

Supplementary table 1. Study results for the primary endpoint and secondary parent-related endpoints by parent sex.

Endpoint	Time	BEM							CONTROL						
		Mother			Fater			Between-group p-value*	Mother			Fater			Between-group p-value*
		Estimated mean levels (95%CI)	Estimated mean difference from T0 and 95% CI	p-value*	Estimated mean levels (95%CI)	Estimated mean difference from T0 and 95% CI	p-value*		Estimated mean levels (95%CI)	Estimated mean difference from T0 and 95% CI	p-value*	Estimated mean levels (95%CI)	Estimated mean difference from T0 and 95% CI	p-value*	
<i>PSI-SF (total)</i>	T0	74.1 (68.3;79.9)			73.6 (67.4;79.8)			0.55	83 (75.6;90.4)			77.6 (69.3;86)			0.2
	T3	71.4 (65;77.8)	-2.7(-7.2;1.8)	0.23	68.0 (61.2;74.8)	-5.6 (-10.3;-0.9)	0.02		82.9 (75.5;90.3)	-0.1 (-4.9;4.6)	0.96	71.3 (63;79.5)	-6.4 (-11.6;-1.1)	0.02	
	T6	65.4 (59.3;71.5)	-8.7(-13.6;-3.7)	0.0008	65.4 (58.9;71.9)	-8.2 (-13.4;-2.9)	0.003		78.4 (71.4;85.4)	-4.6 (-10.1;0.8)	0.1	66.2 (58.4;74)	-11.5 (-17.5;-5.4)	0.0003	
<i>PSI-SF parental distress</i>	T0	28.4 (25.7;31.2)			26.3 (23.3;29.3)			0.43	30.8 (27.8;33.9)			26 (22.6;29.5)			0.79
	T3	25.3 (22.7;27.8)	-3.1 (-5.5;-0.8)	0.009	24.5 (21.8;27.2)	-1.7 (-4.2;0.7)	0.16		29.8 (26.9;32.7)	-1.0 (-3.2;1.1)	0.35	24.1 (20.9;27.3)	-2.0 (-4.4;0.4)	0.11	
	T6	23.3 (20.7;25.9)	-5.1 (-7.7;-2.6)	0.0002	23.6 (20.8;26.3)	-2.7 (-5.4;0)	0.05		28.4 (25.5;31.3)	-2.4 (-4.9;0.1)	0.06	22.4 (19.1;25.6)	-3.7 (-6.4;-0.9)	0.01	
<i>PSI-SF dysfunctional parent-child interaction</i>	T0	19.2 (17.5;21)			19.4 (17.5;21.3)			0.56	22.9 (20.4;25.4)			22.4 (19.6;25.2)			0.17
	T3	20.2 (18;22.5)	1.0 (-0.8;2.9)	0.27	19.5 (17.1;21.9)	0.1(-1.9;2.0)	0.95		24.2 (21.7;26.8)	1.4 (-0.4;3.1)	0.12	21.4 (18.6;24.3)	-1.0 (-2.9;0.9)	0.31	
	T6	17.9 (16.1;19.8)	-1.3 (-2.9;0.4)	0.12	18.8 (16.8;20.8)	-0.6 (-2.4;1.1)	0.48		23.4 (21;25.7)	0.5 (-1.7;2.6)	0.65	20.3 (17.7;22.9)	-2.1 (-4.5;0.3)	0.08	
<i>PSI-SF difficult child</i>	T0	26.5 (23.9;29)			27.9 (25.1;30.6)			0.02	29.3 (26.4;32.1)			29.2 (26;32.5)			0.16

Endpoint	Time	BEM							CONTROL						
