

## Appendix G. 8. WHO review: Cognitive behavioural therapies for children with chronic pain

**Comparison:** Cognitive behavioural therapies (including cognitive behavioural therapy, behavioural therapy, acceptance commitment therapy, relaxation) versus active (non-psychological), standard care or waitlist control

**Population:** children with any chronic pain

**Setting:** Any setting

**Studies:** Randomised controlled trials

### Risk of bias legend

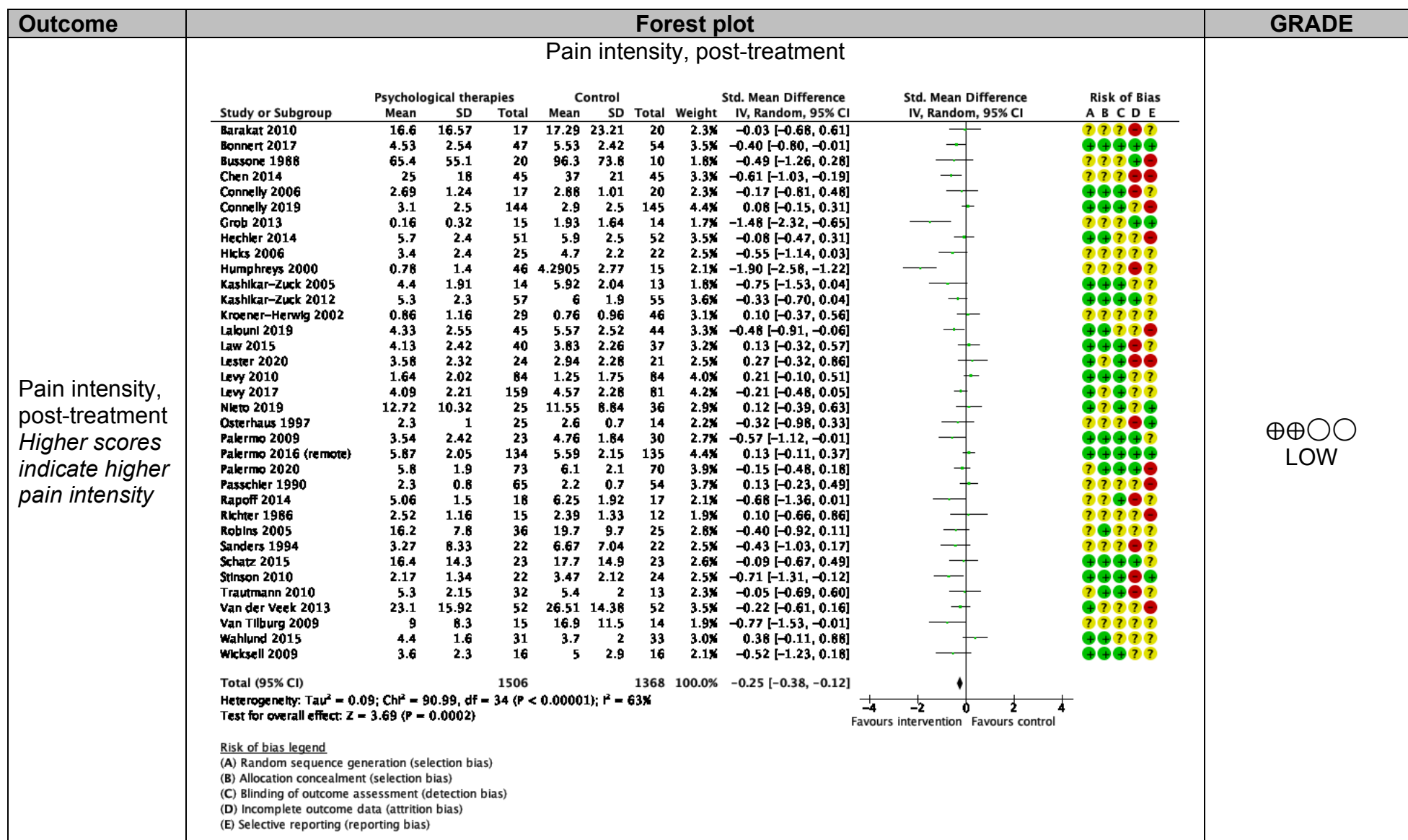
(A) Random sequence generation (selection bias)

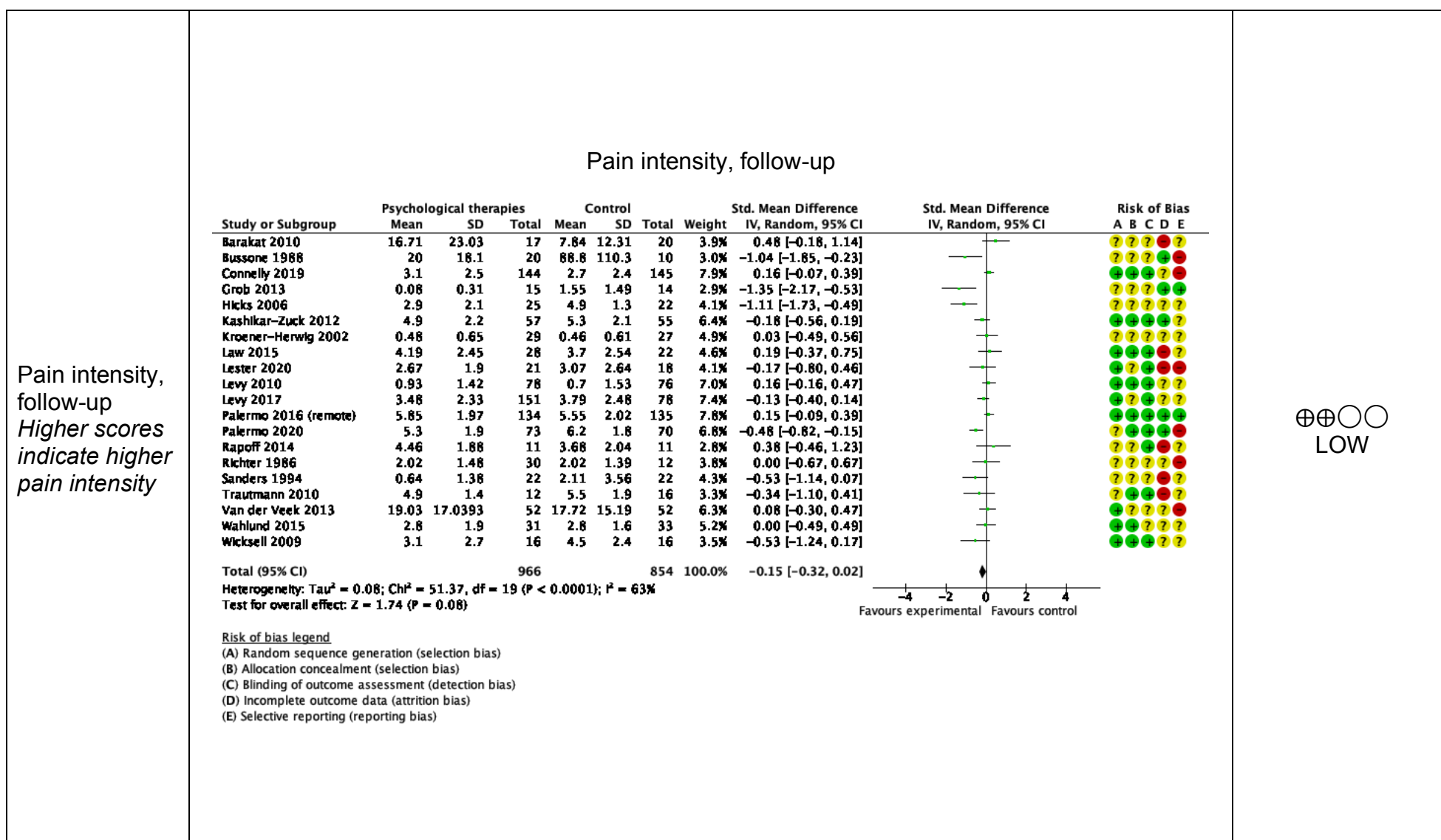
(B) Allocation concealment (selection bias)

