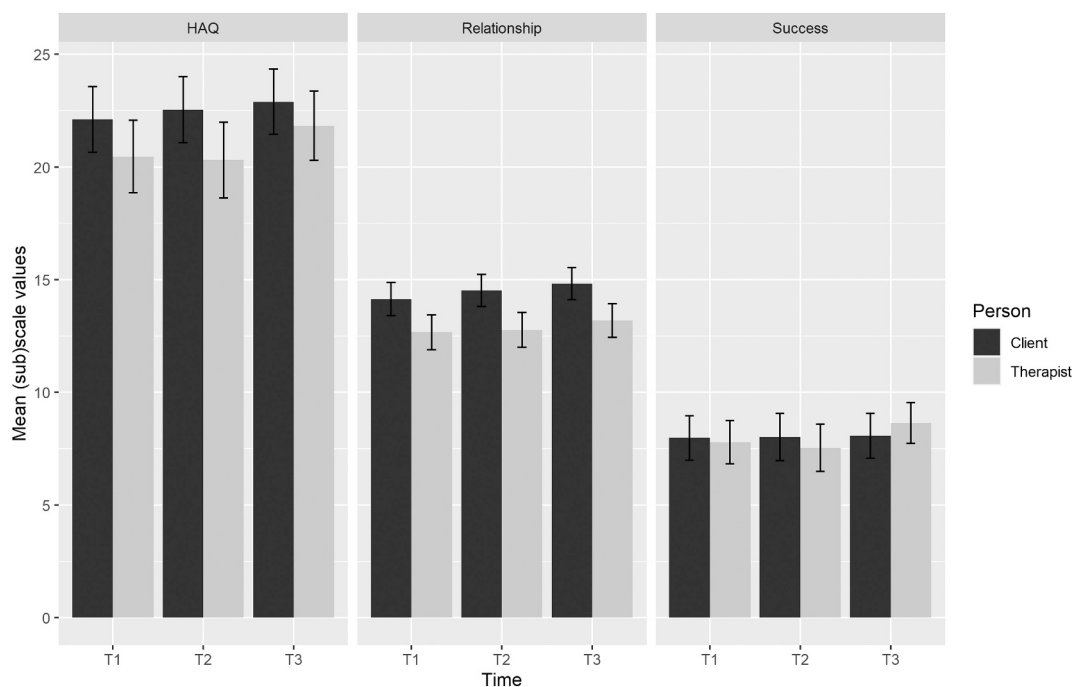


Fig. 1. The effect of *person* (Client/Therapist) and *time* (T1/T2/T3) on mean HAQ score by sub-scale.

Table 3
General Linear Model of HAQ Total: model fit.

Model	df	AIC	BIC	LL	Comparison	χ^2	p
1 (baseline)	5	3232.017	3253.305	-1611.009			
2 (person)	6	3230.803	3256.349	-1609.401	1 vs 2	3.214	.073
3 (time)	8	3225.579	3259.641	-1604.790	2 vs 3	9.223	.010
4 (person × time)	10	3227.269	3269.846	-1603.635	3 vs 4	2.310	.315

3.3. HAQ relationship

The variables *person* ($\chi^2(2) = 12.763, p < .001$) and *time* ($\chi^2(2) = 12.422, p = .002$) both contributed significantly to the model, while the interaction effect was not statistically significant (Table 5). There were no statistically significant higher-order effects (H_03 retained), therefore we interpret the main effects. Planned contrasts (Table 6) revealed a statistically significant difference in HAQ Relationship scores between clients and therapists, $t(86) = -3.686, p < .001, r = 0.369$ (medium); clients rated their satisfaction with the therapeutic relationship higher than their therapists (H_02 refuted). There was also a statistically significant increase in HAQ Relationship scores between T1 and T3, $t(344) = 3.520, p = .001, r = 0.186$ (small), indicating a small improvement in therapeutic relationship over time. However, there was no statistically significant difference in HAQ Relationship scores between face-to-face (T1 and T3) and remote settings (T2), $t(344) = -0.368, p = .713, r = 0.020$ (small) (H_01 retained).

3.4. HAQ success

We found no statistically significant effects of the predictors and their interaction on HAQ Success scores (Table 7). This finding indicates that perceptions of therapeutic success remained stable across therapists and clients, and over time, despite a change in setting. The effect sizes associated with the contrasts (Table 8) show that each effect was small ($r < 0.1$). Only the main effect of *time* indicated a tendency, suggesting that a slight improvement in therapeutic success ratings may be observed over time ($r = 0.09$); however, a larger sample would be needed to achieve statistical significance on this small effect.