		Mother			Fater			Between-group p-value*	Mother			Fater			Between-group p-value*
		Estimated mean levels (95%CI)	Estimated mean difference from T0 and 95% CI	p-value*	Estimated mean levels (95%CI)	Estimated mean difference from T0 and 95% CI	p-value*		Estimated mean levels (95%CI)	Estimated mean difference from T0 and 95% CI	p-value*	Estimated mean levels (95%CI)	Estimated mean difference from T0 and 95% CI	p-value*	
	T3	26 (23.3;28.6)	-0.5 (-2;1)	0.52	24.2 (21.4;27)	-3.7 (-5.3;-2.1)	<.0001		28.7 (25.9;31.6)	-0.5 (-2.5;1.5)	0.62	25.8 (22.6;29)	-3.5 (-5.7;-1.2)	0.003	
	T6	24.3 (21.7;26.9)	-2.1 (-4.1;-0.2)	0.03	23.3 (20.5;26.1)	-4.6 (-6.6;-2.5)	<.0001		26.5 (23.8;29.2)	-2.7 (-5;-0.5)	0.02	23.5 (20.5;26.6)	-5.7 (-8.2;-3.2)	<.0001	
PHQ9	T0	6.1 (4.9;7.3)			3.9 (2.6;5.2)			0.03	7.2 (6.1;8.3)			3.9 (2.7;5.2)			0.42
	T3	4.3 (3;5.6)	-1.8 (-3;-0.6)	0.003	4.4 (3.1;5.8)	0.5 (-0.7;1.8)	0.37		6.1 (4.9;7.3)	-1.1 (-2.1;0)	0.04	3.5 (2.2;4.8)	-0.4 (-1.6;0.7)	0.47	
	T6	4.4 (3.2;5.7)	-1.7 (-2.8;-0.6)	0.003	3.8 (2.4;5.1)	-0.1 (-1.3;1.1)	0.86		5.9 (4.8;6.9)	-1.3 (-2.5;-0.2)	0.02	3.7 (2.5;4.9)	-0.2 (-1.5;1.1)	0.76	
GAD-7	T0	6.7 (5.3;8.1)			4.3 (2.9;5.8)			0.11	8.5 (7.2;9.9)			4.9 (3.4;6.4)			0.62
	T3	4.5 (3.3;5.8)	-2.1 (-3.2;-1)	0.0002	3.8 (2.4;5.1)	-0.6 (-1.7;0.6)	0.32		6.6 (5.4;7.9)	-1.9 (-3.1;-0.8)	0.001	3.4 (2;4.8)	-1.5 (-2.8;-0.2)	0.02	
	T6	4.9 (3.5;6.2)	-1.8 (-3;-0.5)	0.006	3.3 (1.8;4.7)	-1.1 (-2.4;0.3)	0.11		6.9 (5.6;8.1)	-1.7 (-2.8;-0.6)	0.003	3.1 (1.7;4.5)	-1.8 (-3;-0.6)	0.004	
B-PSQI C1_Subjective sleep quality	T0	1.4 (1.2;1.6)			1.3 (1.1;1.6)			0.88	1.3 (1.1;1.6)			1.1 (0.8;1.4)			0.98
	T3	1.1 (0.9;1.4)	-0.3 (-0.5;-0.1)	0.02	1 (0.8;1.3)	-0.3 (-0.5;-0.1)	0.01		1.3 (1;1.5)	-0.1 (-0.3;0.2)	0.62	1.0 (0.7;1.3)	-0.1 (-0.3;0.2)	0.63	
	T6	1 (0.8;1.3)	-0.3 (-0.6;-0.1)	0.006	1.1 (0.8;1.3)	-0.3 (-0.5;0)	0.03		1.3 (1.1;1.5)	0.0 (-0.3;0.2)	0.77	1.0 (0.7;1.3)	-0.1 (-0.3;0.2)	0.64	
B-PSQI C2_Latency:	T0	1 (0.7;1.3)			0.7 (0.3;1)			0.24	0.9 (0.6;1.2)			0.6 (0.3;0.9)			0.92

Endpoint	Time	BEM							CONTROL						
