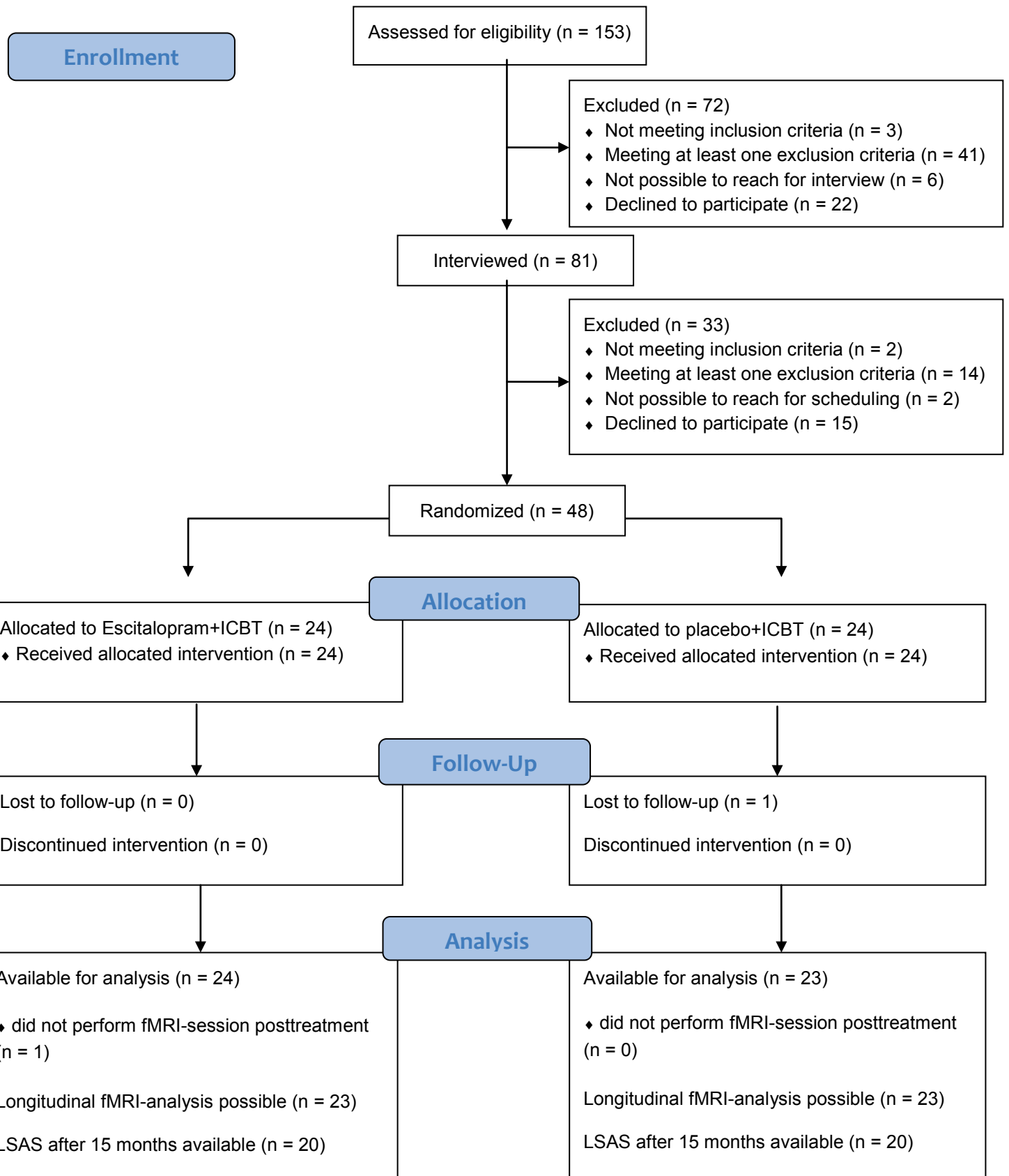
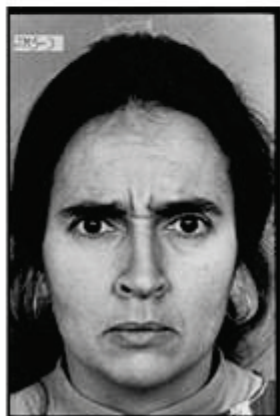


**Fig. DS1** Participant flow diagram.



**Fig. DS2** Sample stimuli in the emotional face-matching task. The task consisted of two parts, emotional face-matching and shape-matching. Participants indicated by button press in the face-matching block (A) which of the two bottom faces expressed the same emotion as the top face or in the shape-matching block (B) which of the two bottom shapes was the same as the top shape.

