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School-based early intervention for anxiety and depression in older adolescents: a feasibility randomised controlled trial of a self-referral stress management workshop programme ("DISCOVER")

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		Arm					
Variable		Combined		Experimental		Control	
		N	%	N	%	N	%
Total students		155	100.0	72	46.5	83	53.6
Gender	Male	29	18.7	7	9.7	22	26.5
	Female	126	81.3	65	90.3	61	73.5
Age	Years (mean sd)	17.3	0.77	17.1	0.73	17.5	0.76
Ethnicity	White British	34	21.9	14	19.4	20	24.1
	White other (incl Irish)	15	9.6	6	8.3	9	10.8
	Asian or British Asian	11	7.1	6	8.3	5	6.0
	Black or Black British	69	44.5	38	52.8	31	37.3
	Mixed Background	8	5.2	2	2.8	6	7.2
	Chinese	1	0.6	1	1.4	0	0.0
	Other	16	10.3	5	6.9	11	13.3
	Prefer not to say	1	0.6	1	1.2	0	0.0
School	A	20	12.9	20	27.8	0	0.0
	B	19	12.3	0	0.0	19	22.9
	C	17	11.0	17	23.6	0	0.0
	D	7	4.5	7	9.7	0	0.0
	E	15	9.7	15	20.8	0	0.0
	F	15	9.7	0	0.0	15	18.1
	G	23	14.8	0	0.0%	23	27.7
	H	9	5.8	0	0.0	9	10.8
	I	17	11.0	0	0.0	17	20.5
	J	13	8.4	13	18.1	0	0.0
School Borough	Lambeth	55	35.5	55	76.4	0	0.0
	Southwark	100	64.5	17	23.6	83	100.0
School year	Year 12	81	52.3	50	69.4	31	37.3
	Year 13	74	47.7	22	30.6	52	62.7
Teacher recommend	Yes	44	28.6	26	36.6	18	21.7
	No	110	71.4	45	63.4	65	78.3
English 1st language	Yes	124	80.0	58	80.6	66	79.5
	No	31	20.0	14	19.4	17	20.5
Previous counselling	Yes	47	30.3	20	27.8	27	32.5
	No	108	69.7	52	72.2	56	67.5
Type of help	School	16	34.8	9	45.0	7	26.9
	CAMHS	9	19.6	3	15.0	6	23.1
	Private organisation	3	6.5	0	0.0	3	11.5
	Youth counselling	2	4.3	1	5.0	1	3.8
	Not specified	16	34.8	7	35.0	9	34.6
Help received	CBT	4	8.9	2	10.5	2	7.7
	Talking therapy	16	35.6	8	42.1	8	30.8
	Whole-family therapy	1	2.2	0	0.0	1	3.8
	Not specified	19	42.2	8	42.1	11	42.3
	Unknown to participant	5	11.1	1	5.3	4	15.4

Table 1. Baseline characteristics of participants.

	Self-referred independently n=110 (71.4%)	Self-referred with encouragement of teacher n=44 (28.6%)	Significant differences
Gender			
male	17	12	Λ^2 =2.82, df=1, p=0.074
female	93	32	
Ethnic background			
white British	22	12	Λ^2 =3.6, df=2, p=0.16
BME	88	31	
prefer not to say		1	
year			
year 12	56	24	
year13	54	20	Λ^2 =0.17, df=1, p=0.4
Previous experience of counselling/therapy			
no	86	22	
yes	24	22	Λ^2 =11.9, df=1, p=0.001
Depression scores	18.35 (SD=10.36)	25.7 (SD=12.01)	F(152)=3.79, p=0.000
Depression 'cases'			
cases (% within referral group)	24 (21.8%)	18 (40.9%)	Λ^2 =5.8, df=1, p=0.015
non-cases (% within referral group)	86 (78.2%)	26 (59.1%)	
Anxiety	48.45 (SD=11.36)	56.35 (SD=13.33)	F(152)=3.705, p=0.000
Anxiety 'cases'			
cases (% within referral group)	46 (41.8%)	29 (65.9%)	Λ^2 =7.3, df=1, p=0.006
not cases (% within referral group)	64 (58.2%)	15 (34.1%)	

Table 2 Differences between students who self-referred independently and with teacher encouragement

	Experimental		Control		Mixed model analyses			
Measure	Baseline (N=72)	3 months (N=62)	Baseline (N=83)	3 months (N=80)	Treatment effect (95% CI)	z	p	Cohen's d (95% C.I.)
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)				
PQLESQ	0.6 (0.1)	0.7 (0.1)	0.6 (0.1)	0.6 (0.1)	0.046 (0.011 to 0.081)	2.60	0.009	0.36 (0.09 to 0.64)
MFQ Total	20.3 (11.9)	14.8 (8.9)	20.8 (10.9)	18.1 (10.4)	-3.03 (-5.61 to -0.46)	-2.31	0.021	-0.27 (-0.49 to -0.04)
WEMWBS	42.9 (8.1)	47.5 (8.3)	41.2 (7.5)	43 (7.1)	3.57 (1.37 to 5.76)	3.19	0.001	0.46 (0.17 to 0.73)
Anxiety T	51.1 (12.9)	45.2 (10.8)	50.6 (12.1)	48 (12.1)	-3.12 (-5.71 to -0.53)	-2.36	0.018	-0.25 (-0.46 to -0.04)
RCADS T	51.7 (12.9)	45.4 (10.9)	51.3 (12.2)	48.8 (11.9)	-3.45 (-6.01 to -0.88)	-2.64	0.008	-0.28 (-0.48 to -0.07)

Table 3. Outcomes by treatment arm at baseline and 3-months and estimated treatment effects at follow-up after controlling for baseline measures and school as random factor using a mixed effects model.