		Mother			Fater			Between-group p-value*	Mother			Fater			Between-group p-value*
		Estimated mean levels (95%CI)	Estimated mean difference from T0 and 95% CI	p-value*	Estimated mean levels (95%CI)	Estimated mean difference from T0 and 95% CI	p-value*		Estimated mean levels (95%CI)	Estimated mean difference from T0 and 95% CI	p-value*	Estimated mean levels (95%CI)	Estimated mean difference from T0 and 95% CI	p-value*	
	T3	0.8 (0.5;1.1)	-0.2 (-0.5;0.1)	0.22	0.8 (0.5;1.1)	0.2 (-0.1;0.5)	0.29		0.8 (0.5;1.1)	-0.1 (-0.3;0.2)	0.57	0.5 (0.2;0.9)	-0.1 (-0.4;0.2)	0.67	
	T6	0.8 (0.5;1.1)	-0.2 (-0.5;0.1)	0.13	0.7 (0.4;1)	0.0(-0.3;0.3)	0.88		0.9 (0.7;1.2)	0.0 (-0.2;0.3)	0.89	0.6 (0.3;0.9)	0.0 (-0.3;0.2)	0.82	
B-PSQI C3_Sleep duration:	T0	1.4 (1.1;1.7)			1.5 (1.2;1.8)			0.58	1.5 (1.3;1.8)			1.4 (1.1;1.7)			0.68
	T3	1.2 (0.9;1.5)	-0.2 (-0.5;0)	0.1	1.3 (1;1.7)	-0.2 (-0.5;0.1)	0.18		1.5 (1.2;1.7)	-0.1 (-0.3;0.2)	0.66	1.5 (1.2;1.7)	0.1 (-0.2;0.3)	0.45	
	T6	1.4 (1;1.7)	0.0 (-0.3;0.2)	0.71	1.3 (0.9;1.7)	-0.2 (-0.5;0.1)	0.12		1.6 (1.3;1.8)	0.1 (-0.2;0.3)	0.72	1.5 (1.3;1.8)	0.2 (-0.1;0.4)	0.25	
B-PSQI C4_Sleep efficiency:	T0	0.6 (0.3;1)			0.6 (0.2;0.9)			0.69	0.6 (0.3;0.9)			0.3 (0;0.6)			0.93
	T3	0.7 (0.3;1)	0.1 (-0.3;0.3)	0.99	0.7 (0.3;1)	0.1 (-0.2;0.5)	0.52		0.7 (0.4;0.9)	0.0 (-0.3;0.3)	0.85	0.3 (0;0.6)	0.0 (-0.3;0.3)	0.84	
	T6	0.4 (0.2;0.7)	-0.3 (-0.5;0.1)	0.19	0.2 (-0.1;0.5)	-0.3 (-0.7;0)	0.05		0.8 (0.5;1.1)	0.1 (-0.2;0.5)	0.45	0.3 (0;0.6)	0.0 (-0.3;0.4)	0.86	
B-PSQI C5_Sleep disturbances:	T0	1.2 (1;1.4)			1.2 (1;1.4)			0.64	1.3 (1.2;1.5)			1.2 (1.1;1.4)			0.22
	T3	1.2 (1;1.3)	0.0 (-0.3;0.2)	0.61	1.0 (0.8;1.2)	-0.2 (-0.5;0)	0.09		1.3 (1.1;1.5)	0.0 (-0.2;0.1)	0.96	1.1 (0.9;1.3)	-0.1 (-0.3;0.0)	0.05	
	T6	1.1 (0.9;1.3)	-0.1 (-0.3;0.1)	0.41	1.1 (0.9;1.3)	-0.2 (-0.4;0.1)	0.18		1.2 (1;1.3)	-0.1 (-0.3;0)	0.05	1.1 (0.9;1.2)	-0.1 (-0.3;0.0)	0.05	
B-PSQI C6_Use of sleep medications:	T0	0.2 (0;0.4)			0.2 (-0.1;0.4)			0.36	0.1 (0;0.3)			0.0 (-0.1;0.2)			0.5

		BEM							CONTROL						
Endpoint	Time	Mother			Fater				Mother			Fater			
