

## Supplemental Information

### EXAMPLE OF SEARCH STRATEGY FOR MEDLINE DATABASE

((maternal OR psychosocial OR responsive OR early OR childhood OR child OR home) adj stimulation).ab,ti OR responsive care.ab,ti OR sensitizing caregiver\*.ab,ti OR misc.ab,ti)

AND

(randomized controlled trial.pt OR controlled clinical trial.pt OR random\*.ab,ti OR placebo\*.ab,ti OR blind\*.ab,ti OR trial.ab,ti OR groups.ab,ti)

AND

(exp Developing Countries/ OR ((developing OR less\* developed OR third world OR under developed OR middle income OR low income OR underserved OR under served OR deprived OR poor\*) adj1 (count\* OR nation? OR state? OR population?)).tw OR (lmic OR lmic).tw OR exp Africa/ OR exp Asia/ OR exp South America/ OR exp Latin America/ OR exp Central America/ OR (Africa OR Asia OR South America OR Latin America OR Central America).tw OR (Afghanistan\* OR Albania\* OR Algeria\* OR Samoa\* OR Angola\* OR Armenia\* OR Azerbaijan\* OR Bangladesh\* OR Bengali OR Belarus\* OR Belize OR Benin OR Bhutan\* OR Bolivia\* OR Bosnia\* OR Herzegovina\* OR Botswana\* OR Brazil\* OR Bulgaria\* OR Burkina Faso OR Burundi\* OR Cabo Verd\* OR Cape Verd\* OR Cambodia\* OR Cameroon\* OR Central African\* OR Chad\* OR China OR Chinese OR Colombia\* OR Comoros OR Congo OR Costa Rica\* OR Cote d'Ivoire OR Ivory Coast OR Cuba OR Cuban OR Djibouti OR Dominica\* OR Ecuador OR Egypt OR El Salvador\* OR Eritrea\* OR Ethiopia\*

OR Fiji\* OR Gabon\* OR Gambia\* OR Georgia\* OR Ghana\* OR Grenada\* OR Guatemala\* OR Guinea\* OR Guyan\* OR Haiti\* OR Hondura\* OR India OR Indian\* OR Indonesia\* OR Iran\* OR Iraq\* OR Jamaica\* OR Jordan OR Kazakh\* OR Kenya\* OR Kiribati OR People\* Republic of Korea OR North Korea OR Kosovo OR Kosovar\* OR Kyrgyz\* OR Lao OR Laos OR Laotian\* OR Lebanon OR Lebanes\* OR Lesotho OR Liberia\* OR Libya\* OR Macedonia\* OR Madagascar\* OR Malawi\* OR Malaysia\* OR Maldives OR Mali OR Malian OR Marshall Island\* OR Mauritania\* OR Mauriti\* OR Mexico OR Mexican\* OR Micronesia\* OR Moldova\* OR Mongolia\* OR Montenegr\* OR Morocc\* OR Mozambique OR Myanmar OR Burmese\* OR Burma OR Namibia\* OR Nepal\* OR Nicaragua\* OR Niger\* OR Pakistan\* OR Palau OR Panama\* OR Paraguay\* OR Peru\* OR Philippin\* OR Romania\* OR Rwanda\* OR Samoa\* OR Sao Tome OR Principe OR Senegal\* OR Serbia\* OR Sierra Leone\* OR Solomon Island\* OR Somalia\* OR South Africa\* OR Sri Lanka OR St Lucia OR Saint Lucia OR St Vincent OR Saint Vincent OR Grenadines OR Sudan\* OR Suriname\* OR Swaziland\* OR Syria\* OR Tajik\* OR Tanzania\* OR Thai\* OR Timor\* OR Togo\* OR Tonga\* OR Tunisia\* OR Turkey OR Turkish OR Turkmen\* OR Tuvalu\* OR Uganda\* OR Ukrain\* OR Uzbeki\* OR Vanuatu\* OR Vietnam\* OR Viet nam\* OR West Bank OR Gaza\* OR Palestin\* OR Yemen\* OR Zambia\* OR Zimbabw\*).tw,sh,in)

These same search terms were customized for the other databases.

**SUPPLEMENTAL TABLE 3** Risk of Bias in Randomized Controlled Studies of Stimulation Interventions in LMICs

Study	Selection Bias		Performance Bias	Detection Bias	Attrition Bias	Reporting Bias
	Random Sequence Generation	Allocation Concealment	Blinding of Participants and Personnel	Blinding of Outcome Assessors	Incomplete Outcome Data	Selective Reporting
Aboud and Akhter <sup>33</sup>	Unclear	Unclear	High	Low	Low	Low
Aboud et al <sup>14</sup>	Unclear	Unclear	High	Low	Low	Low
Attanasio et al <sup>18</sup>	Low	Low	High	Low	Low	Low
Baker-Henningham et al <sup>19</sup>	Unclear	Unclear	High	Low	Low	Unclear
Chang et al <sup>27</sup>	Low	Low	High	Low	Low	Low
Cooper et al <sup>17</sup>	Low	Low	High	Low	Low	Low
Hamadani et al <sup>15</sup>	Unclear	Unclear	High	Low	Low	Unclear
Nahar et al <sup>31</sup>	Low	Low	High	Low	Low	Unclear
Powell et al <sup>25</sup>	Low	Unclear	High	Low	Low	Unclear
Rahman et al <sup>26</sup>	Low	Low	High	Low	Low	Unclear
Tofail et al <sup>32</sup>	Unclear	Unclear	High	Low	Low	Unclear
Walker et al <sup>28</sup>	Unclear	Unclear	High	Low	Low	Unclear
Yousafzai et al <sup>16</sup>	Low	Low	High	Low	Low	Low

Assessed by using the Cochrane Collaboration's tool for risk of bias.