(C) Blinding of outcome assessment (detection bias)

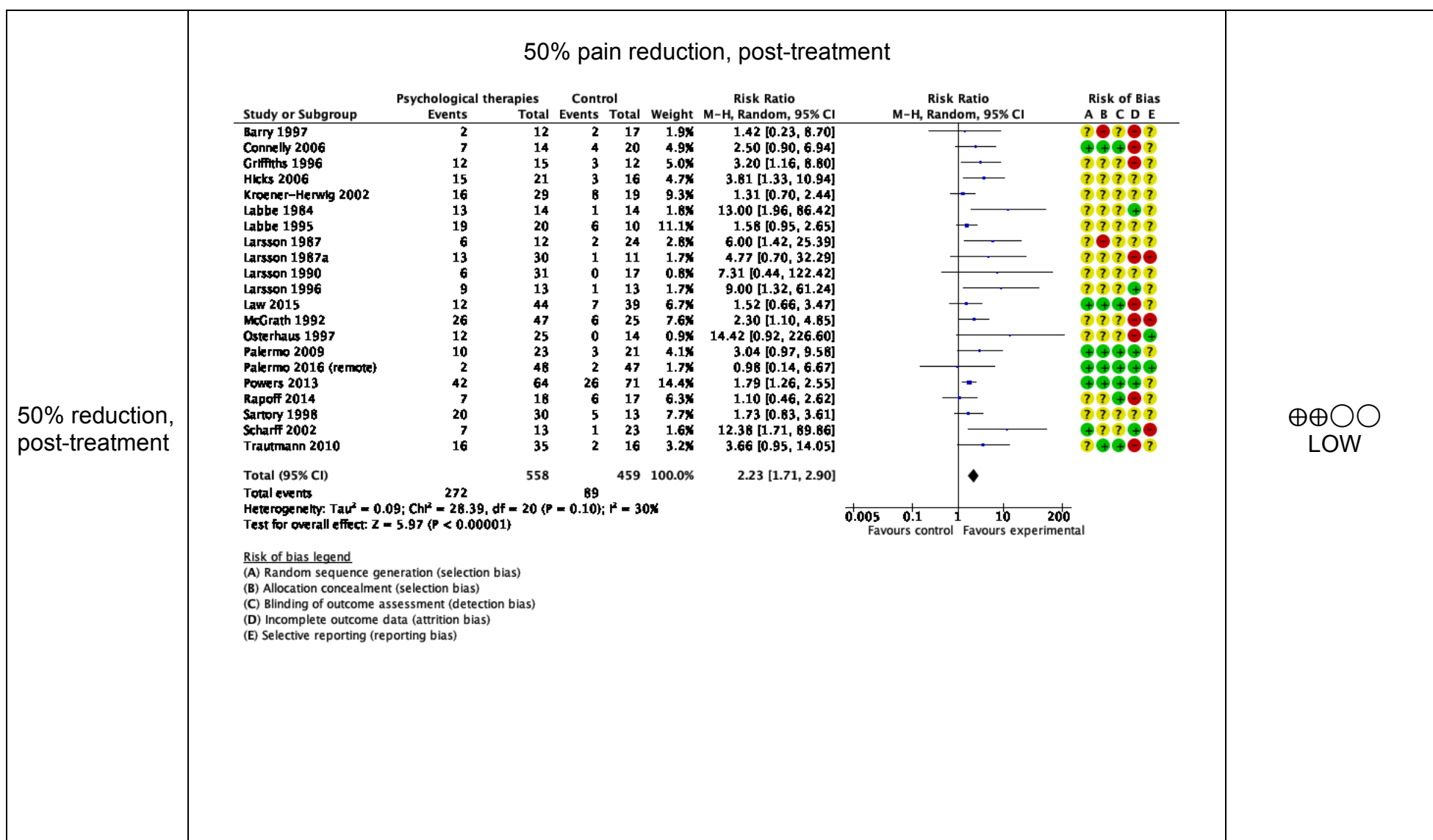
(D) Incomplete outcome data (attrition bias)

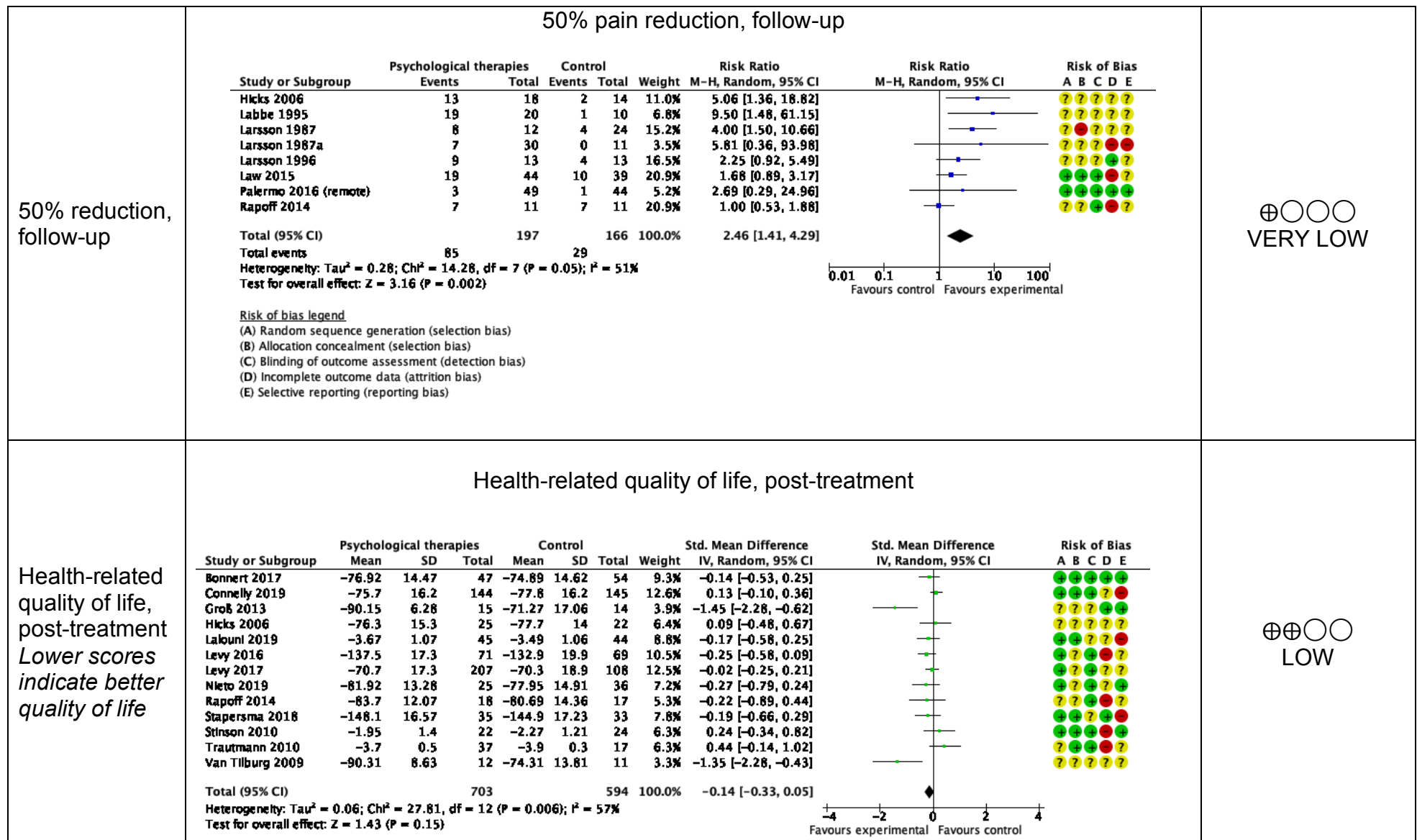
(E) Selective reporting (reporting bias)