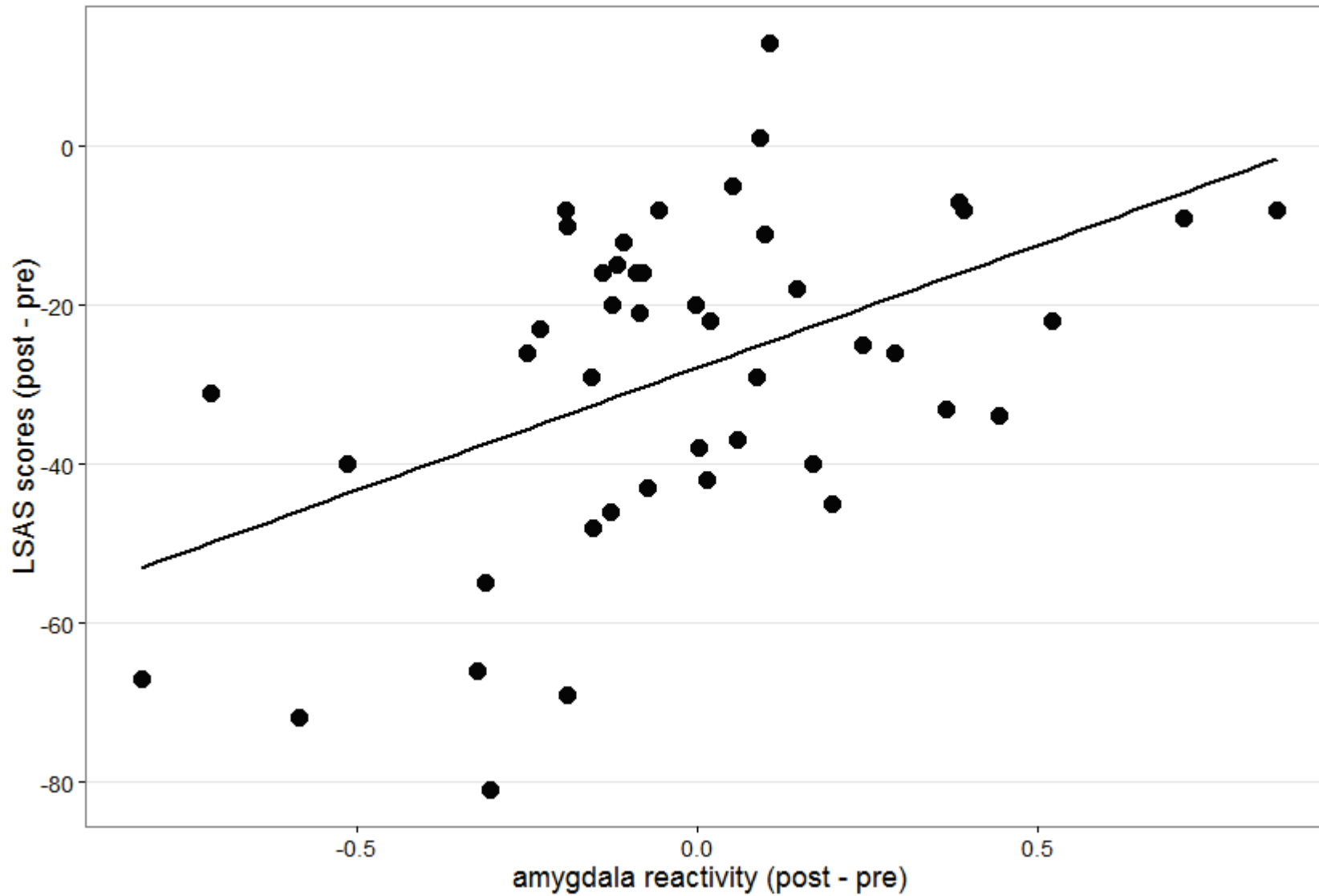
**A**



**B**



**Fig. DS3** Scatter plot and linear fit line illustrating the correlation ( $r=0.49$ ,  $P<0.001$ ) between attenuated amygdala reactivity (beta coefficients) and symptom improvement. LSAS, Liebowitz Social Anxiety Scale.



