Change in work functioning from pre- to post-treatment in feedback-informed Couple and Family Therapy in Norway

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Work functioning has significance for the individual and society but has rarely been used as an outcome measure for psychotherapy. Work-related factors such as work satisfaction and working hours impact personal and relational life. More than half of those on sick leave suffer from social problems such as family-related distress or mental health issues rather than medical issues. This article investigates work functioning change from pre- to post-treatment in feedback-informed couple and family therapy. With a sample of 165 clients from different parts of Norway, we used hierarchical multiple regression and calculated clinical significant change in the analysis. We found firstly that work functioning improved from pre- to post-treatment. Secondly, we found that level of depressive symptoms, couple distress and family functioning predicted work functioning at pre-treatment. Thirdly, we found that the improvements on these measures (depressive symptoms, couple distress and family functioning) predicted work functioning at post-treatment.

Practitioner points
- Clients in couple and family therapy improve from start to end of therapy in work functioning, depressive symptoms, couple distress and family functioning
- Individual and relational improvement predicts the level of work functioning at post-treatment
- Therapists should attend to the client's difficulties not only at individual and relational levels but also in life functioning
- Even if effect sizes are high for the treatment, not all clients improve

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Introduction

Dropping out of work can have severe consequences for the individual and society. It is established knowledge that occupational functioning is associated with mental health and relationships with one's family. For instance, the individual consequences of dropping out of work may be reduced personal wellbeing, including poorer finances (Warr, 2003), depression (Adler *et al.*, 2006; Lerner and Henke, 2008), relationship distress (Novak *et al.*, 2017) and reduced family functioning (Rotunda *et al.*, 1995). Dropping out of work not only has consequences for individual and family life, but also work-related factors such as low work satisfaction, long hours and a mobile office have been found to have a negative impact on couple relationships (Tavistock Centre for Family Relationships, 2018). Reciprocally, the experience of personal and relational distress has been found to reduce a person's work functioning (Whisman and Uebelacker, 2006).

For society, the welfare costs associated with those dropping out of work are great in most countries of the Organization for Economic Co-operation and Development (OECD) (Setzer and Rürup, 2013). Recent research performed in Scandinavia found that more than 50 per cent of sick leave was due to social problems (e.g. family-related distress or mental health issues) rather than medical issues (Aronsson *et al.*, 2015). The proportion of those who go on sick leave due to mental health issues has been steadily increasing in recent years (Hensing *et al.*, 2006) throughout the OECD countries (OECD, 2003). For instance, psychiatric disorders are now the most common reason for long-term sick leave (Henderson *et al.*, 2011). For this reason, psychotherapy should be one of several means in the effort to reduce the interrelated problems involving work, mental health, and relational distress.

People suffering from depression, anxiety (Bilsker *et al.*, 2005) and relational discord (Aronsson *et al.*, 2015) also have an elevated risk of impaired work functioning. In a special issue of the journal *Family Process* focusing on empirically supported treatments in couple and family therapy (CFT), the editor concludes: 'these treatments now extend to treat a wide array of significant couple and family problems, suggesting the value of couple and family therapy for both relational problems and problems often thought of as nested within individuals' (Lebow, 2016, p. 387). More specifically, CFT has been found to be effective for treating depression and anxiety (Carr, 2014a; Crane and Payne, 2011; Gurman, 2008, 2015), as well as dyadic and family problems (Sexton *et al.*, 2013). Hence one may assume CFT to be a suitable method in the

effort to increase clients' levels of functioning at work by reducing their depressive and anxiety symptoms and improving their relationships. To our knowledge, this is the first study that explicitly examines work functioning in the field of CFT. Therefore, we see work functioning as an area of interest to be more thoroughly examined through research. The study presented in this article contributes to addressing this objective.

   This article raises the following research questions:

(1) To what extent is there a change in work functioning for clients from pre- to post- CFT treatment?
(2) To what extent is there a change in depressive symptoms, dyadic adjustment and family functioning from pre- to post- CFT treatment?
(3) To what extent is clients' work functioning at pre-treatment associated with depressive symptoms, dyadic adjustment and family functioning at the same time point?
(4) To what extent is clients' work functioning at post-treatment associated with change in depressive symptoms, dyadic adjustment, and family functioning from pre- to post- CFT treatment?

