Figure 1: Participant flow for the ASPECT trial

Table 2: Baseline characteristics by randomised group for all randomised participants (n=268)

Characteristic	CBT (n=134)	OST (n=134)	All (n=268)
Child's age			
N (%)	134 (100%)	134 (100%)	268 (100%)
Mean (SD)	11.8 (2.6)	11.8 (2.6)	11.8 (2.6)
Median (IQR)	12.0 (10.0, 14.0)	12.0 (10.0, 14.0)	12.0 (10.0, 14.0)
Site			
Humber	10 (7%)	9 (7%)	19 (7%)
Tees, Esk and Wear	39 (29%)	39 (29%)	78 (29%)
South West Yorkshire	9 (7%)	5 (4%)	14 (5%)
Norfolk and Suffolk	21 (16%)	35 (26%)	56 (21%)
Northumberland	14 (10%)	10 (7%)	24 (9%)
South Tyneside	17 (13%)	18 (13%)	35 (13%)
Leeds	1 (1%)	0 (0%)	1 (0%)
RDaSH	10 (7%)	5 (4%)	15 (6%)
Exeter	1 (1%)	1 (1%)	2 (1%)
Dorset	5 (4%)	6 (4%)	11 (4%)
Cumbria	1 (1%)	1 (1%)	2 (1%)
County Durham	1 (1%)	3 (2%)	4 (1%)
Dudley and Walsall	5 (4%)	2 (1%)	7 (3%)
Sex			
Boy	53 (40%)	48 (36%)	101 (38%)
Girl	81 (60%)	86 (64%)	167 (62%)
Ethnicity			
English / Welsh / Scottish / Northern Irish / British	129 (96%)	127 (95%)	256 (96%)
Irish	0 (0%)	1 (1%)	1 (0%)

Characteristic	CBT (n=134)	OST (n=134)	All (n=268)
Any other White background	0 (0%)	1 (1%)	1 (0%)
Pakistani	1 (1%)	2 (1%)	3 (1%)
White and Black Caribbean	1 (1%)	0 (0%)	1 (0%)
White and Black African	2 (1%)	0 (0%)	2 (1%)
White and Asian	0 (0%)	2 (1%)	2 (1%)
Any other mixed / multiple ethnic background	0 (0%)	1 (1%)	1 (0%)
Prefer not to say	1 (1%)	0 (0%)	1 (0%)
School attender			
No	8 (6%)	5 (4%)	13 (5%)
Yes	126 (94%)	129 (96%)	255 (95%)
Treatment preference			
CBT	35 (26%)	43 (32%)	78 (29%)
OST	35 (26%)	30 (22%)	65 (24%)
No preference	64 (48%)	61 (46%)	125 (47%)
Taking part in another study			
No	132 (99%)	130 (97%)	262 (98%)
Yes - phobia/anxiety	2 (1%)	4 (3%)	6 (2%)
Number of adults in household			
1	18 (13%)	25 (19%)	43 (16%)
2	100 (75%)	101 (75%)	201 (75%)
3	13 (10%)	6 (4%)	19 (7%)
4	2 (1%)	2 (1%)	4 (1%)
Number of children in household			
1	37 (28%)	36 (27%)	73 (27%)

Characteristic	CBT (n=134)	OST (n=134)	All (n=268)
2	65 (49%)	68 (51%)	133 (50%)
3	28 (21%)	21 (16%)	49 (18%)
4	2 (1%)	8 (6%)	10 (4%)
5	2 (1%)	0 (0%)	2 (1%)

Table 3: Baseline characteristics by randomised group for the parents and carers of all randomised participants (n=268)