**Table DS1** Clinical variables before in comparison to after treatment

	ESCIT+ICBT (n = 24) <sup>a</sup>	Placebo+ICBT (n = 24) <sup>b</sup>	F(1, 46)	P	Partial $\eta^2$ (between)
STAI-S Anticipatory anxiety			4.62	0.04	0.09
Pre (SD)	61.7 (8.1)	63.2 (10.3)			
Post (SD)	45.5 (11.8)	54.8 (12.0)			
Paired t-test, p-value	6.01, p < 0.001	3.49, p = 0.002			
Cohen's d (within)	1.60	0.75			
Liebowitz Social Anxiety Scale clinician-administered			2.97	0.09	0.06
Pre (SD)	76.0 (23.1)	68.3 (24.6)			
Post (SD)	43.7 (23.4)	46.2 (27.7)			
Paired t-test, p-value	6.69, p < 0.001	6.36, p < 0.001			
Cohen's d (within)	1.39	0.84			
Social Phobia Scale			0.43	0.52	0.01
Pre (SD)	37.5 (16.1)	38.4 (14.4)			
Post (SD)	16.7 (12.8)	20.0 (14.0)			
Paired t-test, p-value	7.50, p < 0.001	7.23, p < 0.001			
Cohen's d (within)	1.43	1.30			
Social Interaction Anxiety Scale			2.60	0.11	0.05
Pre (SD)	52.3 (12.8)	50.1 (14.6)			
Post (SD)	29.1 (13.4)	33.1 (14.5)			
Paired t-test, p-value	7.32, p < 0.001	8.12, p < 0.001			
Cohen's d (within)	1.77	1.17			
Montgomery-Åsberg Depression Rating Scale self-report			0.16	0.69	0.003
Pre (SD)	13.9 (7.8)	14.6 (8.8)			
Post (SD)	7.0 (7.1)	8.7 (6.7)			
Paired t-test, p-value	3.76, p = 0.001	3.82, p = 0.001			
Cohen's d (within)	0.93	0.75			
Beck Anxiety Inventory			0.06	0.81	0.001
Pre (SD)	16.0 (9.8)	20.1 (10.3)			
Post (SD)	6.7 (5.7)	10.2 (6.8)			
Paired t-test, p-value	5.84, p < 0.001	5.45, p < 0.001			
Cohen's d (within)	1.16	1.13			
Quality of Life Inventory			4.79	0.03	0.09
Pre (SD)	0.7 (1.6)	0.7 (1.7)			
Post (SD)	2.2 (1.1)	1.4 (1.7)			
Paired t-test, p-value	6.13, p < 0.001	3.20, p = 0.004			
Cohen's d (within)	1.09	0.41			

ESCIT, escitalopram; ICBT, internet-delivered cognitive-behavioural therapy; STAI-S, Spielberger State-Trait Anxiety Inventory – State version.

<sup>a</sup> n = 23 available for posttreatment STAI-S in the ESCIT+ICBT group, intention-to-treat analysis performed

<sup>b</sup> n = 23 available at posttreatment in the placebo+ICBT group, intention-to-treat analysis performed.