Method

Participating units

This study is a sub-study based on a naturalistic randomised clinical trial (RCT) (the 'main study', $n = 229$: Tilden *et al.*, in review), conducted at three levels of CFT sites in Norway. The main study's aim was to explore whether the use of the feedback system Systemic Therapy Inventory of Change (STIC; Pinsof *et al.*, 2009) made a difference compared to treatment as usual. In this current sub-study, not all data from the main study was included. However, this study included three CFT sites, each representing one of the main CFT service levels in Norway. Our rationale for using multiple sites was to capture the variation of how CFT is practised in our country, hence strengthening the ecological validity of the study, which would facilitate the generalisability of the findings. In line with a stepped-care model, the Step 1 CFT site in this study is a low-threshold family counselling outpatient service located in two Norwegian cities of medium size, where no referral is needed. Step 2 is represented by a mid-threshold inpatient/outpatient child and adolescent psychiatry unit in a general hospital in a medium-sized city in Norway, where a referral is needed. The third step is

represented by a high-threshold residential family treatment unit in a highly specialised national psychiatric hospital in Norway, where again a referral is needed.

Due to the great variation of client characteristics and problems, the treatments were tailored to the single client/couple/family's needs, often from an integrative theoretical approach (Pinsof, 1983). All the therapists were trained in using the STIC (Pinsof *et al.*, 2009). However, the therapists did not know the focus of this study.

Sample

As shown in Table 1, a total of 165 adult clients were included in this study. The data collection started in August 2013 and ended in September 2016. The mean age of the clients was 40.3 (± 7.8), and 52.1 per cent were women.

Measurements

The Short Form Quality of Life measure (SF-36 v.2) is a health-related quality of life client self-assessment measure consisting of thirty-six items. For the purposes of this article, we only make use of the data from the Role Emotional scale (SF-RE) that measures the client's work functioning. For the analyses of change, we needed a cut-off between normal and impaired work functioning. No such cut-off level was established for the work functioning measure (SF-RE). Thus, we applied the Jacobson and Truax (1991) formula by comparing the means and standard deviations of our sample with a Norwegian normative sample (Loge and Kaasa, 1998): cut-off $= (s_0 M_1 + s_1 M_0)/(s_0 + s_1)$. Here, M_0 and s_0 are the mean and standard deviation of the normative sample, and M_1 and s_1 are the mean and standard deviation of our sample, resulting in a cut-off value for work functioning at 79.35. A client's score below this cut-off value could clinically be helpful when hypothesising about the client's emotional problems as associated with less time spent on work, accomplishing less at work, or that the work is performed less carefully than usual. Answering 'most of the time' on at least one of these items or another combination that leads to the same combined average is required to obtain a score below the cut-off. Such a level of work functioning implies that people's emotional problems impact impaired work functioning in one or all these three ways. In our sample, Cronbach's alphas for the SF-RE were .91 (95 per cent confidence interval CI: .88 – .93) at pre-treatment and .92 (CI: .88 – .94) at post-treatment.

TABLE 1 *Characteristics of the sample*

Variables	n = 165	
	%	n
Sex: female	52.1	86
Education		
Low	49.1	81
Medium (Bachelor's degree)	33.3	55
High (Master's and PhD)	17.6	29
Relationship status		
Committed relationship – not married	20.6	34
Married	68.5	113
Medication		
Using medication (some more than one medication)	17.6	29
Depression	10.3	17
Anxiety	4.8	8
Concentration difficulties/hyperactivity	3.6	6
Bipolar	4.2	7
Other	4.8	8
Prior experience with therapy		
None	32.7	54
Less than a year	33.3	55
More than one year	33.9	56

The Beck Depression Inventory (BDI-II – (Beck *et al.*, 1996)) is a 21-item client self-report instrument for measuring the severity of depression, with a clinical cut-off at 14.29. Cronbach's alpha at pre-treatment was .93 (CI: .91 – .95) and .95 (CI: .94 – 96) at post-treatment. A clinical level of depression is defined as BDI> 14.29.