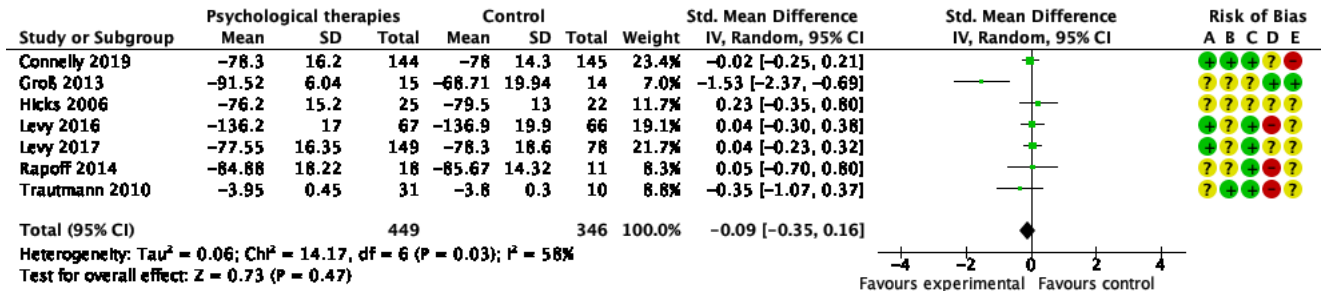
30% reduction, post-treatment	<div>30% pain reduction, post-treatment</div> <table><tr><th rowspan="2">Study or Subgroup</th><th colspan="2">Psychological therapies</th><th colspan="2">Control</th><th rowspan="2">Weight</th><th rowspan="2">Risk Ratio M-H, Fixed, 95% CI</th><th rowspan="2">Risk Ratio M-H, Fixed, 95% CI</th><th colspan="5">Risk of Bias</th></tr><tr><th>Events</th><th>Total</th><th>Events</th><th>Total</th><th>A</th><th>B</th><th>C</th><th>D</th><th>E</th></tr><tr><td>Van der Veek 2013</td><td>17</td><td>52</td><td>15</td><td>52</td><td>100.0%</td><td>1.13 [0.64, 2.02]</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>Total (95% CI)</td><td></td><td>52</td><td></td><td>52</td><td>100.0%</td><td>1.13 [0.64, 2.02]</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>Total events</td><td>17</td><td></td><td>15</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td colspan="16">Heterogeneity: Not applicable</td></tr><tr><td colspan="16">Test for overall effect: Z = 0.42 (P = 0.67)</td></tr><tr><td colspan="16"><u>Risk of bias legend</u></td></tr><tr><td colspan="16">(A) Random sequence generation (selection bias)</td></tr><tr><td colspan="16">(B) Allocation concealment (selection bias)</td></tr><tr><td colspan="16">(C) Blinding of outcome assessment (detection bias)</td></tr><tr><td colspan="16">(D) Incomplete outcome data (attrition bias)</td></tr><tr><td colspan="16">(E) Selective reporting (reporting bias)</td></tr></table> <div><p>⊕○○○ VERY LOW</p></div>	Study or Subgroup	Psychological therapies		Control		Weight	Risk Ratio M-H, Fixed, 95% CI	Risk Ratio M-H, Fixed, 95% CI	Risk of Bias					Events	Total	Events	Total	A	B	C	D	E	Van der Veek 2013	17	52	15	52	100.0%	1.13 [0.64, 2.02]										Total (95% CI)		52		52	100.0%	1.13 [0.64, 2.02]										Total events	17		15													Heterogeneity: Not applicable																Test for overall effect: Z = 0.42 (P = 0.67)																<u>Risk of bias legend</u>																(A) Random sequence generation (selection bias)																(B) Allocation concealment (selection bias)																(C) Blinding of outcome assessment (detection bias)																(D) Incomplete outcome data (attrition bias)																(E) Selective reporting (reporting bias)																
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Health-related  
quality of life,  
follow-up  
*Lower scores  
indicate better  
quality of life*

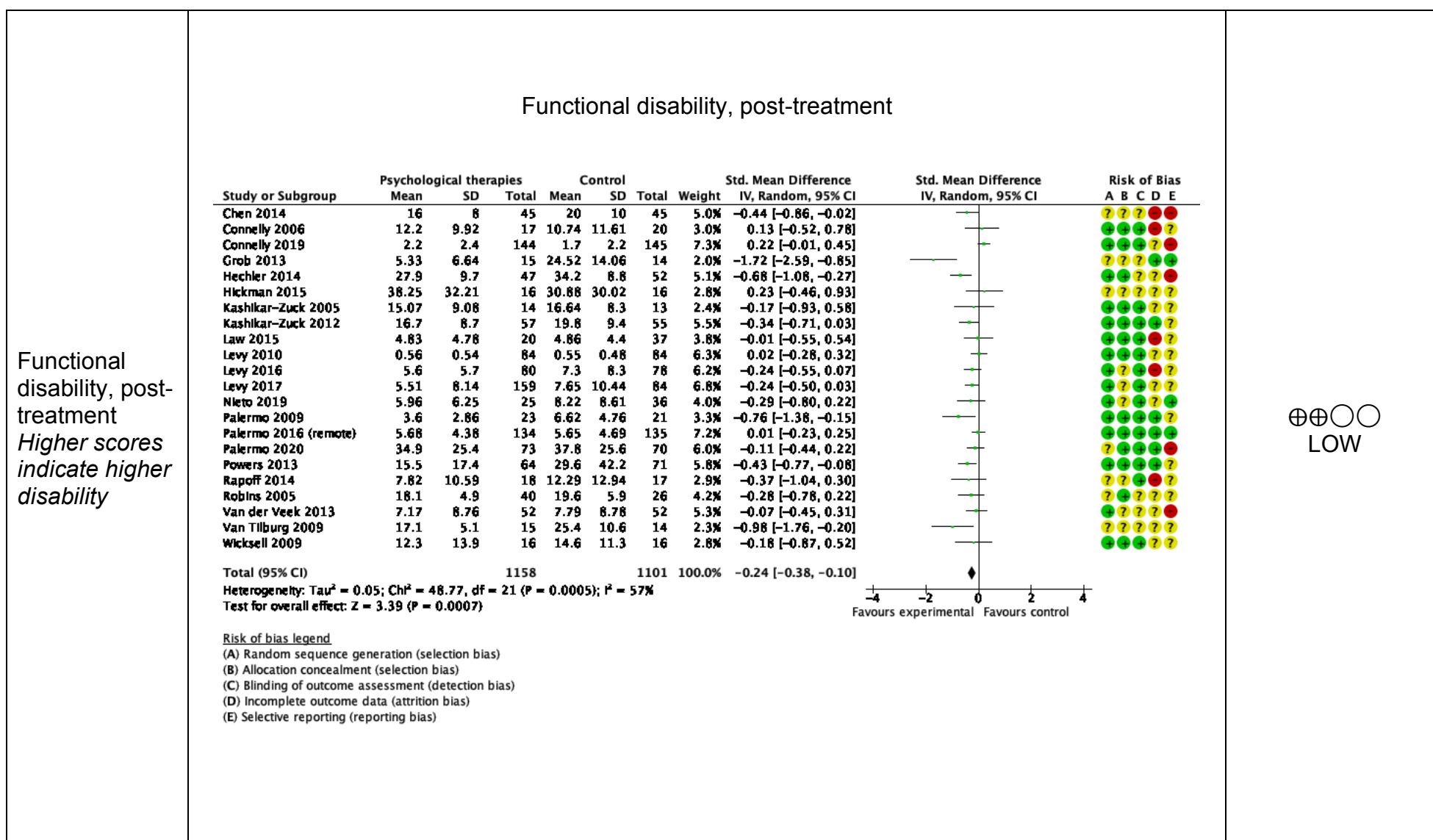
### Health-related quality of life, follow-up