4. Discussion, limitations and future work

We fitted multilevel linear models to ratings of therapeutic alliance (HAQ Total, HAQ Relationship, and HAQ Success scales) to data collected from therapists and their clients over time and across therapeutic settings. Specifically, we assessed the effects of *person* (client/therapist), that is, the member of the therapeutic dyad who made the rating, and *time* (T1/T2/T3), that is, when (and under which therapeutic setting) the rating was made. As higher-order effects were statistically non-significant in the analysis of each scale, and the associated effect-sizes were consistently small (each $r < 0.1$), we only interpret the main effects of *person* and *time* on therapeutic alliance over time and across settings.

Research Question 1 asked whether changes in therapeutic setting between face-to-face and online had an effect the self-reported quality of

therapeutic alliance. This question was addressed by planned orthogonal contrasts on the variable *time*: one contrast between online (T2) and face-to-face (T1 and T3) settings, and another one between T1 and T3 to assess the overall change over time. The contrast between online and face-to-face setting was statistically non-significant on each scale, consistently associated with small effect size (r values: HAQ = 0.065; Relationship = 0.020; Success = 0.077, all *ns*). From this finding we conclude that changing the therapeutic setting had no effect on the self-reported quality of therapeutic alliance, as measured by HAQ and its sub-scales. Conversely, the contrast between T1 and T3 was statistically significant in HAQ Total and HAQ Relationship with small effect size ($r = 0.149$ and $r = 0.186$, respectively), but not in HAQ Success ($r = 0.090$, *ns*). From this we conclude that there was an overall improvement in therapeutic alliance over time, which was mainly due to an improvement in the perceived quality of relationship as the therapy sessions progressed. The above findings indicate that the improvement in therapeutic relationship was not affected adversely by a change in setting.

Research Question 2 asked whether clients and their therapists differed in their assessment of therapeutic alliance across settings. The analysis of HAQ Total found no statistically significant differences in overall HAQ scores between clients and their therapists; however, we observed an effect size between small to medium (Table 4), and Fig. 1 shows that client averages were consistently higher than those of therapists over time, albeit with overlapping confidence intervals, indicating a tendency. When considering the HAQ Relationship sub-scale, the difference between clients and therapists were statistically significant with a medium effect size (Table 6), with clients reporting higher levels of satisfaction with the therapeutic relationship. This finding holds relevance to the development and training of therapists, and how therapists can be assisted to be more confident in new settings, as well as for future research in this direction. Conversely, we found no indication of clients and therapist differing in their ratings of HAQ Success (Fig. 1). We conclude that clients and their therapists did differ in their rating of therapeutic alliance, and this was due to clients rating the quality of relationship higher than therapist. As we found no interaction effect between *person* and *time*, we conclude that clients and therapists were not affected differently by the change in therapeutic setting.

The findings need to be interpreted in light of limitations related to sample, design, and measurement properties. Related to sampling limitations, we had no means to extend the participant pool within our clinic, as we contacted all therapists and clients who started with face-to-face therapy and switched to an online setting when lockdown was enacted. Nevertheless, we could consistently detect medium effect sizes in our sample and several small effects reached statistical significance. The description of clients and their therapists show a broad range of demographic background, as well as multiple therapeutic orientations

Table 4
General Linear model of HAQ Total: planned contrasts.

Effect	<i>b</i>	<i>SE</i>	<i>df</i>	<i>t</i>	<i>p</i>	<i>r</i>
(Intercept)	21.692	0.536	344	40.448	<.001	
Person (client vs therapist)	-0.826	0.459	86	-1.799	.076	0.190
Online (T2) vs F2F (T1 and T3)	-0.133	0.110	344	-1.203	.230	0.065
T1 vs T3	0.537	0.192	344	2.803	.005	0.149
Person × online vs F2F	-0.145	0.111	344	-1.307	.192	0.070
Person × T1 vs T3	0.147	0.192	344	0.764	.445	0.041

Table 5
General Linear Model of the HAQ Relationship sub-scale: model fit.

Model	<i>df</i>	<i>AIC</i>	<i>BIC</i>	<i>LL</i>	Comparison	χ^2	<i>p</i>
1 (baseline)	5	2432.718	2454.006	-1211.359			
2 (person)	6	2421.954	2447.501	-1204.977	1 vs 2	12.763	<.001
3 (time)	8	2413.532	2447.594	-1198.766	2 vs 3	12.422	.002
4 (person × time)	10	2416.813	2459.39	-1198.407	3 vs 4	0.719	.698

Table 6
General Linear model of the HAQ Relationship sub-scale: planned contrasts.

Effect	<i>b</i>	<i>SE</i>	<i>df</i>	<i>t</i>	<i>p</i>	<i>r</i>
(Intercept)	13.686	0.265	344	51.574	<.001	
Person (client vs therapist)	-0.812	0.220	86	-3.686	<.001	0.369
Online (T2) vs F2F (T1 and T3)	-0.018	0.049	344	-0.368	.713	0.020
T1 vs T3	0.302	0.086	344	3.520	.001	0.186
Person × online vs F2F	-0.034	0.049	344	-0.677	.499	0.037
Person × T1 vs T3	-0.043	0.086	344	-0.503	.615	0.027

Table 7
General Linear Model of the HAQ Success sub-scale: model fit.