The Family Assessment Device (FAD; Epstein *et al.*, 1983) general functioning scale is a client self-assessment measure of perceived family functioning with twelve items, with a clinical cut-off at 2.00. Cronbach's alpha at pre-treatment was .89 (CI: .86 – .91) and at post-treatment it was .91 (CI: .88 – .94).

The Revised Dyadic Adjustment Scale (RDAS; Busby *et al.*, 1995) is a widely used 14-item client self-assessment questionnaire that provides a global measure of an individual's assessed level of consensus, satisfaction, and

cohesion with his or her spouse. The clinical cut-off is 47. Cronbach's alpha at pre-treatment was .85 (CI: .82 – .89) and at post-treatment .88 (CI: .82 – .91).

Procedures

Clients who agreed to participate in this study completed the Outcome Package (OP), meaning filling out the above-presented questionnaires as well as the initial STIC questionnaire electronically via secure zone internet before and after treatment. Additionally, the clients completed the intersession STIC before each therapy session. All data were received, analysed and securely stored by the Psychotherapychange.org website at www.family-institute.org, and then a report of this information was available to the therapists on the therapist website immediately after completion. This was presented in a graphical format and with summaries so that the information was easy for the therapists to use (Zahl-Olsen and Oanes, 2017).

Clients who did not complete the OP immediately upon the termination of treatment received three emails or phone call reminders before they were marked as missing.

Analyses

We used IBM SPSS v. 24 for the statistical analysis. None of the outcome measures violated the assumptions for parametric analysis after application of the central limit theorem to assume normal sample distribution (Field, 2018). Paired t-tests and effect sizes were calculated to explore statistical change between pre- (t1) and post- (t2) treatment. We calculated effect sizes both by dividing the difference of the means by the mean standard deviation of the two measures (Cohen's *d*) and by dividing the differences of the means by the standard deviation at post- (t2) treatment (Glass Δ). Analyses of correlations were performed to explore hypothesised associations between variables. Confidence intervals were calculated using 1000 bootstrapped samples. Based on systemic theory (Johnsen and Torsteinsson, 2012), assuming that personal, dyadic and family aspects mutually affect each other and considering the findings in the correlation analysis, we carried out a total of five hierarchical multiple regression analyses with forced entry with work functioning as the dependent variable.

In the first regression, we analysed whether the individual and relational measures at pre-treatment (t1) would predict the level of work functioning at the same time point (t1). In the second, third and fourth

regression we predicted work functioning at end of treatment (t2) by each of the other measures individually, firstly at pre-treatment (t1) after controlling for level of work functioning at pre-treatment (t1). Secondly, we analysed whether change on each measure from pre- to post-treatment predicted work functioning at post-treatment (t2) when controlling for work functioning at pre-treatment (t1). In the final and fifth regression analysis, we did the same as in regression two, three and four but this time including all measures. First, we analysed if the levels of all the measures together at pre-treatment (t1) predicted work functioning at post-treatment (t2) after controlling for level of work functioning at pre-treatment (t1). Secondly, we analysed whether the change on these measures from pre- to post-treatment predicted work functioning at post-treatment (t2) when controlling for work functioning at pre-treatment (t1). However, due to power analysis estimates these analyses were limited to being conducted on the total sample only, a result also supported by the rule of thumb $n = 50 + 8m$ where m is the number of variables in the regression analysis (Tabachnick and Fidell, 2014).

We also wished to assess the outcome on an individual level by use of the clinical significance (CS) approach (Jacobson and Truax, 1991), categorising clients into four outcome groups: recovered, improved, unchanged and deteriorated, on work functioning. Only those who at pre-treatment (t1) had impaired work functioning due to emotional problems were included in the CS calculation. We calculated the reliable change index (RCI) by using the formula provided by Jacobson and Truax (1991), as follows: $RCI = 1.96 * SD \sqrt{2(1-r)}$. Here, SD is the standard deviation, and r is the Cronbach's alpha. As Jacobson and Truax (1991) did not specify which sample to take the SD and Cronbach's alpha from, we chose to use those from our impaired sample in the RCI equation and found RCI to be 20.47 for the work functioning. To be categorised in the recovered outcome group it required a change from pre- (t1) to post-treatment (t2) that crossed the measurement's cut-off level (79.35) between impaired work functioning and normal work functioning and that this change was larger than the RCI.