SD estimates at baseline		Mean	Above clinical cut-off n (%)	observed SD	bSE	lower 80%	upper 80%	lower 95%	upper 95%
PQLESQ	155	0.602	N/A	0.127	0.006	0.119	0.135	0.115	0.139
MFQ	155	20.56	43 (27.7%)	11.36	0.60	10.59	12.14	10.18	12.54
RCADS Anxiety	155	50.81	12 (7.7%)	12.46	0.78	11.46	13.46	10.93	13.99
RCADS Total	155	51.48	11 (7.1%)	12.51	0.82	11.46	13.55	10.90	14.11
WEMWBS	155	41.99	N/A	7.84	0.43	7.29	8.39	7.00	8.69

Table 4. Outcomes at baseline, including variance estimates. Observed SD at baseline with bootstrap SE (bSE) confidence intervals.

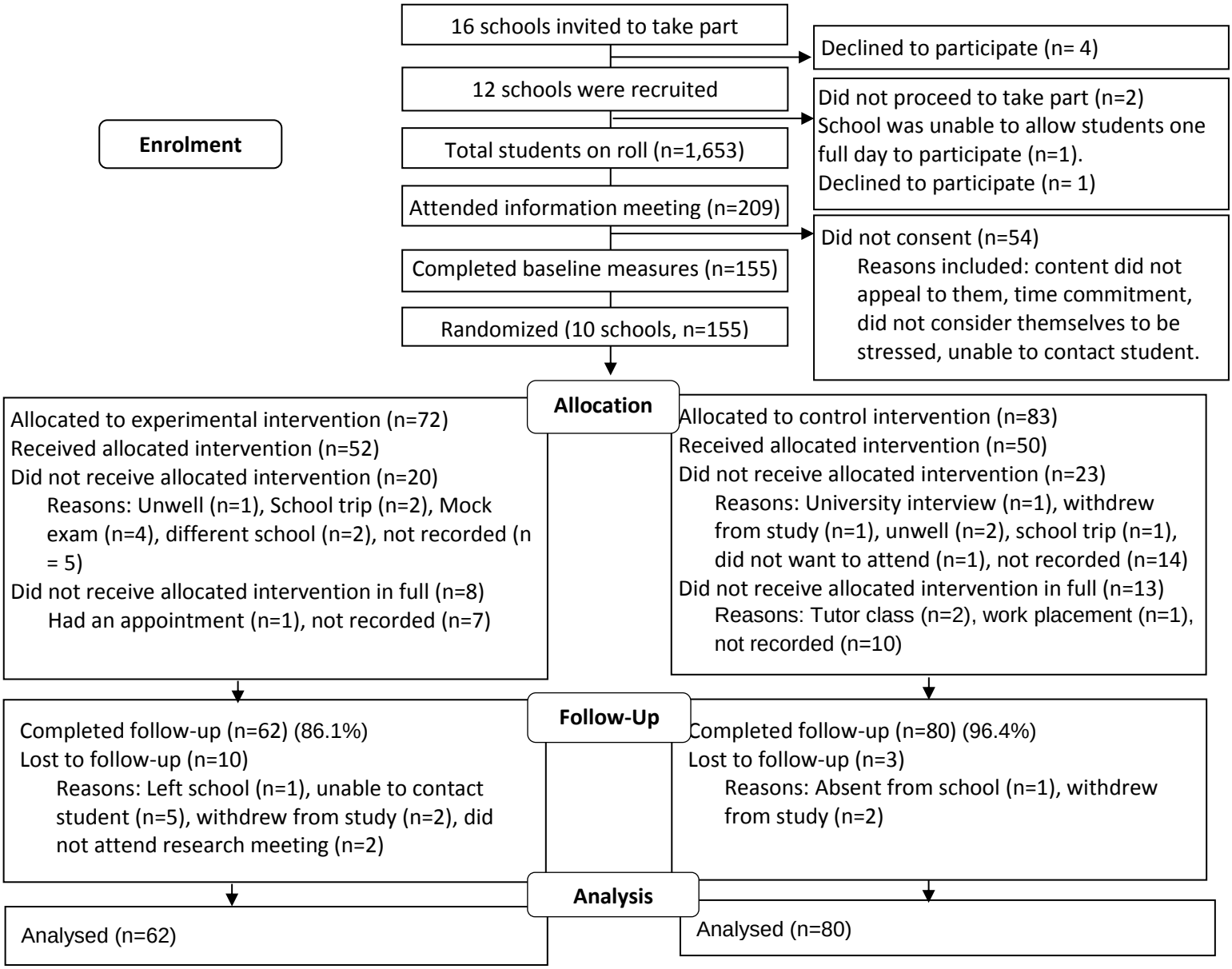

Figure 1. Consort diagram showing participant flow throughout the trial.