Characteristic	CBT (n=134)	OST (n=134)	All (n=268)
Age			
N (%)	132 (99%)	133 (99%)	265 (99%)
Mean (SD)	41.3 (6.4)	42.9 (7.2)	42.1 (6.9)
Median (IQR)	42.0 (37.0, 46.0)	43.0 (37.0, 48.0)	42.0 (37.0, 47.0)
Sex			
Male	15 (11%)	12 (9%)	27 (10%)
Female	119 (89%)	122 (91%)	241 (90%)
Ethnicity			
English / Welsh / Scottish / Northern Irish / British	127 (95%)	126 (94%)	253 (94%)
Irish	1 (1%)	0 (0%)	1 (0%)
Any other White background	4 (3%)	4 (3%)	8 (3%)
Pakistani	1 (1%)	2 (1%)	3 (1%)
White and Asian	0 (0%)	1 (1%)	1 (0%)
Any other mixed / multiple ethnic background	1 (1%)	0 (0%)	1 (0%)
Prefer not to say	0 (0%)	1 (1%)	1 (0%)
Highest qualification			
Primary or less	0 (0%)	2 (1%)	2 (1%)
Secondary	24 (18%)	39 (29%)	63 (24%)
Higher (e.g. University, College)	80 (60%)	66 (49%)	146 (54%)
Other qualifications	27 (20%)	25 (19%)	52 (19%)
Employment status			
Employed full-time	39 (29%)	38 (28%)	77 (29%)

Employed part-time	52 (39%)	50 (37%)	102 (38%)
Self-employed	17 (13%)	13 (10%)	30 (11%)
Currently unable to work due to poor health	6 (4%)	7 (5%)	13 (5%)
Unemployed	10 (7%)	12 (9%)	22 (8%)
Retired	0 (0%)	2 (1%)	2 (1%)
Studying/student	1 (1%)	6 (4%)	7 (3%)
Other	9 (7%)	5 (4%)	14 (5%)
Relationship to child			
Parent	129 (96%)	131 (98%)	260 (97%)
Other relative / legal guardian	5 (4%)	3 (2%)	8 (3%)
Marital status			
Married/Civil partnership - cohabiting	83 (62%)	89 (66%)	172 (64%)
Married/civil partnership - separated	2 (1%)	4 (3%)	6 (2%)
Single - living in a couple	21 (16%)	11 (8%)	32 (12%)
Single - not living in a couple	14 (10%)	11 (8%)	25 (9%)
Divorced – cohabiting	3 (2%)	5 (4%)	8 (3%)
Divorced – separated	5 (4%)	6 (4%)	11 (4%)
Widowed	1 (1%)	1 (1%)	2 (1%)
Prefer not to say	0 (0%)	1 (1%)	1 (0%)
Partner's employment status			
Employed full-time	68 (51%)	70 (52%)	138 (51%)
Employed part-time	13 (10%)	8 (6%)	21 (8%)
Self-employed	14 (10%)	18 (13%)	32 (12%)
Currently unable to work due to poor health	5 (4%)	1 (1%)	6 (2%)
Unemployed	4 (3%)	3 (2%)	7 (3%)
Retired	2 (1%)	2 (1%)	4 (1%)

Other	1 (1%)	3 (2%)	4 (1%)
Parent concerned about CYP psychological or emotional health			
Yes	67 (50%)	90 (67%)	157 (59%)
No	67 (50%)	44 (33%)	111 (41%)
Child sought help for psychological or emotional problem in last 6 months			
Yes	62 (46%)	65 (49%)	127 (47%)
No	72 (54%)	69 (51%)	141 (53%)

Table 4: Baseline assessments and Patient Reported Outcome Measures (PROMs) for all randomised participants (n=268)

Assessment/PROM		CBT (n=134)	OST (n=134)	All (n=268)
Principal diagnosis (ADIS)				
	Spiders	5 (4%)	6 (4%)	11 (4%)
	Dogs	30 (22%)	26 (19%)	56 (21%)
	Bees / Insects	5 (4%)	6 (4%)	11 (4%)
	Other animals	1 (1%)	1 (1%)	2 (1%)
	Heights	1 (1%)	2 (1%)	3 (1%)
	Darkness	2 (1%)	0 (0%)	2 (1%)
	Getting injections	23 (17%)	23 (17%)	46 (17%)
	Having blood tests	7 (5%)	8 (6%)	15 (6%)
	Seeing blood from a cut or scrape	1 (1%)	5 (4%)	6 (2%)
	Lifts or small enclosed places	0 (0%)	2 (1%)	2 (1%)
	Doctors / Dentists	1 (1%)	2 (1%)	3 (1%)
	Vomiting	41 (31%)	36 (27%)	77 (29%)
	Costumed characters	5 (4%)	1 (1%)	6 (2%)
	Choking	0 (0%)	4 (3%)	4 (1%)
	Food / Eating	3 (2%)	5 (4%)	8 (3%)
	Other	9 (7%)	7 (5%)	16 (6%)
ADIS CSR				
	N (%)	134 (100%)	134 (100%)	268 (100%)
	Mean (SD)	7.5 (0.9)	7.6 (0.9)	7.5 (0.9)
	Median (IQR)	8.0 (7.0, 8.0)	8.0 (7.0, 8.0)	8.0 (7.0, 8.0)
BAT steps				
	N (%)	134 (100%)	133 (99%)	267 (100%)