Clients that completed the study

Of the 165 clients in the study, ninety-six completed the OP at termination. Of the sixty-nine that did not complete the termination OP, nineteen were outpatients still involved in treatment at the time of closing the data collection and were therefore not asked to complete the

termination OP. The omission of these clients yields a completion rate of 65.8 per cent (96/146).[1]

We performed attrition analysis by running one-way ANOVA analyses for the scale measures and Chi-square tests for the nominal measures. In general, on seventeen variables we found no significant difference between those who completed the final OP and those who did not. However, there were significant differences on the following two variables: significantly more of those who were married χ^2 (1, $n = 165$) = 7.864, $p = .005$, $phi = -.218$ and those who had prior experience with therapy χ^2 (1, $n = 165$) = 8.221, $p = .016$, $phi = .223$ completed the OP at termination.

Ethics

Informed consent for collecting the project data was obtained from each participant. This study was approved by the Modum Bad Ombudsman for Data Protection and the Regional Ethics Committee for Medical Research with human subjects (REK – no. 2017/96). The main study is registered at ClinicalTrials.gov.

Results

The research questions addressed outcomes on work functioning (SF-RE), depressive symptoms (BDI), family functioning (FAD), and couple distress (RDAS).

Change and effect size

As shown in Table 2, we found a statistically significant improvement from the start to the end of treatment for work functioning ($d = 0.34$), depression ($d = 0.38$), family functioning ($d = 0.48$) and couple distress ($d = 0.43$). For comparison with other studies, we additionally calculated pre- to post-effect size for those clients who were in the clinical/impaired region for each of the measures at pre-treatment (t1).

Reliable change

By use of the clinical significance (CS) approach (Jacobson and Truax, 1991) on work functioning, we found that the portion of clients who had impaired work functioning (<79.35) at pre-treatment (t1) represented

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[1]Little's test of the hypothesis that data are missing completely at random (MCAR) is non-significant. This suggests that treating the data as MCAR may be a reasonable assumption and will not have a material impact on the accuracy of the estimates and inferences.

TABLE 2 *Levels of distress and outcomes*

Sample	Measure	N	t1		t2		t	Δ	d	Sig.
			M	SD	M	SD				
Total sample	Work functioning	97	73.63	24.61	81.79	23.36	-3.261	0.34	0.34	<.001
	Depression	92	15.1	11.38	10.78	11.28	4.160	0.38	0.38	<.001
	Couple distress	82	39.51	10.57	43.72	8.81	-5.149	0.48	0.43	<.001
	Family functioning	89	2.35	0.56	2.08	0.56	5.116	0.48	0.48	<.001
Clinical/ impaired sample	Work functioning	54	56.17	19.10	72.53	26.68	-4.100	0.61	0.71	<.001
	Depression	45	24.84	7.63	16.27	12.84	4.915	0.67	0.84	<.001
	Couple distress	66	35.73	7.52	41.17	7.56	-5.916	0.72	0.72	<.001
	Family functioning	68	2.59	0.39	2.22	0.54	5.958	0.69	0.80	<.001

Note: Higher values indicate less distress for Work function and Couple distress while it is the opposite for the other measures.

52.7 per cent ($n = 87$) of the total sample. As shown in Table 3, 53.7 per cent of the clients improved or even recovered at a reliable level from start to end of treatment.

Correlations

We conducted two correlation analyses; one on the data at the start of therapy and one on the data at the end of therapy (see Table 4). Significant associations were identified between work functioning and depression, work functioning and family functioning, but not for work functioning and couple distress at start or end of treatment.

Regression analyses

We wanted to investigate how to predict work functioning by addressing different levels of a client's life based on the individual, couple and family measures used in this study. In the first regression, we assessed if the prediction of work functioning improved when we added relational measures to the individual measure (pre-treatment prediction). Secondly, and more importantly for this study, we wanted to predict work functioning at post-treatment by the change from pre- to post-treatment of the individual and relational measures (post-treatment prediction). Statistical tests indicated that multi-collinearity was not a significant problem. Variance inflation factors (VIFs) were computed for each predictor variable. As a rule of thumb, a VIF> 10 indicates problematic collinearity (Field, 2018). The VIF in our data was below 3.2 and thus well below the suggested cut-off value.

