

**Effectiveness of the Thinking Healthy Programme for perinatal depression delivered through peers:
pooled analysis of two randomized controlled trials in India and Pakistan**

SUPPLEMENT

Table A1. Factors associated with country.

Variable	Adjusted odds ratio (95% CI) for Pakistan versus India^a	P value
Age, per 10 years	0.98 (0.50,1.91)	0.95
Level of education		<0.001
None	1 (reference)	
Primary	0.09 (0.04,0.24)	
Secondary	1.60 (0.73,3.50)	
Higher secondary/above	2.46 (0.96,6.28)	
Occupation		0.003
Does not work	1 (reference)	
Works	0.28 (0.12,0.65)	
Chronicity of depression, weeks		<0.001
<12	0.14 (0.08,0.25)	
≥12	1 (reference)	
Symptom severity (PHQ-9 score)		0.003
10-14	1 (reference)	
15-19	2.41 (1.32,4.40)	
≥20	3.73 (1.29,10.81)	
MSPSS score, per unit	0.40 (0.31,0.51)	<0.001
Participant's expectation of usefulness of counselling		<0.001
Not/a little useful	1 (reference)	
Somewhat useful	3.30 (1.14,9.55)	
Moderately useful	11.17 (3.97,31.43)	
Very useful	5.07 (1.89,13.60)	
Parity		0.56
Primiparous	1 (reference)	
Multiparous	1.22 (0.63,2.36)	
Previous miscarriage or still birth		<0.001
None	1 (reference)	
One or more	9.43 (4.05,21.95)	
Domestic violence		0.01
No	1 (reference)	
Yes	0.34 (0.15,0.79)	
Time between screening and birth of child, per month	0.54 (0.43,0.66)	<0.001

PHQ=Patient Health Questionnaire. MSPSS=Multidimensional Scale of Perceived Social Support. CI=confidence interval.

^aLogistic regression model. N=589 (women with any missing data were excluded). Broadly similar results were obtained from models excluding chronicity of depression and time between screening and birth (which had the highest missingness, particularly in Pakistan).

Table A2. Sensitivity analyses for the primary outcomes.

	Number of clusters	Intervention effect (adjusted mean difference or odds ratio; 95% CI) ^a	P value	P value for effect modification by country
Symptom severity (PHQ-9 score) at 6 months				
Primary analysis as reported in Table 4 (GEEs with individuals in India acting as their own clusters)	291	-0.78 (-1.47,-0.09)	0.03	0.77
GEEs with individuals in India grouped as one cluster	41	-0.82 (-1.64,-0.01) ^b	0.05 ^b	0.81 ^b
Random effects models with individuals in India acting as their own clusters	291	-0.82 (-1.64,-0.01)	0.05	0.81
Random effects models with individuals in India grouped as one cluster	41	-0.82 (-1.64,-0.01)	0.05	0.81
Remission (PHQ-9 score <5) at 6 months				
Primary analysis as reported in Table 4 (GEEs with individuals in India acting as their own clusters)	291	1.35 (1.02,1.78)	0.04	0.18
GEEs with individuals in India grouped as one cluster	41	1.39 (1.02,1.91) ^b	0.04 ^b	0.20 ^b
Random effects models with individuals in India acting as their own clusters	291	1.39 (0.02,1.91)	0.04	0.20
Random effects models with individuals in India grouped as one cluster	41	1.39 (1.02,1.91)	0.04	0.20

^aLinear or logistic GEE models as described in the methods section, adjusted for country, recruitment site, residence, union council, baseline symptom severity, treatment expectations, education, chronicity of depression, and time between screening and birth (see methods). ^bUsing independent correlation matrix due to convergence problems when using exchangeable correlation structure.

Table A3. Remission (PHQ-9 score <5) at 6 months by potential effect modifiers.