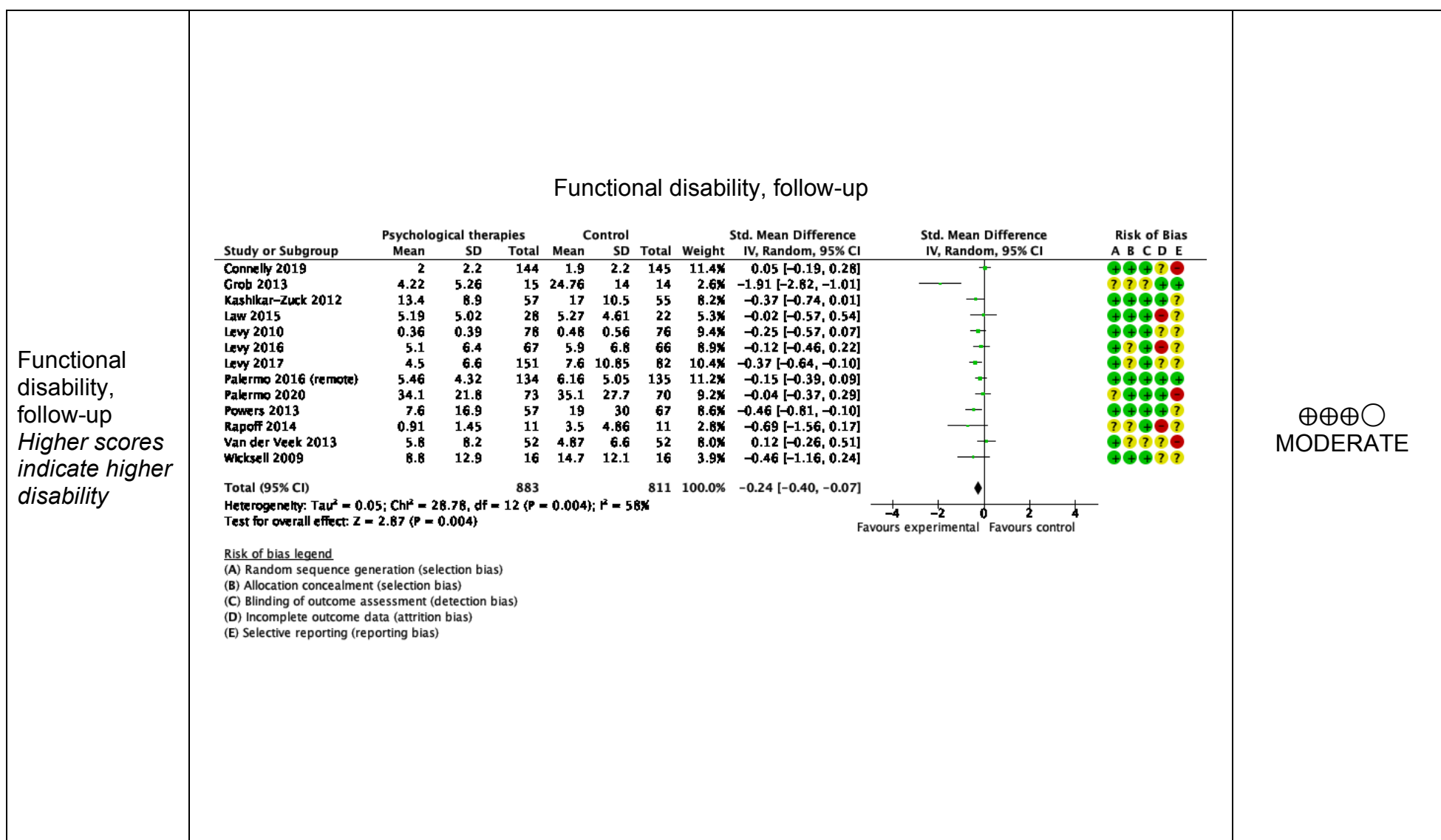
#### Risk of bias legend

- (A) Random sequence generation (selection bias)
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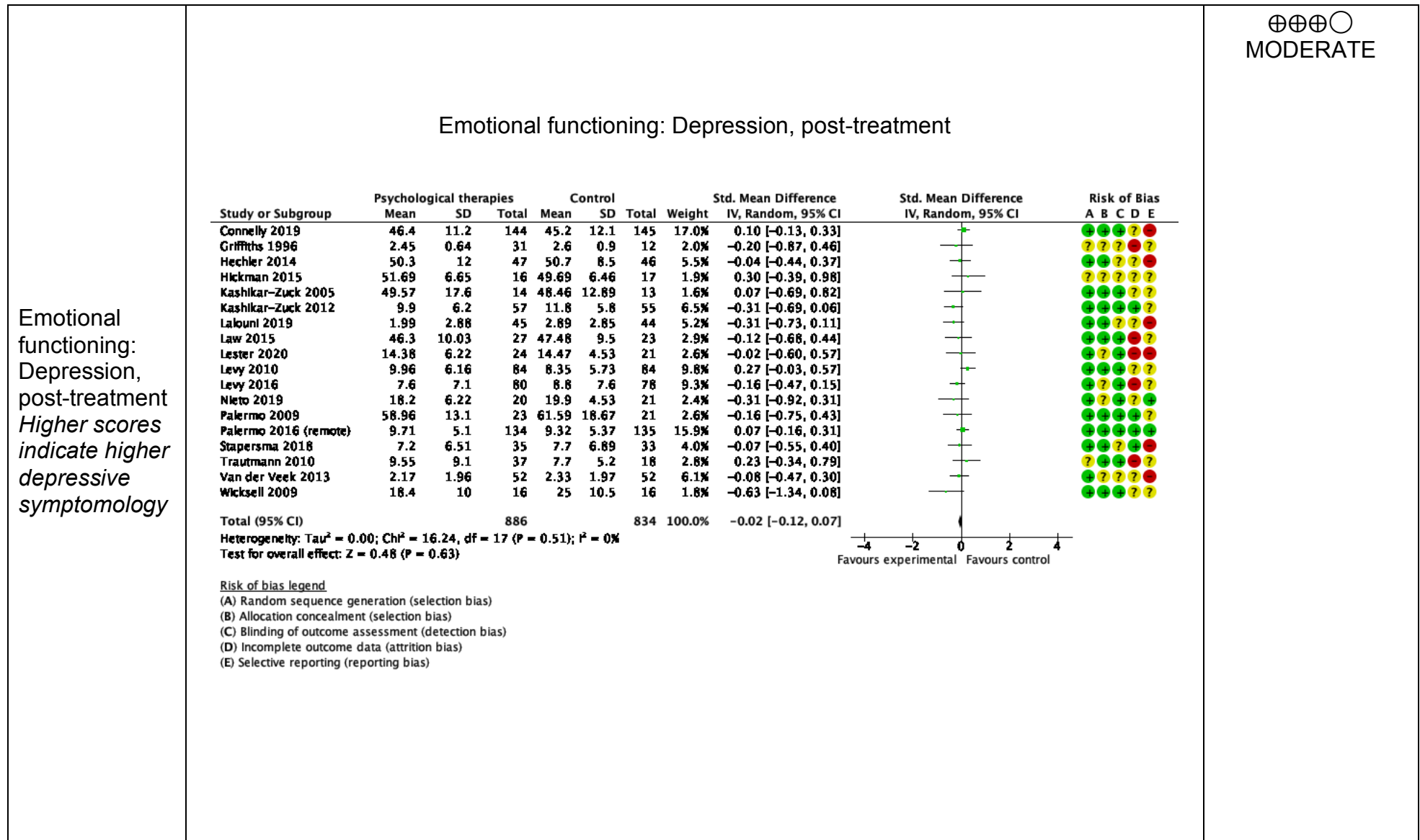
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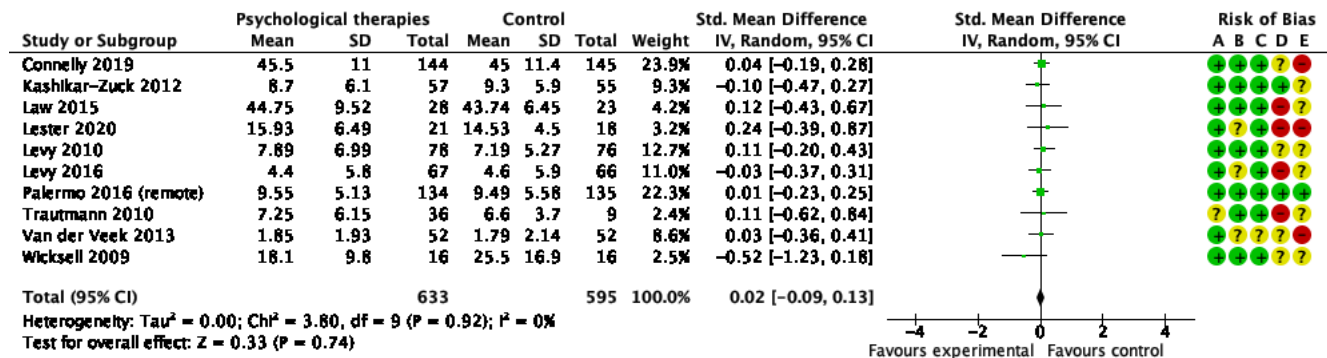