	Mean (SD)	4.1 (4.2)	4.8 (4.2)	4.4 (4.2)
	Median (IQR)	2.0 (0.0, 9.0)	4.0 (0.0, 10.0)	3.0 (0.0, 10.0)
Change in SUDS				
	N (%)	121 (90%)	120 (90%)	241 (90%)
	Mean (SD)	-0.3 (2.3)	-0.1 (1.9)	-0.2 (2.1)
	Median (IQR)	0.0 (-1.0, 0.0)	0.0 (-1.0, 1.0)	0.0 (-1.0, 1.0)
CAIS child				
	N (%)	130 (97%)	133 (99%)	263 (98%)
	Mean (SD)	17.8 (13.6)	18.1 (14.1)	17.9 (13.8)
	Median (IQR)	15.0 (8.0, 24.0)	14.0 (7.0, 26.0)	15.0 (7.0, 25.0)
CAIS parent				
	N (%)	127 (95%)	129 (96%)	256 (96%)
	Mean (SD)	20.2 (16.3)	21.9 (16.7)	21.1 (16.5)
	Median (IQR)	16.0 (6.0, 30.0)	17.0 (8.0, 33.0)	16.0 (8.0, 32.0)
CHU-9D				
	N (%)	133 (99%)	132 (99%)	265 (99%)
	Mean (SD)	0.9 (0.1)	0.8 (0.1)	0.9 (0.1)
	Median (IQR)	0.9 (0.8, 0.9)	0.9 (0.8, 0.9)	0.9 (0.8, 0.9)
EQ-5D-Y				
	N (%)	134 (100%)	133 (99%)	267 (100%)
	Mean (SD)	0.741 (0.276)	0.748 (0.258)	0.745 (0.266)
	Median (IQR)	0.812 (0.656, 1.000)	0.812 (0.689, 0.883)	0.812 (0.689, 1.000)
EQ-5D VAS				
	N (%)	134 (100%)	133 (99%)	267 (100%)
	Mean (SD)	79.1 (19.6)	77.7 (18.6)	78.4 (19.1)
	Median (IQR)	85.0 (70.0, 95.0)	80.0 (65.0, 95.0)	80.0 (70.0, 95.0)
Goal based outcome - goal 1				
	N (%)	134 (100%)	134 (100%)	268 (100%)

	Mean (SD)	1.7 (2.0)	1.9 (1.9)	1.8 (2.0)
	Median (IQR)	1.0 (0.0, 3.0)	1.5 (0.0, 3.0)	1.0 (0.0, 3.0)
Goal based outcome - goal 2				
	N (%)	127 (95%)	129 (96%)	256 (96%)
	Mean (SD)	1.9 (2.1)	2.1 (1.9)	2.0 (2.0)
	Median (IQR)	1.0 (0.0, 3.0)	2.0 (0.0, 4.0)	2.0 (0.0, 3.5)
Goal based outcome - goal 3				
	N (%)	89 (66%)	92 (69%)	181 (68%)
	Mean (SD)	2.0 (2.0)	1.9 (1.8)	1.9 (1.9)
	Median (IQR)	1.0 (0.0, 3.0)	2.0 (0.0, 3.0)	2.0 (0.0, 3.0)
RCADS child social phobia score				
	N (%)	134 (100%)	133 (99%)	267 (100%)
	Mean (SD)	8.8 (6.1)	9.7 (6.5)	9.2 (6.3)
	Median (IQR)	9.0 (4.0, 12.0)	9.0 (5.0, 14.0)	9.0 (4.0, 13.0)
RCADS child panic disorder score				
	N (%)	134 (100%)	133 (99%)	267 (100%)
	Mean (SD)	6.6 (5.4)	7.8 (6.7)	7.2 (6.1)
	Median (IQR)	6.0 (2.0, 10.0)	6.0 (3.0, 11.0)	6.0 (2.0, 10.0)
RCADS child depression score				
	N (%)	134 (100%)	133 (99%)	267 (100%)
	Mean (SD)	7.8 (5.6)	8.3 (5.7)	8.0 (5.7)
	Median (IQR)	7.0 (3.0, 11.0)	7.0 (4.0, 12.0)	7.0 (4.0, 11.0)
RCADS child separation anxiety score				
	N (%)	134 (100%)	133 (99%)	267 (100%)
	Mean (SD)	5.8 (4.7)	6.0 (4.4)	5.9 (4.5)
	Median (IQR)	5.0 (2.0, 9.0)	5.0 (2.0, 9.0)	5.0 (2.0, 9.0)