Pre-treatment prediction. We used hierarchical multiple regression to assess the level of three measures (depression, couple distress and family functioning) to predict the levels of work functioning at pre-treatment (t1). Table 5 shows the results.

The level of depression was entered at Step 1, explaining 46.8 per cent of the variance in the work functioning. Couple distress was added

TABLE 3 *Reliable change*

Group	% (*n*)
Recovered	42.6 (23)
Improved	11.1 (6)
Unchanged	35.2 (19)
Deteriorated	11.1 (6)

TABLE 4 *Correlations*

Time	Measure	Work functioning	Depression	Couple distress	Family functioning
t1	Work functioning	–			
	Depression	−.684**	–		
	n	161			
	Couple distress	.077	−.319**	–	
	n	149	148		
	Family functioning	−.232**	.341**	−.621**	–
	n	152	151	142	
t2	Work functioning	–			
	Depression	−.646**	–		
	n	93			
	Couple distress	.165	−.447**	–	
	n	84	81		
	Family functioning	−.322**	.368**	−.717**	–
	n	91	87	78	

Note: ** Correlation is significant at the 0.01 level (2-tailed). Higher values indicate less distress for Work function and couple distress while it is the opposite for the other measures.

TABLE 5 *Hierarchical regression 1. Dependent variable: Work functioning (t1)*

	β	95 % CI	R Square Change	F Change	Sig.
Step 1			0.468	140.062	<.001
Depression (t1)	−1.608	−1.859 – −1.375			.001
Step 2			0.018	5.131	.025
Depression (t1)	−1.648	−1.922 – −1.417			.001
Couple distress (t1)	−0.389	−.750 – .031			.034
Step 3			0.019	5.589	.020
Depression (t1)	−1.688	−1.976 – −1.431			.001
Couple distress (t1)	−0.701	−1.065 – −0.295			.001
Family functioning (t1)	−8.113	−14.669 – −1.046			.020

Note: Confidence intervals are based on 1000 bootstrap samples.

at Step 2 and family functioning at Step 3. Both steps gained significant F change. The final model explains 53.4 per cent of the variance in work functioning at pre-treatment.

Post-treatment predictions. As shown in Table 6, we tested whether each of the measures (depression, couple distress, family functioning) by themselves could predict work functioning at post-treatment (t2) when work functioning at pre-treatment (t1) was controlled for. This was done using hierarchical multiple regression for each of the measures one by one. None of the measures at pre-treatment (t1) could significantly predict work functioning at post-treatment (t2). At the next step, we entered the level at post-treatment (t2) for each of the measures. Since we controlled for pre-treatment levels in Step 2, this gave us a residual change score for each of these measures. By themselves, each of the change scores could predict the level of work functioning at post-treatment (t2) when the level of work functioning at pre-treatment (t1) was controlled for.

Finally, we ran a hierarchical multiple regression in which we used all the measures together in one regression. In the first step, we controlled for work functioning at pre-treatment (Step 1). At Step 2 we added all the measures at pre-treatment (t1). As shown in Table 7 this model (Step 2) could not significantly predict the level of work functioning at end of treatment. At Step 3 all the measures at post-treatment (t2) were added, giving residual change score, showing that the model predicts 53.8 per cent of the level of work functioning at end of treatment.

Discussion

There are three main findings in this study. Firstly, we found improvements from pre- to post-treatment on work functioning. Secondly, we found that level of depression, couple distress and family functioning predict work functioning at pre-treatment. Thirdly, we found that the improvements on these measures (depression, couple distress and family functioning) predict work functioning at post-treatment.

To our knowledge, no previous study within CFT has addressed significant improvements from pre- to post-treatment on work functioning. When inspecting the group of clients with impaired work functioning at pre-treatment we found improvements on work functioning from pre- to post-treatment with close to large effect size. By use of the clinical significance (CS) approach (Jacobson and Truax, 1991), we found

TABLE 6 *Hierarchical regression 2, 3, 4. Work functioning at post-treatment (t2) predicted by each of the measures one by one*