<p>Role functioning (school absence), post-treatment</p> <p><i>Higher scores indicate more absence from school</i></p>	<div><div>Role functioning (school absence), post-treatment</div><table><tr><th rowspan="2">Study or Subgroup</th><th colspan="3">Psychological therapies</th><th colspan="3">Control</th><th rowspan="2">Weight</th><th rowspan="2">Std. Mean Difference IV, Random, 95% CI</th><th rowspan="2">Std. Mean Difference IV, Random, 95% CI</th><th rowspan="2">Risk of Bias A B C D E</th></tr><tr><th>Mean</th><th>SD</th><th>Total</th><th>Mean</th><th>SD</th><th>Total</th></tr><tr><td>Bonnert 2017</td><td>1.04</td><td>1.1</td><td>47</td><td>1.31</td><td>1.1</td><td>54</td><td>13.6%</td><td>-0.24 [-0.64, 0.15]</td><td></td><td>● ● ● ● ●</td></tr><tr><td>Hechler 2014</td><td>1.6</td><td>3.3</td><td>47</td><td>5</td><td>6.1</td><td>47</td><td>13.3%</td><td>-0.69 [-1.10, -0.27]</td><td></td><td>● ● ● ● ●</td></tr><tr><td>Humphreys 2000</td><td>0.06</td><td>0.17</td><td>46</td><td>0.8</td><td>1.26</td><td>15</td><td>10.6%</td><td>-1.16 [-1.78, -0.54]</td><td></td><td>● ● ● ● ●</td></tr><tr><td>Lakouni 2019</td><td>0.21</td><td>0.94</td><td>45</td><td>0.41</td><td>0.93</td><td>44</td><td>13.3%</td><td>-0.21 [-0.63, 0.20]</td><td></td><td>● ● ● ● ●</td></tr><tr><td>Levy 2017</td><td>6.3</td><td>11.95</td><td>205</td><td>7.8</td><td>15</td><td>109</td><td>15.5%</td><td>-0.11 [-0.35, 0.12]</td><td></td><td>● ● ● ● ●</td></tr><tr><td>Van Tilburg 2009</td><td>1</td><td>1.3</td><td>14</td><td>1.79</td><td>1.25</td><td>14</td><td>9.0%</td><td>-0.60 [-1.36, 0.16]</td><td></td><td>● ● ● ● ●</td></tr><tr><td>Wahlund 2003</td><td>1.24</td><td>3.36</td><td>34</td><td>0.08</td><td>0.4</td><td>39</td><td>12.6%</td><td>0.50 [0.03, 0.96]</td><td></td><td>● ● ● ● ●</td></tr><tr><td>Wahlund 2015</td><td>1.2</td><td>2.1</td><td>31</td><td>0.3</td><td>0.8</td><td>33</td><td>12.2%</td><td>0.57 [0.07, 1.07]</td><td></td><td>● ● ● ● ●</td></tr><tr><td>Total (95% CI)</td><td></td><td></td><td>469</td><td></td><td></td><td>355</td><td>100.0%</td><td>-0.22 [-0.55, 0.12]</td><td></td><td></td></tr></table><p>Heterogeneity: <math>\tau^2 = 0.17</math>; <math>\chi^2 = 33.43</math>, <math>df = 7</math> (<math>P &lt; 0.0001</math>); <math>I^2 = 79\%</math> Test for overall effect: <math>Z = 1.26</math> (<math>P = 0.21</math>)</p><p><u>Risk of bias legend</u> (A) Random sequence generation (selection bias) (B) Allocation concealment (selection bias) (C) Blinding of outcome assessment (detection bias) (D) Incomplete outcome data (attrition bias) (E) Selective reporting (reporting bias)</p></div>	Study or Subgroup	Psychological therapies			Control			Weight	Std. Mean Difference IV, Random, 95% CI	Std. Mean Difference IV, Random, 95% CI	Risk of Bias A B C D E	Mean	SD	Total	Mean	SD	Total	Bonnert 2017	1.04	1.1	47	1.31	1.1	54	13.6%	-0.24 [-0.64, 0.15]		● ● ● ● ●	Hechler 2014	1.6	3.3	47	5	6.1	47	13.3%	-0.69 [-1.10, -0.27]		● ● ● ● ●	Humphreys 2000	0.06	0.17	46	0.8	1.26	15	10.6%	-1.16 [-1.78, -0.54]		● ● ● ● ●	Lakouni 2019	0.21	0.94	45	0.41	0.93	44	13.3%	-0.21 [-0.63, 0.20]		● ● ● ● ●	Levy 2017	6.3	11.95	205	7.8	15	109	15.5%	-0.11 [-0.35, 0.12]		● ● ● ● ●	Van Tilburg 2009	1	1.3	14	1.79	1.25	14	9.0%	-0.60 [-1.36, 0.16]		● ● ● ● ●	Wahlund 2003	1.24	3.36	34	0.08	0.4	39	12.6%	0.50 [0.03, 0.96]		● ● ● ● ●	Wahlund 2015	1.2	2.1	31	0.3	0.8	33	12.2%	0.57 [0.07, 1.07]		● ● ● ● ●	Total (95% CI)			469			355	100.0%	-0.22 [-0.55, 0.12]			<div><div>⊕○○○</div><div>VERY LOW</div></div>
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Wahlund 2003	0.38	0.53	34	0.04	0.2	39	23.9%	0.86 [0.38, 1.34]		● ● ● ● ●																																																																																																												
Total (95% CI)			270			206	100.0%	0.14 [-0.32, 0.60]																																																																																																														



Emotional  
functioning:  
Depression,  
follow-up  
*Higher scores  
indicate higher  
depressive  
symptomology*

### Emotional functioning: Depression, follow-up



#### Risk of bias legend

- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of outcome assessment (detection bias)
- (D) Incomplete outcome data (attrition bias)
- (E) Selective reporting (reporting bias)