		Estimated mean levels (95%CI)	Estimated mean difference from T0 and 95% CI	p-value*	Estimated mean levels (95%CI)	Estimated mean difference from T0 and 95% CI	p-value*	Between-group p-value*	Estimated mean levels (95%CI)	Estimated mean difference from T0 and 95% CI	p-value*	Estimated mean levels (95%CI)	Estimated mean difference from T0 and 95% CI	p-value*	Between-group p-value*
	T3	0.0 (-0.1;0.1)	-0.2 (-0.4;0)	0.05	0.1 (0;0.2)	-0.1(-0.3;0.2)	0.65		0.1 (0;0.2)	0.0 (-0.1;0.1)	0.87	0.0 (-0.1;0.1)	0.0 (-0.1;0.0)	0.40	
	T6	0.1 (-0.1;0.3)	-0.1 (-0.3;0.1)	0.43	0.1 (-0.1;0.3)	-0.1(-0.3;0.2)	0.59		0 (0;0.1)	-0.1 (-0.2;0)	0.15	0.0 (0;0)	0.0 (-0.2;0.1)	0.68	
<i>B-PSQI C7_Dysfunction during the day</i>	T0	0.6 (0.4;0.9)			0.7 (0.5;1)			0.65	1.0 (0.7;1.3)			0.5 (0.2;0.8)			0.78
	T3	0.6 (0.3;0.8)	-0.1 (-0.3;0.2)	0.49	0.7 (0.5;1)	0.0 (-0.2;0.3)	0.85		1.0 (0.7;1.2)	0.0 (-0.3;0.2)	0.85	0.5 (0.2;0.7)	0.0 (-0.3;0.3)	0.82	
	T6	0.6 (0.3;0.8)	-0.1 (-0.3;0.2)	0.55	0.6 (0.3;0.8)	-0.1 (-0.4;0.1)	0.29		0.8 (0.6;1.1)	-0.2 (-0.5;0.1)	0.24	0.4 (0.2;0.7)	-0.1 (-0.4;0.3)	0.68	
<i>PSESMD</i>	T0	31.4 (29.8;33)			33.0 (31.2;34.7)			0.66	29.7 (28.1;31.2)			30.5 (28.8;32.2)			0.41
	T3	32.7 (30.8;34.7)	1.3 (-0.5;3.2)	0.16	33.2 (31.1;35.2)	0.2 (-1.8;2.2)	0.83		29.4 (27.5;31.3)	1.5 (-1.1;4.1)	0.25	31.2 (29.1;33.2)	0.7 (-1.8;3.1)	0.59	
	T6	33.1 (31.1;35.2)	1.8 (-0.2;3.8)	0.08	33.9 (31.7;36.1)	0.9 (-1.2;3)	0.39		31.2 (29.4;33)	1.9 (-0.6;4.4)	0.14	31.5 (29.6;33.5)	1.8 (-1;4.5)	0.21	
<i>COPE Social support</i>	T0	29.9 (27.9;31.9)			24 (21.8;26.1)			0.86	30.1 (27.6;32.5)			24.5 (21.8;27.2)			0.81
	T3	29.6 (27;32.1)	-0.3 (-2.6;2)	0.8	24.3 (21.6;27)	0.3 (-2.1;2.8)	0.78		28.8 (26.4;31.1)	-1.3 (-3.7;1.1)	0.28	23.0 (20.4;25.7)	-1.5 (-4.1;1.2)	0.27	
	T6	28.8 (26.3;31.3)	-1.1 (-3.2;1.1)	0.34	23.8 (21.2;26.4)	-0.2 (-2.5;2.1)	0.87		28.2 (26;30.5)	-1.8 (-4.2;0.6)	0.14	21.9 (19.4;24.3)	-2.6 (-5.3;0.1)	0.06	
<i>COPE Avoidance strategies</i>	T0	21.2 (19.7;22.6)			19.6 (18;21.2)			0.96	22.5 (21;24.1)			21.3 (19.6;23.1)			0.29

Endpoint	Time	BEM							CONTROL						
		Mother			Fater			Between-group p-value*	Mother			Fater			Between-group p-value*