	Depression					Couple distress					Family functioning				
	β	95 % CI	R Square Change	F Change	Sig.	β	95 % CI	R Square Change	F Change	Sig.	β	95 % CI	R Square Change	F Change	Sig.
Step 1			.251	30.179	<.001			.240	25.216	<.001			.217	24.175	<.001
Work func. (t1)	.480	.290 –.716			.001	.469	.246 –.716			.001	.473	.246 –.744			.001
Step 2			.007	.783	.379			.000	.000	.991			.009	.987	.323
Work func. (t1)	.407	.005 –.124			.147	.469	.236 –.724			.002	.444	.214 –.707			.002
a (t1)	–.225	.434 – –.778			.273	–.002	–.429 –.485			.990	–4.156	–14.462 – 5.452			.390
Step 3			.242	42.580	<.001			.052	5.771	.019			.058	6.950	.010
Work func. (t1)	.376	.166 – .626			.002	.490	.269 – .712			.001	.450	.238 – .689			.002
a (t1)	.510	.069 –.943			.033	–.512	–1.104 – .179			.119	3.655	–9.434 – 14.665			.551
a (t2)	–1.281	–1.824 – –.741			.001	.833	.004 – 1.483			.029	–12.768	–22.687 – –1.921			.016

Note: In the left pane a = Depression, in the middle pane a = Couple distress, in the right pane a = Family functioning. Confidence intervals are based on 1000 bootstrap samples.

TABLE 7 *Hierarchical regression 5. Work functioning at post-treatment (t2) predicted by all other measures combined*

Model	R Square	Change statistics				
		R Square Change	F Change	df1	df2	Sig. F Change
Step 1	.203	.203	18.063	1	71	.001
Step 2	.217	.014	.405	3	68	.750
Step 3	.538	.321	15.064	3	65	.001

Note: Step 1: Predictors: (Constant), work functioning (t1). Step 2: Predictors: (Constant), work functioning (t1), Depression (t1), Couple distress (t1), Family functioning (t1). Step 3: Predictors: (Constant), work functioning (t1), Depression (t1), Couple distress (t1), Family functioning (t1), Depression (t2), Couple distress (t2), Family functioning (t2).

that 53.7 per cent of this group had significant improvements on work functioning when measured at post-treatment, a finding similar to what is typical for other measures of improvement in psychotherapy (Ogles, 2013). We also found that 46.3 per cent were unchanged or even deteriorated from pre- to post-treatment on work functioning. This finding is important in at least two ways. Firstly, it should work as a reminder to clinicians that not all individuals are helped in treatment even if there is a significant change from beginning to end for the total sample of clients. This implies an ethical imperative for therapists to make a stronger effort to look for signs of no change or deterioration during treatment to optimise the therapy outcome. For researchers, this finding implies a methodological objective, addressing the need to measure outcome on an individual as well as on a group level. Secondly, it suggests that we need more knowledge about the group of clients who do not benefit from treatment. Even though there is a growing field of knowledge on non-responders (see, e.g., Day *et al.*, 2014; Mohr, 1995) to our knowledge this has not so far been investigated within the field of CFT.

This study also found that depressive symptoms predict the level of work functioning at pre-treatment. We also found that when we expanded the model to add couple distress and finally family functioning the prediction became more precise for each step. This finding supports the systemic theory claiming that different areas of life impact each other and a broader context is needed to understand a phenomenon (Johnsen and Torsteinsson, 2012). The most powerful predictor of work functioning at pre-treatment was the level of depression. This is in line with previous research implying that the level of depressive symptoms is associated with work performance (Adler *et al.*, 2006; Kessler *et*

al., 2006; Lerner and Henke, 2008; Mintz *et al.*, 1992). Research showing this relationship the other way around is sparse. However, Aronsson *et al.* (2015) and Dahl, Hansen and Vignes (2015) give some empirical support that couple distress and family functioning impact work functioning. In our study, we found that depressive symptoms and couple distress were interrelated, hence we suggest that these variables may interact mutually. Further research should explore in greater detail which mediators and change mechanisms influence the relationship between CFT and improved work function. The clinical implication of this prediction of work functioning at pre-treatment is that the therapist prior to or at the start of therapy should assess the client's difficulties on the individual, relational and functional levels to obtain optimal understanding as a basis for choosing and discussing interventions with clients.