⊕⊕⊕⊕  
HIGH

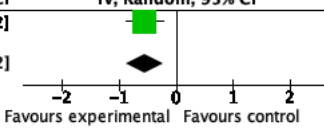

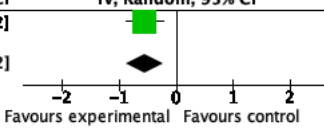

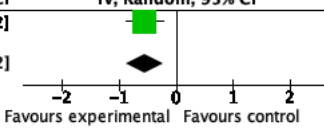

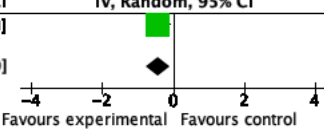

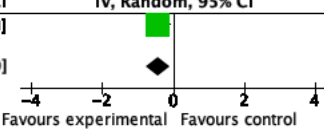

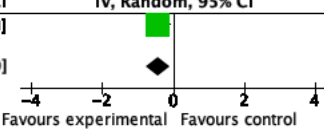



Anxiety, follow-up <i>Higher scores indicate higher anxious symptomology</i>	<table><tr><th rowspan="2">Study or Subgroup</th><th colspan="3">Psychological therapies</th><th colspan="3">Control</th><th rowspan="2">Weight</th><th rowspan="2">Std. Mean Difference IV, Random, 95% CI</th><th rowspan="2">Std. Mean Difference IV, Random, 95% CI</th><th rowspan="2">Risk of Bias A B C D E</th></tr><tr><th>Mean</th><th>SD</th><th>Total</th><th>Mean</th><th>SD</th><th>Total</th></tr><tr><td>Bussone 1988</td><td>27.8</td><td>2.3</td><td>20</td><td>29.1</td><td>1.4</td><td>10</td><td>1.8%</td><td>-0.62 [-1.39, 0.16]</td><td></td><td>?</td></tr><tr><td>Connelly 2019</td><td>45.3</td><td>12</td><td>144</td><td>46</td><td>11.4</td><td>145</td><td>20.5%</td><td>-0.06 [-0.29, 0.17]</td><td></td><td>?</td></tr><tr><td>Kashikar-Zuck 2012</td><td>1.89</td><td>0.82</td><td>50</td><td>2.22</td><td>0.91</td><td>50</td><td>7.0%</td><td>-0.38 [-0.77, 0.02]</td><td></td><td>?</td></tr><tr><td>Law 2015</td><td>45.82</td><td>10.96</td><td>28</td><td>45.36</td><td>9.9</td><td>22</td><td>3.5%</td><td>0.04 [-0.52, 0.60]</td><td></td><td>?</td></tr><tr><td>Lester 2020</td><td>4.71</td><td>5.09</td><td>21</td><td>4.07</td><td>2.99</td><td>18</td><td>2.7%</td><td>0.15 [-0.48, 0.78]</td><td></td><td>?</td></tr><tr><td>Levy 2010</td><td>13.21</td><td>3.98</td><td>75</td><td>12.59</td><td>4.14</td><td>63</td><td>9.7%</td><td>0.15 [-0.18, 0.49]</td><td></td><td>?</td></tr><tr><td>Levy 2016</td><td>7.9</td><td>3.3</td><td>67</td><td>8.2</td><td>3.2</td><td>66</td><td>9.4%</td><td>-0.09 [-0.43, 0.25]</td><td></td><td>?</td></tr><tr><td>Levy 2017</td><td>0.87</td><td>0.88</td><td>151</td><td>1.1</td><td>0.98</td><td>78</td><td>14.5%</td><td>-0.25 [-0.52, 0.02]</td><td></td><td>?</td></tr><tr><td>Palermo 2016 (remote)</td><td>10.35</td><td>6.12</td><td>134</td><td>10.23</td><td>5.45</td><td>135</td><td>19.1%</td><td>0.02 [-0.22, 0.26]</td><td></td><td>?</td></tr><tr><td>Trautmann 2010</td><td>24.95</td><td>7</td><td>31</td><td>28.1</td><td>9.9</td><td>10</td><td>2.1%</td><td>-0.40 [-1.12, 0.32]</td><td></td><td>?</td></tr><tr><td>Van der Veek 2013</td><td>5.47</td><td>5.22</td><td>52</td><td>5.82</td><td>6.09</td><td>52</td><td>7.4%</td><td>-0.06 [-0.45, 0.32]</td><td></td><td>?</td></tr><tr><td>Wicksell 2009</td><td>12.2</td><td>4.6</td><td>16</td><td>11.7</td><td>5.8</td><td>16</td><td>2.3%</td><td>0.09 [-0.60, 0.79]</td><td></td><td>?</td></tr><tr><td colspan="3">Total (95% CI)</td><td>789</td><td colspan="3">665</td><td>100.0%</td><td>-0.08 [-0.19, 0.02]</td><td></td><td></td></tr><tr><td colspan="11">Heterogeneity: <math>\tau^2 = 0.00</math>; <math>\chi^2 = 9.73</math>, <math>df = 11</math> (<math>P = 0.55</math>); <math>I^2 = 0\%</math> Test for overall effect: <math>Z = 1.52</math> (<math>P = 0.13</math>)</td></tr><tr><td colspan="11"><u>Risk of bias legend</u> (A) Random sequence generation (selection bias) (B) Allocation concealment (selection bias) (C) Blinding of outcome assessment (detection bias) (D) Incomplete outcome data (attrition bias) (E) Selective reporting (reporting bias)</td></tr></table>	Study or Subgroup	Psychological therapies			Control			Weight	Std. Mean Difference IV, Random, 95% CI	Std. Mean Difference IV, Random, 95% CI	Risk of Bias A B C D E	Mean	SD	Total	Mean	SD	Total	Bussone 1988	27.8	2.3	20	29.1	1.4	10	1.8%	-0.62 [-1.39, 0.16]		?	Connelly 2019	45.3	12	144	46	11.4	145	20.5%	-0.06 [-0.29, 0.17]		?	Kashikar-Zuck 2012	1.89	0.82	50	2.22	0.91	50	7.0%	-0.38 [-0.77, 0.02]		?	Law 2015	45.82	10.96	28	45.36	9.9	22	3.5%	0.04 [-0.52, 0.60]		?	Lester 2020	4.71	5.09	21	4.07	2.99	18	2.7%	0.15 [-0.48, 0.78]		?	Levy 2010	13.21	3.98	75	12.59	4.14	63	9.7%	0.15 [-0.18, 0.49]		?	Levy 2016	7.9	3.3	67	8.2	3.2	66	9.4%	-0.09 [-0.43, 0.25]		?	Levy 2017	0.87	0.88	151	1.1	0.98	78	14.5%	-0.25 [-0.52, 0.02]		?	Palermo 2016 (remote)	10.35	6.12	134	10.23	5.45	135	19.1%	0.02 [-0.22, 0.26]		?	Trautmann 2010	24.95	7	31	28.1	9.9	10	2.1%	-0.40 [-1.12, 0.32]		?	Van der Veek 2013	5.47	5.22	52	5.82	6.09	52	7.4%	-0.06 [-0.45, 0.32]		?	Wicksell 2009	12.2	4.6	16	11.7	5.8	16	2.3%	0.09 [-0.60, 0.79]		?	Total (95% CI)			789	665			100.0%	-0.08 [-0.19, 0.02]			Heterogeneity: $\tau^2 = 0.00$ ; $\chi^2 = 9.73$ , $df = 11$ ( $P = 0.55$ ); $I^2 = 0\%$ Test for overall effect: $Z = 1.52$ ( $P = 0.13$ )											<u>Risk of bias legend</u> (A) Random sequence generation (selection bias) (B) Allocation concealment (selection bias) (C) Blinding of outcome assessment (detection bias) (D) Incomplete outcome data (attrition bias) (E) Selective reporting (reporting bias)											
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Activity participation, follow-up (no post-treatment data) Higher scores indicate higher interference with child activities	<p style="text-align: center;">Activity participation, follow-up</p> <table><tr><th rowspan="2">Study or Subgroup</th><th colspan="3">Psychological therapies</th><th colspan="3">Control</th><th rowspan="2">Weight</th><th rowspan="2">Std. Mean Difference IV, Random, 95% CI</th><th rowspan="2">Std. Mean Difference IV, Random, 95% CI</th><th rowspan="2">Risk of Bias A B C D E</th></tr><tr><th>Mean</th><th>SD</th><th>Total</th><th>Mean</th><th>SD</th><th>Total</th></tr><tr><td>Sanders 1994</td><td>0.3</td><td>0.8</td><td>22</td><td>1.9</td><td>2.1</td><td>22</td><td>100.0%</td><td>-0.99 [-1.62, -0.36]</td><td></td><td>●●●●●</td></tr><tr><td>Total (95% CI)</td><td></td><td></td><td>22</td><td></td><td></td><td>22</td><td>100.0%</td><td>-0.99 [-1.62, -0.36]</td><td></td><td></td></tr></table> <p>Heterogeneity: Not applicable Test for overall effect: Z = 3.08 (P = 0.002)</p> <p>Risk of bias legend (A) Random sequence generation (selection bias) (B) Allocation concealment (selection bias) (C) Blinding of outcome assessment (detection bias) (D) Incomplete outcome data (attrition bias) (E) Selective reporting (reporting bias)</p>	Study or Subgroup	Psychological therapies			Control			Weight	Std. Mean Difference IV, Random, 95% CI	Std. Mean Difference IV, Random, 95% CI	Risk of Bias A B C D E	Mean	SD	Total	Mean	SD	Total	Sanders 1994	0.3	0.8	22	1.9	2.1	22	100.0%	-0.99 [-1.62, -0.36]		●●●●●	Total (95% CI)			22			22	100.0%	-0.99 [-1.62, -0.36]			⊕○○○ VERY LOW
Study or Subgroup	Psychological therapies			Control			Weight	Std. Mean Difference IV, Random, 95% CI					Std. Mean Difference IV, Random, 95% CI	Risk of Bias A B C D E																											
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## Appendix G. 9 WHO review: Cognitive behavioural therapies for children with chronic pain, by route