	Number of participants		Number with remission (%)		Intervention effect (adjusted odds ratio; 95% CI) ^a	P value for effect modification
	Control	Intervention	Control	Intervention		
Age, years						0.18
18-24	135	132	91 (69%)	74 (55%)	1.86 (1.08,3.20)	
≥25	220	217	110 (51%)	104 (47%)	1.20 (0.87,1.66)	
Chronicity of depression, weeks						0.03
<12	105	103	73 (71%)	55 (52%)	2.54 (1.39,4.65)	
≥12	172	178	88 (49%)	79 (46%)	1.10 (0.73,1.65)	
Missing ^b	78	68	40 (59%)	44 (56%)	-	
Baseline symptom severity (PHQ-9 score)						0.49
10-14	223	209	135 (65%)	124 (56%)	1.48 (1.01,2.17)	
≥15	132	140	66 (47%)	54 (41%)	1.17 (0.73,1.90)	
Treatment expectations ^c						0.85
None/little/somewhat	114	96	56 (58%)	58 (51%)	1.29 (0.73,2.26)	
Moderate/very useful	241	252	144 (57%)	120 (50%)	1.37 (0.98,1.93)	
Parity						0.03
Primiparous	91	95	72 (76%)	52 (57%)	2.59 (1.35,4.93)	
Multiparous	264	254	129 (51%)	126 (48%)	1.10 (0.80,1.52)	

PHQ=Patient Health Questionnaire. CI=confidence interval. ^aLogistic GEE models, adjusted for country, recruitment site, residence, union council, baseline symptom severity, treatment expectations, education, chronicity of depression, and time between screening and birth (see methods). Baseline treatment expectations missing for one woman in Pakistan control group, therefore models are based on one fewer women than indicated by the numbers indicated. These results are illustrated in Figure 1B. ^bModel includes missing chronicity category, but interaction effects are presented only among those with non missing chronicity. ^cMissing for one woman in Pakistan control group, who is omitted.

Table A4. Symptom severity (PHQ-9 score) at 6 months by potential effect modifiers.

	Number of participants		Mean symptom severity (PHQ-9 score; SE)		Intervention effect (adjusted mean difference; 95% CI) ^a	P value for effect modification
	Control	Intervention	Control	Intervention		
Age, years						0.27
18-24	135	132	5.9 (0.5)	4.4 (0.5)	-1.38 (-2.66,-0.10)	
≥25	220	217	6.0 (0.4)	5.5 (0.4)	-0.44 (-1.35,0.47)	
Chronicity of depression, weeks						0.49
<12	105	103	5.1 (0.5)	3.7 (0.5)	-1.67 (-3.16,-0.18)	
≥12	172	178	6.9 (0.5)	5.8 (0.4)	-0.99 (-2.02,0.03)	
Missing ^b	78	68	4.9 (0.6)	5.6 (0.7)	-	
Baseline symptom severity (PHQ-9 score)						0.80
10-14	223	209	5.1 (0.4)	4.4 (0.4)	-0.69 (-1.65,0.27)	
≥15	132	140	7.4 (0.6)	6.2 (0.5)	-0.91 (-2.14,0.31)	
Treatment expectations ^c						0.35
None/little/somewhat	114	96	6.3 (0.6)	4.5 (0.5)	-1.37 (-2.80,0.05)	
Moderate/very useful	241	252	5.8 (0.4)	5.3 (0.4)	-0.54 (-1.39,0.30)	
Parity						0.29
Primiparous	91	95	4.8 (0.5)	3.3 (0.5)	-1.51 (-3.05,0.04)	
Multiparous	264	254	6.4 (0.4)	5.8 (0.4)	-0.51 (-1.32,0.29)	

PHQ=Patient Health Questionnaire. SE=standard error. CI=confidence interval. ^aLinear GEE models, adjusted for country, recruitment site, residence, union council, baseline symptom severity, treatment expectations, education, chronicity of depression, and time between screening and birth (see methods). Baseline treatment expectations missing for one woman in Pakistan control group, therefore models are based on one fewer women than indicated by the numbers indicated. These results are illustrated in Figure 1A. ^bModel includes missing chronicity category, but interaction effects are presented only among those with non missing chronicity. ^cMissing for one woman in Pakistan control group, who is omitted.