**SUPPLEMENTAL TABLE 4** Mean ES, 95% CIs, and Heterogeneity Statistics by Moderator Variables on Home Caregiving Environment, Knowledge, and Depressive Symptoms Outcomes

Moderator Variable	Home Caregiving Environment			Maternal Knowledge of ECD			Maternal Depressive Symptoms		
	No. Studies	ES (95% CI)	<i>Q</i> Within, % <i>I</i> Within, %	No. Studies	ES (95% CI)	<i>Q</i> Within, % <i>I</i> Within, %	No. Studies	ES (95% CI)	<i>Q</i> Within, % <i>I</i> Within, %
<b>Sample characteristics</b>									
Child age at enrollment, mean, mo									
<12	4	0.52 (0.12 to 0.93)	57.21***	4	0.90 (0.29 to 1.51)	158.12***	5	-0.02 (-0.15 to 0.11)	11.30*
≥12	5	0.59 (0.34 to 0.85)	28.68***	3	0.91 (0.51 to 1.31)	10.82***	3	-0.30 (-0.71 to 0.12)	22.6***
Maternal education, mean, y									
Incomplete primary school	4	0.77 (0.50 to 1.04)	21.75***	3	0.70 (0.49 to 0.91)	6.43*	3	-0.19 (-0.51 to 0.13)	18.81***
Complete primary school or higher	4	0.39 (0.21 to 0.57)	13.54**	3	1.00 (0.02 to 1.97)	144.95***	4	0.03 (-0.10 to 0.16)	6.68
Country context									
Upper middle-income country	4	0.33 (0.16 to 0.50)	6.97	2	0.82 (0.09 to 1.56)	11.98**	4	-0.09 (-0.26 to 0.09)	9.72*
Lower middle-income country	6	0.70 (0.49 to 0.90)	35.05***	5	0.94 (0.42 to 1.47)	153.68***	5	-0.11 (-0.32 to 0.10)	27.10***
<b>Intervention characteristics</b>									
Delivery									
Individualized	5	0.44 (0.33 to 0.55)	5.34	a	a	a	4	-0.12 (-0.29 to 0.05)	7.97*
Group or individualized and group	5	0.65 (0.32 to 0.98)	65.12***	a	a	a	5	-0.08 (-0.29 to 0.13)	28.99***
Total duration, mo									
<12	5	0.49 (0.13 to 0.85)	16.12**	4	1.03 (0.28 to 1.77)	132.16***	5	-0.16 (-0.39 to 0.08)	25.48***
≥12	5	0.63 (0.44 to 0.83)	81.30***	3	0.71 (0.43 to 1.00)	11.98**	4	-0.01 (-0.12 to 0.10)	6.09
<b>Outcome measure details</b>									
Reliability of measure reported									
Yes	8	0.53 (0.31 to 0.76)	63.21***	3	0.88 (0.40 to 1.36)	17.03***	7	-0.11 (-0.28 to 0.06)	33.09***
No	2	0.70 (-0.02 to 1.41)	27.76	4	0.92 (0.30 to 1.55)	151.60***	2	-0.08 (-0.31 to 0.15)	3.83
For stimulation: used HOME total score									
Yes	6	0.69 (0.47 to 0.90)	32.66***	b	b	b	b	b	b
No	4	0.37 (0.20 to 0.54)	9.47*	b	b	b	b	b	b
For parenting knowledge: content assessed in questionnaire									
Child development milestones	b	b	b	4	0.93 (0.30 to 1.55)	151.60***	b	b	b
Child rearing practices	b	b	b	3	0.88 (0.40 to 1.36)	17.03***	b	b	b

**TABLE 4** Continued

Moderator Variable	Home Caregiving Environment			Maternal Knowledge of ECD			Maternal Depressive Symptoms			
	No. Studies	ES (95% CI)	<i>I</i> Within, %	No. Studies	ES (95% CI)	<i>I</i> Within, %	No. Studies	ES (95% CI)	<i>I</i> Within, %	
For depressive symptoms: used CES-D scale										
Yes	b	b	b	b	b	b	6	-0.10 (-0.30 to 0.10)	32.05**	84.4
No	b	b	b	b	b	b	3	-0.11 (-0.26 to 0.04)	4.65	57.0

<sup>a</sup> Insufficient studies in each stratum to conduct moderator analyses.

<sup>b</sup> Not applicable.

\*  $P < .05$ ;

\*\*  $P < .01$ ;

\*\*\*  $P < .001$ .