**Comparison:** Cognitive behavioural therapies (including cognitive behavioural therapy, behavioural therapy, acceptance commitment therapy, relaxation) versus active (non-psychological), standard care or waitlist control, by route (face-to-face vs. remotely delivered)

**Population:** children with any chronic pain

**Setting:** Any setting

**Studies:** Randomised controlled trials

### Risk of bias legend

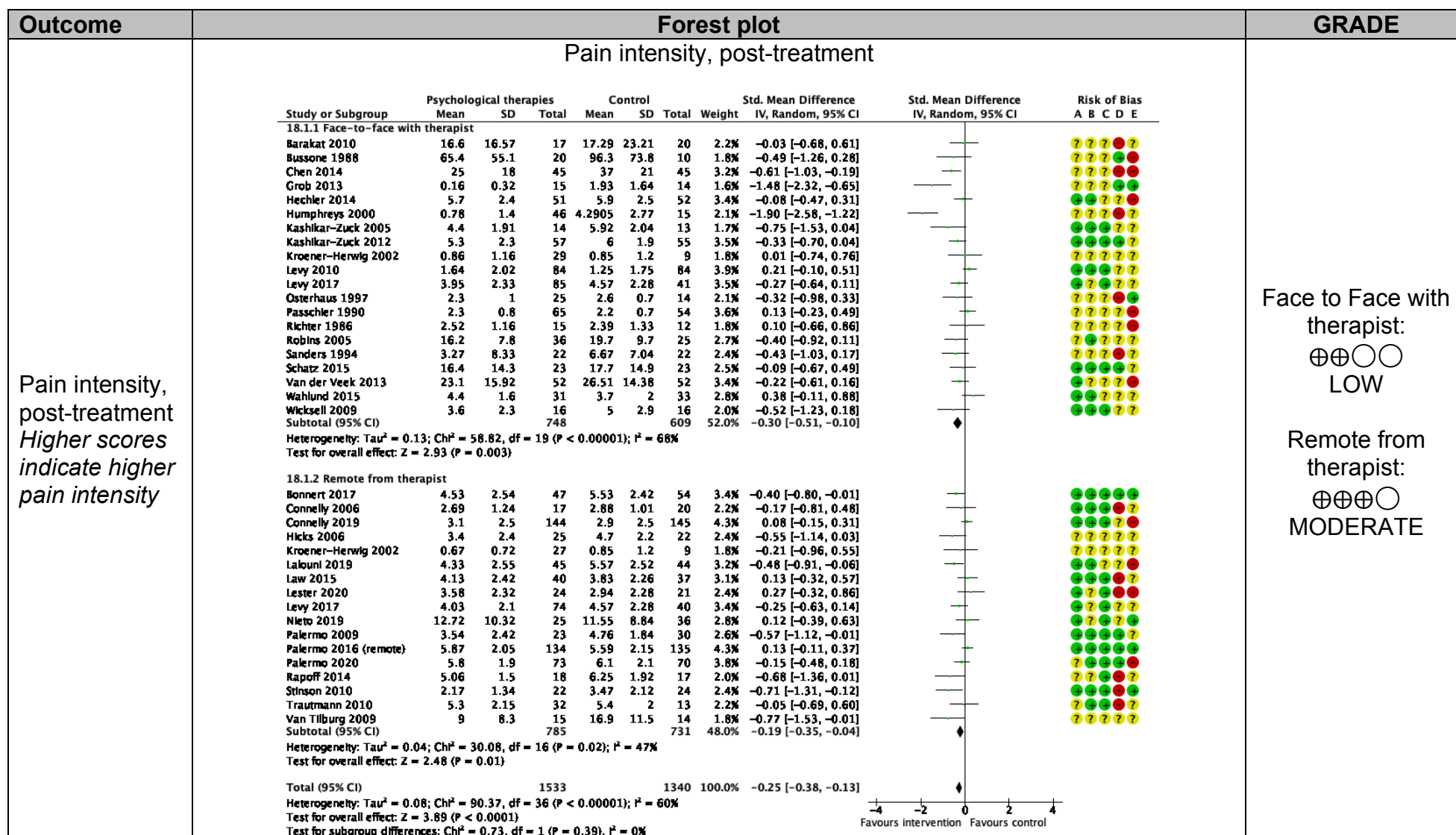
(A) Random sequence generation (selection bias)

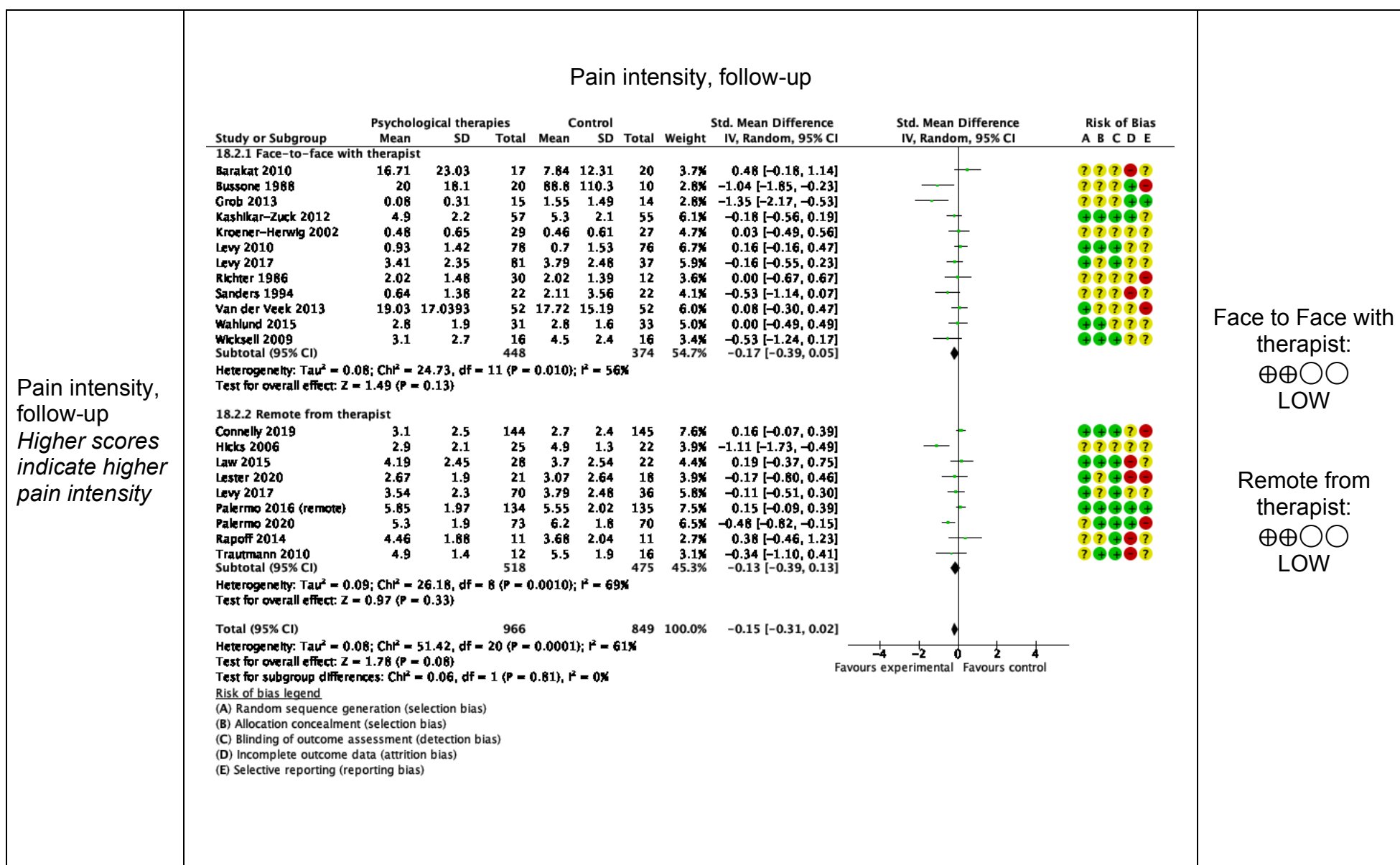
(B) Allocation concealment (selection bias)