RCADS child generalised anxiety score				
	N (%)	134 (100%)	133 (99%)	267 (100%)
	Mean (SD)	6.4 (4.2)	7.1 (4.4)	6.7 (4.3)
	Median (IQR)	6.0 (3.0, 9.0)	7.0 (4.0, 10.0)	6.0 (3.0, 9.0)
RCADS child obsessive compulsive score				
	N (%)	134 (100%)	133 (99%)	267 (100%)
	Mean (SD)	4.4 (3.8)	5.0 (4.2)	4.7 (4.0)
	Median (IQR)	4.0 (1.0, 7.0)	4.0 (2.0, 7.0)	4.0 (2.0, 7.0)
RCADS child total anxiety score				
	N (%)	134 (100%)	133 (99%)	267 (100%)
	Mean (SD)	32.0 (19.1)	35.6 (21.8)	33.8 (20.5)
	Median (IQR)	28.5 (16.0, 47.0)	31.0 (19.0, 52.0)	30.0 (17.0, 49.0)
RCADS parent social phobia score				
	N (%)	134 (100%)	134 (100%)	268 (100%)
	Mean (SD)	9.6 (5.8)	11.4 (5.8)	10.5 (5.9)
	Median (IQR)	9.0 (5.0, 13.0)	11.0 (7.0, 15.0)	10.0 (6.0, 14.0)
RCADS parent panic disorder score				
	N (%)	133 (99%)	134 (100%)	267 (100%)
	Mean (SD)	6.1 (5.0)	7.7 (5.9)	6.9 (5.5)
	Median (IQR)	5.0 (2.0, 8.0)	6.0 (3.0, 10.0)	5.0 (3.0, 10.0)
RCADS parent depression score				
	N (%)	134 (100%)	134 (100%)	268 (100%)
	Mean (SD)	8.0 (5.5)	8.8 (5.8)	8.4 (5.6)
	Median (IQR)	7.0 (4.0, 11.0)	8.0 (5.0, 13.0)	7.5 (4.0, 12.0)

RCADS parent separation anxiety score				
	N (%)	134 (100%)	134 (100%)	268 (100%)
	Mean (SD)	6.4 (4.9)	7.3 (5.2)	6.9 (5.1)
	Median (IQR)	5.0 (2.0, 10.0)	6.0 (3.0, 12.0)	6.0 (3.0, 10.0)
RCADS parent generalised anxiety score				
	N (%)	133 (99%)	134 (100%)	267 (100%)
	Mean (SD)	6.8 (4.3)	7.7 (4.5)	7.2 (4.4)
	Median (IQR)	6.0 (3.0, 10.0)	7.0 (4.0, 11.0)	7.0 (4.0, 10.0)
RCADS parent obsessive compulsive score				
	N (%)	132 (99%)	134 (100%)	266 (99%)
	Mean (SD)	3.6 (3.8)	3.9 (3.1)	3.7 (3.5)
	Median (IQR)	2.0 (0.5, 6.0)	3.0 (2.0, 6.0)	3.0 (1.0, 6.0)
RCADS parent total anxiety score				
	N (%)	132 (99%)	134 (100%)	266 (99%)
	Mean (SD)	32.4 (19.1)	37.9 (20.3)	35.2 (19.9)
	Median (IQR)	29.0 (17.5, 45.0)	35.0 (23.0, 51.0)	32.0 (19.0, 50.0)

ADIS CSR is measured on a 0-8 scale, higher score means the phobia is more disturbing

