

Supplementary Material

**Table S1. Sample descriptive and comparison across groups**

IMPACT sample (465)						
	WAI-S 6 weeks missing (N=242)		WAI-S 6 weeks complete (223)		Chi2	p
	N	%	N	%		
<b>Gender</b>					0.16	0.686
<i>Male</i>	59	24.4	58	26.0		
<i>Female</i>	183	75.6	165	74.0		
<b>Ethnicity</b>					0.76	0.382
<i>White British</i>	190	82.3	173	79.0		
<i>Other</i>	41	17.7	46	21.0		
<b>Treatment Arm</b>					0.67	0.714
<i>BPI</i>	83	34.3	72	32.3		
<i>CBT</i>	76	31.4	78	35.0		
<i>STPP</i>	83	34.3	73	32.7		
	Mean	SD	Mean	SD	t	P
<b>Age</b>	15.67	1.42	15.54	1.42	-1.04	0.299
<b>MFQ baseline</b>	46.13	10.71	45.75	10.41	0.45	0.648
<b>MFQ 86 weeks</b>	23.89	16.23	21.53	15.35	0.16	0.164
<b>P factor baseline</b>	1.01	0.71	0.94	0.71	-1.14	0.254
<b>P factor 86 weeks</b>	-0.71	1.17	-0.76	1.14	-0.48	0.629
<b>Weeks in treatment</b>	28.02	20.20	27.92	17.14	0.01	0.960
IMPACT sample (465)						

	WAI-S-T 6 weeks missing (N=326)		WAI-S-T 6 weeks complete (139)		Chi2	p
	N	%	N	%		
<b>Gender</b>					1.97	0.160
<i>Male</i>	76	23.3	41	29.5		
<i>Female</i>	205	76.7	98	70.5		
<b>Ethnicity</b>					14.17	<0.001
<i>White British</i>	267	85.3	96	70.1		
<i>Other</i>	46	14.7	41	29.9		
<b>Treatment Arm</b>						
<i>BPI</i>	123	37.7	32	23.0	12.63	0.002
<i>CBT</i>	108	33.1	46	33.1		
<i>STPP</i>	95	29.1	61	43.9		
	Mean	SD	Mean	SD	t	P
<b>Age</b>	15.59	1.40	15.65	1.46	0.17	0.310
<b>MFQ baseline</b>	45.74	10.56	46.34	10.50	0.56	0.575
<b>MFQ 86 weeks</b>	23.34	16.53	21.12	14.08	1.24	0.216
<b>P factor baseline</b>	0.95	0.72	1.03	0.69	1.19	0.264
<b>P factor 86 weeks</b>	-0.70	1.18	-0.80	1.08	-0.90	0.385
<b>Weeks in treatment</b>	26.77	20.36	29.63	14.80	1.99	0.159

Note: MFQ=The Mood and Feelings Questionnaire

**Table S2. Model comparison of the linear and logarithmic shape of the MFQ and p factor change from 12 weeks to posttreatment (86 weeks).**

<b>Sample</b>	<b>D.V.</b>	<b>Model</b>	<b>AIC</b>	<b>BIC</b>	<b>logLik</b>
<b>WAI-S</b>	MFQ change	Linear	5800.55	5855.93	-2888.27
		Logarithmic	5734.22	5789.60	-2855.11
	p factor change	Linear	2427.65	2485.17	-1201.83
		Logarithmic	2391.02	2448.54	-1183.51
<b>WAI-S-T</b>	MFQ change	Linear	3504.22	3553.47	-1740.11
		Logarithmic	3471.02	3520.28	-1723.51
	p factor change	Linear	1540.03	1591.88	-758.02
		Logarithmic	1524.41	1576.25	-750.20

**Table S3. Comparison between the logarithmic three-level model predicting outcomes including the interaction term between alliance and time (Model 2) and the equivalent model using alliance and time as independent predictors (Model 1)**

<b>Sample</b>	<b>D.V.</b>	<b>Model</b>	<b>AIC</b>	<b>BIC</b>	<b>logLik</b>	<b>L.Ratio</b>	<b>p</b>
<b>WAI-S</b>	MFQ change	Model 1	5734.22	5789.60	-2855.11		
		Model 2	5736.17	5796.16	-2855.09	0.05	0.825
	p factor change	Model 1	2391.02	2448.54	-1183.51		
		Model 2	2393.00	2455.31	-1183.50	0.02	0.881
<b>WAI-S-T</b>	MFQ change	Model 1	3471.02	3520.28	-1723.51		
		Model 2	3472.97	3526.33	-1723.49	0.05	0.818
	p factor change	Model 1	1524.41	1576.25	-750.20		
		Model 2	1526.25	1582.42	-750.12	0.16	0.693

**Table S4. Comparison of the model predicting the primary outcome (MFQ) by Prior Depression Change, Baseline severity, treatment type (Model 1) and the model including the interaction term between alliance and treatment arm**

<b>Sample</b>	<b>Model</b>	<b>AIC</b>	<b>BIC</b>	<b>logLik</b>	<b>L.Ratio</b>	<b>p</b>
<b>WAI-S</b>	Model 1	5734.22	5789.60	-2855.11		
	Covariate + WAI-S X Arm	5732.16	5790.76	-2852.08	6.06	0.048
<b>WAI-S-T</b>	Model 1	3471.02	3520.28	-1723.51		
	Covariate + WAI-S X Arm	3470.95	3526.41	-1721.47	4.08	0.130

Note: Covariate include Prior Depression Change, Baseline severity, treatment type