Table A5. Factors associated with the primary outcomes.

	Symptom severity (PHQ-9 score) at 6 months		Remission (PHQ-9 score <5) at 6 months	
	Adjusted mean difference (95% CI) ^a	P value	Adjusted odds ratio (95% CI) ^a	P value
Randomised group		0.03		0.04
Control	0 (reference)		1 (reference)	
Intervention	-0.78 (-1.47,-0.09)		1.35 (1.02,1.78)	
Country		<0.001		0.001
India	0 (reference)		1 (reference)	
Pakistan	2.81 (1.23,4.39)		0.34 (0.18,0.64)	
Recruitment site		0.84		0.81
N/A (Pakistan) or Goa Medical College Hospital	0 (reference)		1 (reference)	
Asilo	0.32 (-1.15,1.79)		1.10 (0.62,1.96)	
Primary health centres	-0.46 (-3.93,3.02)		1.62 (0.37,7.20)	
Residence		0.67		0.85
N/A (Pakistan) or rural	0 (reference)		1 (reference)	
Urban	-0.38 (-2.09,1.33)		1.07 (0.54,2.09)	
Union council		0.002		0.03
N/A (India) or Guf	0 (reference)		1 (reference)	
Kallar	-0.61 (-2.22,0.99)		1.44 (0.76,2.75)	
Kanoha	0.06 (-1.70,1.83)		1.47 (0.71,3.02)	
Sakot	-1.67 (-3.81,0.46)		1.55 (0.66,3.65)	
Choa	-1.33 (-3.23,0.58)		1.00 (1.00,1.00)	
Smoot	-2.60 (-4.66,-0.53)		1.87 (0.86,4.09)	
Bewek	1.68 (0.15,3.21)		3.14 (1.32,7.47)	
Darkali	-0.92 (-2.38,0.54)		0.57 (0.29,1.11)	
Bishandot	0.49 (-1.19,2.17)		1.24 (0.69,2.24)	
Sagri	-0.84 (-2.39,0.71)		1.31 (0.67,2.56)	
Nallah	-2.57 (-4.75,-0.39)		1.52 (0.81,2.86)	
Symptom severity (PHQ-9 score)		0.004		0.02
10-14	0 (reference)		1 (reference)	
15-19	1.56 (0.61,2.51)		0.59 (0.41,0.85)	
≥20	1.39 (-0.10,2.87)		0.71 (0.40,1.26)	
Participant's expectation of usefulness of counselling		0.78		0.99
Not/a little useful	0 (reference)		1 (reference)	
Somewhat useful	-0.22 (-1.81,1.38)		0.99 (0.53,1.84)	
Moderately useful	-0.19 (-1.70,1.33)		0.95 (0.52,1.72)	
Very useful	-0.62 (-2.12,0.88)		1.01 (0.56,1.82)	
Education status		0.009		0.12
No formal education	0 (reference)		1 (reference)	
Up to primary	-0.37 (-1.83,1.09)		1.12 (0.64,1.98)	
Up to secondary	-0.47 (-1.65,0.71)		1.43 (0.91,2.27)	
Beyond secondary	-2.38 (-3.90,-0.86)		1.95 (1.07,3.55)	
Chronicity of depression, weeks		0.13		0.07

<12	-0.45 (-1.52,0.63)		1.06 (0.70,1.62)	
≥12	0 (reference)		1 (reference)	
Missing	-1.23 (-2.44,-0.01)		1.74 (1.09,2.79)	
Time between screening and birth of child, per month	-0.16 (-0.46,0.14)	0.30	1.08 (0.96,1.22)	0.19