		Estimated mean levels (95%CI)	Estimated mean difference from T0 and 95% CI	p-value*	Estimated mean levels (95%CI)	Estimated mean difference from T0 and 95% CI	p-value*		Estimated mean levels (95%CI)	Estimated mean difference from T0 and 95% CI	p-value*	Estimated mean levels (95%CI)	Estimated mean difference from T0 and 95% CI	p-value*	
	T3	21.8 (20;23.5)	0.6 (-1.3;2.6)	0.51	20.6 (18.8;22.4)	1.0 (-1;3)	0.33		22.0 (20.4;23.6)	-1.9 (-4.3;0.4)	0.10	20.6 (18.8;22.3)	0.4 (-1.8;2.6)	0.72	
	T6	21.6 (19.5;23.7)	0.5 (-1.9;2.8)	0.69	20.3 (18;22.5)	0.7 (-1.8;3.1)	0.59		21.7 (20.4;23)	-3.5 (-5.6;-1.4)	0.002	19 (17.6;20.5)	-1.4 (-3.8;0.9)	0.23	
COPE Positive attitude	T0	31.8 (29.9;33.6)			34.4 (32.4;36.4)			0.28	33.3 (31.3;35.2)			32.2 (30;34.4)			0.24
	T3	32.4 (30.5;34.4)	0.7 (-1.3;2.6)	0.51	34.1 (32.1;36.2)	-0.3 (-2.3;1.8)	0.79		32.6 (30.9;34.2)	-2.2 (-4.9;0.5)	0.11	31.1 (29.2;33)	1.2 (-1.6;4.1)	0.39	
	T6	33.0 (30.5;35.5)	1.2 (-1.1;3.6)	0.3	33 (30.4;35.6)	-1.4 (-3.9;1.1)	0.26		33.4 (31.6;35.2)	-2.7 (-5.5;0.1)	0.06	30.6 (28.6;32.6)	-1.5 (-4;1.1)	0.25	
COPE Problem orientation	T0	32.0 (30.1;33.9)			34.7 (32.6;36.7)			0.77	32.3 (30.1;34.4)			31.7 (29.3;34.1)			0.11
	T3	32.0 (29.6;34.4)	0.0 (-2;2.1)	0.98	33.9 (31.4;36.5)	-0.7 (-2.9;1.4)	0.51		30.3 (28.1;32.6)	-1.3 (-4.7;2)	0.42	30.9 (28.4;33.4)	-0.6 (-3.8;2.6)	0.70	
	T6	31.8 (29.3;34.4)	-0.2 (-2.6;2.3)	0.9	33.2 (30.5;36)	-1.4 (-4;1.1)	0.27		31.1 (29;33.2)	-2.9 (-6.1;0.2)	0.07	29.4 (27;31.7)	0.6 (-2.8;4)	0.72	
COPE Transcendent orientation	T0	22.0 (20.4;23.7)			20.6 (18.8;22.4)			0.58	23.9 (22.4;25.4)			22.7 (21;24.4)			0.4
	T3	21.8 (20.2;23.4)	-0.2 (-1.2;0.7)	0.61	20.0 (18.3;21.7)	-0.6 (-1.6;0.4)	0.25		23.8 (22.2;25.4)	-1.8 (-4.1;0.6)	0.13	22.2 (20.4;23.9)	1.3 (-1;3.6)	0.26	
	T6	21.6 (20;23.2)	-0.4 (-1.6;0.7)	0.46	19.3 (17.6;21)	-1.3 (-2.5;-0.1)	0.04		24 (22.4;25.6)	-0.8 (-3.1;1.5)	0.51	23.2 (21.4;24.9)	-1.7 (-4;0.7)	0.17	

* Paired t-test derived from linear mixed models for repeated measures. Statistically significant p-values ($p < 0.05$) are shown in bold.