Model	df	AIC	BIC	LL	Comparison	χ^2	p
1 (baseline)	5	2844.440	2865.728	-1417.220			
2 (person)	6	2846.438	2871.983	-1417.219	1 vs 2	0.002	.963
3 (time)	8	2845.604	2879.665	-1414.802	2 vs 3	4.834	.089
4 (person × time)	10	2845.849	2888.426	-1412.925	3 vs 4	3.755	.153

Table 8
General Linear model of the HAQ Success sub-scale: planned contrasts.

Effect	b	SE	df	t	p	r
(Intercept)	8.006	0.338	344	23.685	<.001	
Person (client vs therapist)	-0.013	0.287	86	-0.047	.963	0.005
Online (T2) vs F2F (T1 and T3)	-0.115	0.081	344	-1.423	.156	0.077
T1 vs T3	0.236	0.140	344	1.685	.093	0.090
Person × online vs F2F	-0.111	0.081	344	-1.376	.170	0.074
Person × T1 vs T3	0.190	0.140	344	1.356	.176	0.073

applied; we believe this detail supports the generalizability of our findings. Related to design limitations, we collected T1 (face-to-face) and T2 (online) ratings in a single session, with the former constituting a retrospective-, the latter a concurrent report. Due to the rapid implementation of lockdown measures and the subsequent, almost immediate switch to online setting left us no time to collect data pertaining to T1 before the switch actually occurred. As for limitations related to measurement properties, the factor structure of HAQ was not supported for therapists; however, our analyses were only exploratory due to sample-size constraints, the internal consistency HAQ and the sub-scales was adequate, and the analysis of HAQ total was fully appropriate even when assuming a single-factor structure in case of therapists.

The lockdown situation offered a unique opportunity to collect repeated-measures data on the progression of therapeutic alliance over time and across settings. However, as time and setting were necessarily confounded in this context, future work should attempt to treat these factors separately, for example, by counterbalancing (online first then face-to-face, and vice versa). Future research should also consider therapeutic orientation as a covariate, or categorical moderator, of the relationship between therapeutic setting and alliance. Additionally, the effects of setting change could be more precisely investigated by controlling various factors, such as number of therapy sessions; however, such control can be difficult to implement in an ecologically valid setting. Considering the observed effect sizes and the available literature, we posit that between-setting differences in therapeutic alliance may be more qualitative than quantitative in nature. As the qualitative findings of the current research were published in German (Eichenberg et al., 2021), we present a brief summary below.

5. Qualitative findings

Alongside HAQ items, clients and therapists were asked to report the effects of the lockdown-related change of setting by answering (in writing) a set of fixed questions. Content analysis revealed that a stable therapeutic relationship facilitates coping with setting changes, and also makes it easier to deal with technical and organisational challenges (Leukhardt et al., 2021). Many clients felt more secure in an online setting, often felt more able to engage in the therapeutic process, and also managed the change back to the personal face-to-face with ease.

Peripheral conditions, such as the availability of an undisturbed room, were also reported to be essential by both therapists and clients. The importance of space was not only emphasised in traditional, face-to-face therapy (Intelmann, 2004), but also in current teletherapy research (e.g., Isaacs Russell, 2020). Many clients noted the convenience of online therapy for not having to travel; however, reports of this time being

useful for preparation before each session and integration afterwards were also prevalent. Technical problems (see Ghaneirad et al., 2021) and potential organisational issues were also important: many reported problems with online connection, camera positioning, and a lack of body language (Abbass and Elliott, 2020); however, participants also noted the convenience of the online setting in terms of flexibility (e.g., booking appointments and extending sessions).

In summary, the findings suggest that online therapy has notable advantages both in terms of convenience and emotional security during therapy, especially for clients; it is therefore advisable for therapists to offer online therapy even outside the pandemic context. However, therapists need appropriate technical preparation, while legal regulations must be flexible to support the provision of remote treatment. Online psychotherapy is not meant to replace face-to-face practice, rather to complement it (Christensen et al., 2020). With the experience accumulated with online setting by many therapists and their clients, we expect an increase prevalence of remote therapy in the future, hopefully without pressure from external circumstance.

6. Conclusion

Our findings support the feasibility of switching from face-to-face therapy to an online setting and back in terms of the quality of therapeutic alliance, as reported by therapists and their clients using the Helping Alliance Questionnaire. Although we found an overall, albeit small improvement in therapeutic alliance over time, we did not detect a difference due to setting change. Therapists and clients were not affected differently by changes in therapeutic setting. Furthermore, therapists tended to rate their satisfaction with therapeutic relationship lower than their clients, while there were no differences between therapists and clients in terms of their ratings related to therapeutic success.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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