BAT steps is measured on 0 (no steps completed) to 10 (all steps completed)

SUDS is measured on a 0-8 scale, higher scores mean more anxiety/fear

CAIS measures impact of anxiety symptoms on psychological function on the 0-81 scale, higher scores represent greater impact

CHU-9D is measured on a 0.33-1 scale higher scores mean greater health related quality of life

EQ-5D-Y is measured on a scale of -0.594 to one (full health)

Goal based outcome is measured from 0 (goal not at all met) to 10 (goal reached)

RCADS measures anxiety and depression symptoms, higher scores mean more anxiety/depression symptoms RCADS total anxiety is measured on 0-111 scale

Table 5: Comparison of mean 6-month assessment and quality of life outcomes by treatment group (n=197)

| Outcome | Treatment group | | | |
| | CBT | | OST | |
	N	Mean (SD)	n	Mean (SD)
BAT steps	76	7.1 (3.9)	73	7.4 (3.6)
SUDS before	74	3.8 (3.0)	72	3.7 (2.7)
SUDS change	74	-0.8 (2.1)	70	-0.5 (2.0)
ADIS CSR	97	5.1 (2.6)	100	4.9 (2.7)
CAIS child	93	12.0 (11.2)	96	14.5 (14.3)
CAIS parent	92	14.4 (14.5)	92	15.0 (15.8)
CHU-9D	95	0.89 (0.10)	96	0.87 (0.10)
EQ-5D-Y	96	0.81 (0.24)	98	0.82 (0.23)
EQ-5D-Y VAS	96	84.2 (16.3)	98	82.6 (17.1)
Goal based outcome - goal 1	94	6.4 (3.2)	95	5.8 (3.4)
Goal based outcome - goal 2	91	6.2 (3.5)	94	5.9 (3.2)
Goal based outcome - goal 3	66	6.5 (3.7)	69	6.1 (3.2)
RCADS child social phobia score	96	7.3 (5.8)	97	8.6 (6.0)
RCADS child panic disorder score	96	5.0 (4.7)	97	5.6 (5.2)

BAT is measured on a 0 (no steps) to 10 (all steps completed) scale, a positive difference means the CBT group completed more steps at six-months than the OST group
SUDS is measured on a 0-8 scale, higher scores mean more anxiety/fear
ADIS CSR is measured on a 0-8 scale higher score means phobia is more disturbing
CAIS measures impact of anxiety symptoms on psychological function on the 0-81 scale, higher scores represent greater impact
CHU-9D is measured on a 0.33-1 scale higher scores mean greater health related quality of life
EQ-5D-Y is measured on a scale of -0.594 to one (full health)
Goal based outcome is measured from 0 (goal not at all met) to 10 (goal reached)
RCADS measures anxiety and depression symptoms, higher scores mean more anxiety/depression symptoms RCADS total anxiety is measured on 0-111 scale

Table 6: Adverse events and serious adverse events by treatment group (n=268)

Adverse Events	CBT (n=134)	OST (n=134)	All (n=268)
Number (%) of participants who experienced >=1 AE	4(3.0%)	5(3.7%)	9(3.4%)
Number of all AEs (including repeated events)	5	5	10
Number (%) of participants who experienced >=1 SAE	2(1.5%)	1(0.7%)	3(1.1%)
Number of all SAEs (including repeated events)	3	1	4
Occurred			
Before randomisation	1 (20.0%)	0 (0.0%)	1 (10.0%)
After randomisation	4 (80.0%)	5 (100.0%)	9 (90.0%)
AE category			
fainting/light headedness	1 (20.0%)	1 (20.0%)	2 (20.0%)
Needle injury/scratch	1 (20.0%)	1 (20.0%)	2 (20.0%)
Inpatient hospitalisation	3 (60.0%)	1 (20.0%)	4 (40.0%)
Other	0 (0.0%)	2 (40.0%)	2 (20.0%)
Seriousness			
Inpatient hospitalisation	3 (60.0%)	1 (20.0%)	4 (40.0%)
Intensity			
Moderate	1 (20.0%)	1 (20.0%)	2 (20.0%)
Severe	2 (40.0%)	0 (0.0%)	2 (20.0%)
Relationship to phobia treatment			
Unrelated	3 (60.0%)	1 (20.0%)	4 (40.0%)