**Table DS2** Clinical variables before treatment in comparison to 15-month follow-up

	ESCIT+ICBT (n = 24) <sup>a</sup>	Placebo+ICBT (n = 24) <sup>a</sup>	F(1, 46)	P	Partial $\eta^2$ (between)
Liebowitz Social Anxiety Scale			5.84	0.02	0.11
Pre (SD)	76.0 (23.1)	68.3 (24.6)			
Follow-up (SD)	37.7 (25.3)	45.3 (28.3)			
Paired t-test, p-value	8.14, p < 0.001	5.44, p < 0.001			
Cohen's d (within)	1.58	0.87			
Social Phobia Scale			0.48	0.49	0.01
Pre (SD)	37.5 (16.1)	38.4 (14.4)			
Follow-up (SD)	15.8 (11.5)	19.0 (14.1)			
Paired t-test, p-value	8.71, p < 0.001	8.58, p < 0.001			
Cohen's d (within)	1.55	1.36			
Social Interaction Anxiety Scale			1.77	0.19	0.04
Pre (SD)	52.3 (12.8)	50.1 (14.6)			
Follow-up (SD)	29.1 (14.0)	31.5 (14.3)			
Paired t-test, p-value	8.61, p < 0.001	8.45, p < 0.001			
Cohen's d (within)	1.73	1.29			
Montgomery–Åsberg Depression Rating Scale self-report			0.00	0.96	0
Pre (SD)	13.9 (7.8)	14.6 (8.8)			
Follow-up (SD)	8.9 (8.6)	9.8 (7.3)			
Paired t-test, p-value	2.94, p = 0.007	3.11, p = 0.005			
Cohen's d (within)	0.61	0.59			
Beck Anxiety Inventory			0.46	0.50	0.01
Pre (SD)	16.0 (9.8)	20.1 (10.3)			
Follow-up (SD)	6.7 (6.0)	9.4 (8.2)			
Paired t-test, p-value	6.82, p < 0.001	6.41, p < 0.001			
Cohen's d (within)	1.14	1.15			
Quality of Life Inventory			2.96	0.09	0.06
Pre (SD)	0.7 (1.6)	0.7 (1.7)			
Follow-up (SD)	1.9 (1.3)	1.3 (2.0)			
Paired t-test, p-value	4.26, p < 0.001	2.10, p = 0.05			
Cohen's d (within)	0.82	0.32			

ESCIT, escitalopram; ICBT, internet-delivered cognitive-behavioural therapy; STAI-S, Spielberger State-Trait Anxiety Inventory – State version.

<sup>a</sup> n = 20 available at follow-up measurement in each group, intention-to-treat analysis performed.

**Table DS3** Whole-brain analyses of treatment-related reductions in BOLD signal during emotional challenge after internet-delivered cognitive-behavioural therapy (ICBT) combined with escitalopram (ESCIT) or placebo

	BA	Hemisphere	MNI x, y, z			Z	height p-value	Cluster volume <sup>a</sup>
<b>ESCIT+ICBT &gt; placebo+ICBT</b>								
Precentral gyrus	6	Right	21	-16	55	4.46	<0.001	1404
Calcarine fissure	17	Right	0	-88	7	4.34	<0.001	1539
Precentral gyrus	4	Left	-15	-22	61	3.99	<0.001	756
Calcarine fissure	30	Left	-21	-73	7	3.80	<0.001	540
Supramarginal gyrus	40	Right	54	-40	37	3.65	<0.001	1080
Supramarginal gyrus	40	Left	-60	-43	34	3.63	<0.001	405
Superior frontal gyrus	9	Right	18	47	40	3.54	<0.001	270
Rolandic operculum	22	Left	-48	5	1	3.51	<0.001	297
<b>Responders &gt; Nonresponders (whole sample)</b>								
Inferior parietal gyrus, angular gyrus	40	Right	42	-52	46	3.83	<0.001	1701
Middle temporal gyrus	-	Right	45	-37	-11	3.80	<0.001	702
Middle temporal gyrus	21	Right	60	-43	-2	3.75	<0.001	513
Precentral gyrus	6	Right	33	2	40	3.45	<0.001	297
<b>Positive correlation with reduction in LSAS score (whole sample)</b>								
Precentral gyrus	6	Right	33	2	43	3.71	<0.001	648

BA, Brodmann area; LSAS, Liebowitz Social Anxiety Scale; MNI, Montreal Neurological Institute.

<sup>a</sup> Cluster volume in mm<sup>3</sup>