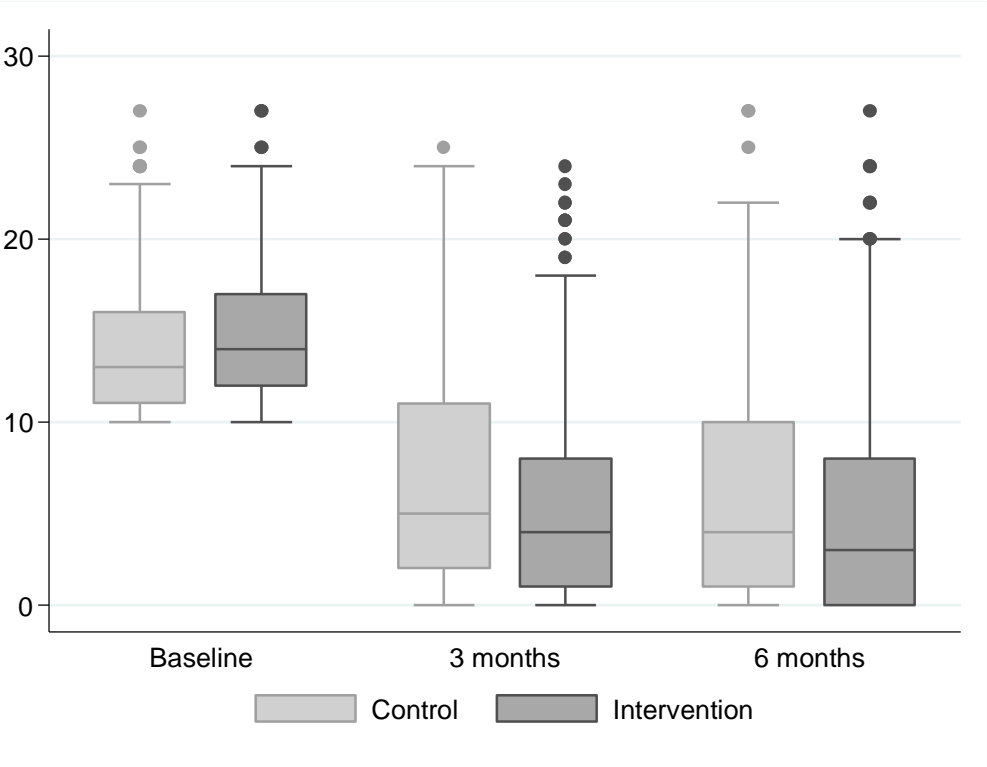
PHQ=Patient Health Questionnaire. MSPSS=Multidimensional Scale of Perceived Social Support. CI=confidence interval. N/A=not applicable. ^aLinear or logistic GEE models as described in the methods section, adjusted for all variables shown in the table.

Table A6. Analysis of repeated measures for the primary and secondary outcomes.

	P value for group by time interaction	Overall adjusted mean difference or odds ratio (95% CI)	P value for overall intervention effect
Primary outcomes			
Symptom severity (PHQ-9 score)	0.17	-1.30 (-1.86,-0.74)	<0.001
Remission (PHQ-9 score <5)	0.98	1.39 (1.13,1.72)	0.002
Secondary outcomes			
WHO DAS score	0.81	-2.56 (-4.31,-0.81)	0.004
Number of days unable to work in last month	0.82	-0.12 (-0.55,0.32)	0.59
MSPSS score	0.37	0.25 (0.11,0.38)	<0.001

PHQ=Patient Health Questionnaire. WHO-DAS=World Health Organization Disability Assessment Schedule. MSPSS=Multidimensional Scale of Perceived Social Support. CI=confidence interval. Linear or logistic GEE models, adjusted for visit month, country, recruitment site, residence, union council, baseline symptom severity, treatment expectations, education, chronicity of depression, and time between screening and birth (see methods).

Figure A1. Symptom severity (PHQ-9 score) over time.



The central line shows the median score, the length of the box is the interquartile range, the lines are the most extreme values within 1.5 times the interquartile range, and points outside this range are shown individually.