As described, we also investigated whether the change on individual and relational levels predicted work functioning at post-treatment. From pre- to post-treatment, clients improved on all the included measures. More importantly for this study, the improvement in individual and relational aspects of clients' lives predicts the level of work functioning at post-treatment separately (depressive symptoms, couple distress, family functioning) as well as combined. We cannot from this study conclude that therapy alone affected improved work functioning, even if such an interpretation has support from the Tavistock Centre for Family Relationships report (2018). It is still reasonable to assume that therapy plays a role in this improvement. An even stronger finding is that these variables seem to be related, something that supports the essence of systemic theory; that individual and relational issues are related and a change in one variable is considered to create change among the interrelated variables (Johnsen and Torsteinsson, 2012). The clinical implication is, therefore, that which variable to focus on first in therapy may not be decisive. However, our results show that the individual level of depression answers to some of the variance in work functioning that is different from the variance explained by couple distress and family functioning. Hence, contrary to systemic theory, this implies that clinically it may matter which variable to give priority to at a certain point in the therapy. We find this interpretation in line with what Pinsof and Lebow (2005) labelled 'differential causality', namely that even though the systemic rule of thumb is to consider interactions as mutually influencing each other, different variables in such an interaction represent variance in strength, distance and impact. This perspective also yields support from network theory (Borsboom, 2017) that builds on creating idiographic network

maps based on data from the individual client. Thus, variables in this map (for instance, symptoms, behaviour, relationships) may relate to each other with different closeness, strength and centrality. In this way the therapist and client are given a therapeutic tool pointing to which variable(s) to focus on in order to optimise the desired change in the system. Hence, considering elements within relationships as unidirectional should not be perceived as contrary to a systemic approach.

This study also identified significant improvement in depressive symptoms, couple distress and family functioning. Improvement in depressive symptoms is in line with the findings of Carr (2014a) who identified several CFT treatments that are effective for mental health issues, including depression. This is different from the earlier review by Sexton and colleagues (2003), who identified a limited impact of CFT on depression. The other two improvements, couple distress and family functioning, are as expected since these objectives represent the explicit foci within CFT accompanied by empirical support (Carr, 2014b; Sexton, Datchi *et al.*, 2013; Sexton, Robbins *et al.*, 2003). The effect sizes we calculated on the total sample are small to medium, something that is similar to what has been found in other CFT studies (Sexton *et al.*, 2013). A comment regarding these effect sizes: the total sample includes a great variety of clients reporting from minor to major distress. This combination may very well appear within one couple or family, as it is well known to CFT therapists that one spouse might report more distress than the other. Methodologically, this variation is levelled out by including the total sample when calculating effect size, masking the severity of the most distressed clients. To illustrate, when selecting a subsample of the most impaired clients in our study – something that would be comparable to individual psychotherapy – we found effect sizes in the medium to high range, similar to psychotherapy in general (Ogles, 2013). This phenomenon is important to emphasise, as effect sizes are the standard reference for comparing effectiveness in psychotherapy. Hence, if calculating effect sizes without taking the mentioned variation within CFT into consideration, these effect sizes may not be comparable to individual psychotherapy.

Strengths, limitations and future research

Including data from all three levels of CFT care in Norway as well as using a naturalistic design strengthens the ecological validity of our study. Unfortunately, our sample size did not allow for analyses of

possible differences between the sites. In this study, we did not implement treatment manuals; hence, we did not control for adherence and competence. Even though this is a strength from a naturalistic standpoint, it is also a limitation because the variability of the treatment (such as therapeutic focus, specific methods, quality of alliance) may be large. However, we did control for the therapists' theoretical identification and nearly all of the therapists identified themselves as practising family/systems therapy. In retrospect, we regret not having video recordings of the therapies, which could have shed light on these objectives. The effect sizes in our study, showing outcomes like those of other studies, suggest that the delivered therapy, in general, was of satisfactory quality. All the included cases had the component of feedback given through the STIC system. It is a limitation of our work discussed here that we did not control for how the therapists used the feedback throughout the course of therapy. Although the effect sizes were good, RC analysis showed that many did not benefit from the treatment. We therefore suggest further research on the group of clients who do not benefit from CFT treatment, especially since classifying clients as responders and non-responders can be problematic (Senn, 2018). We also suggest further research to explore in detail the relationship between CFT and work functioning (i.e. mediators and change mechanisms).

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