(C) Blinding of outcome assessment (detection bias)

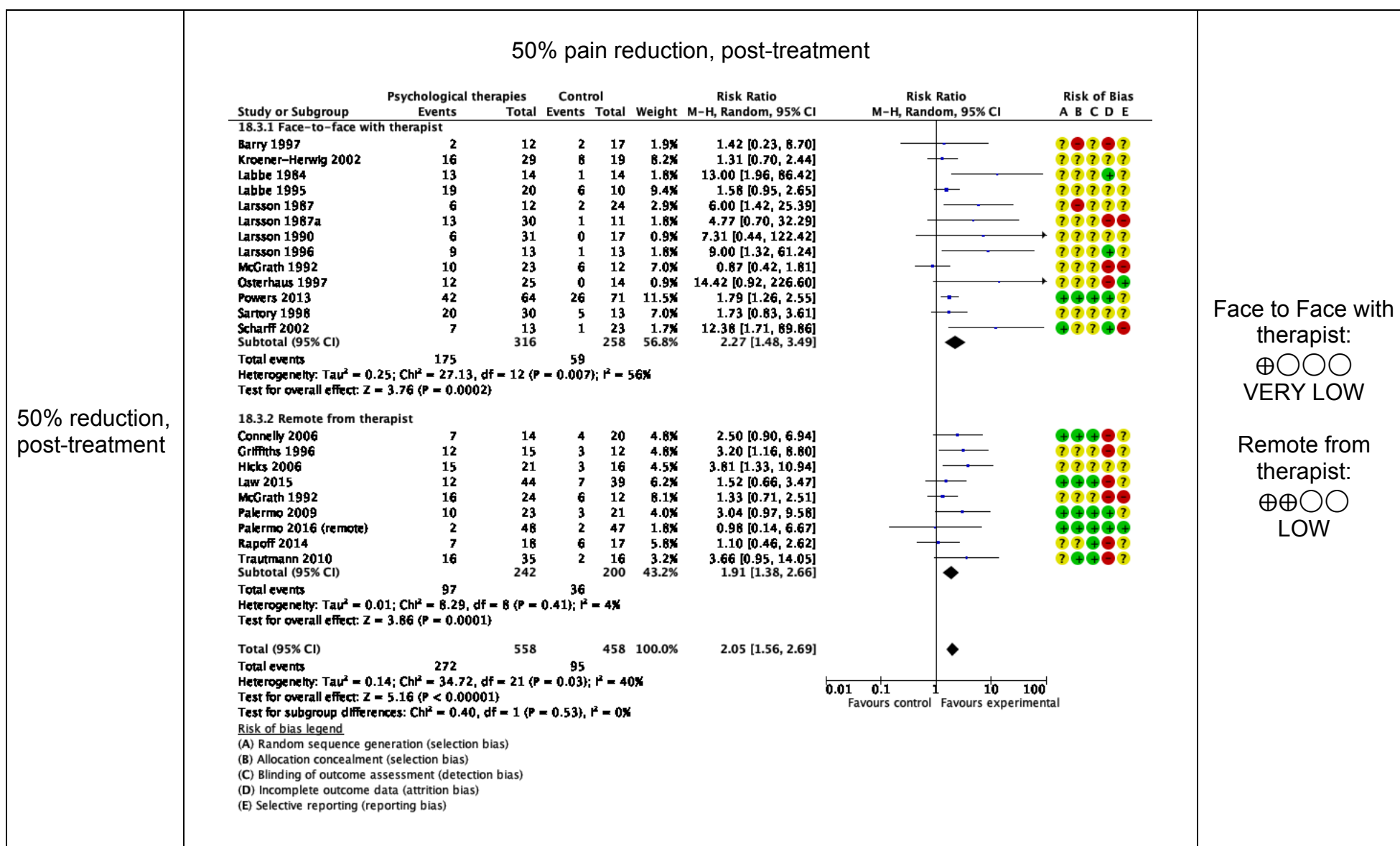
(D) Incomplete outcome data (attrition bias)

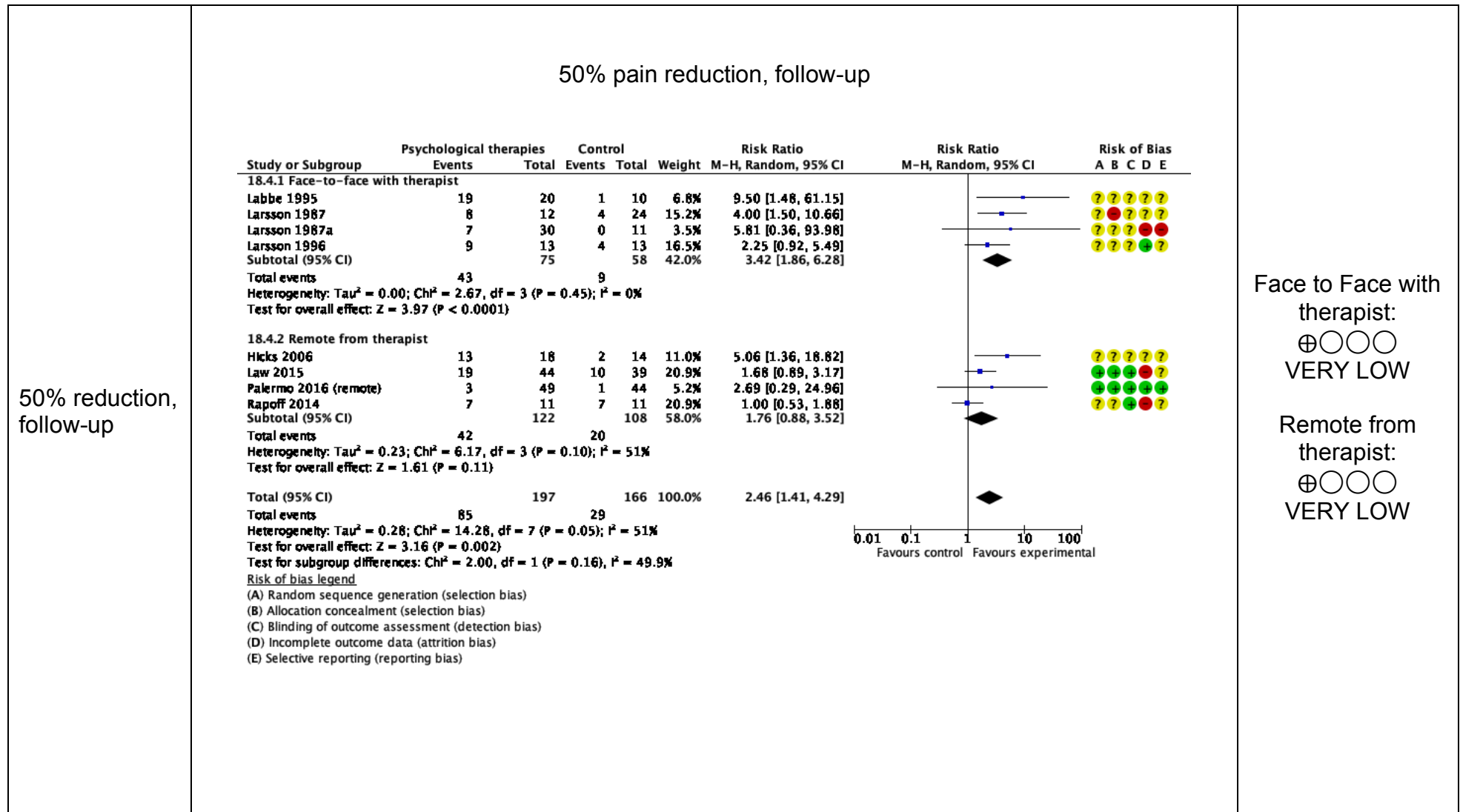
(E) Selective reporting (reporting bias)





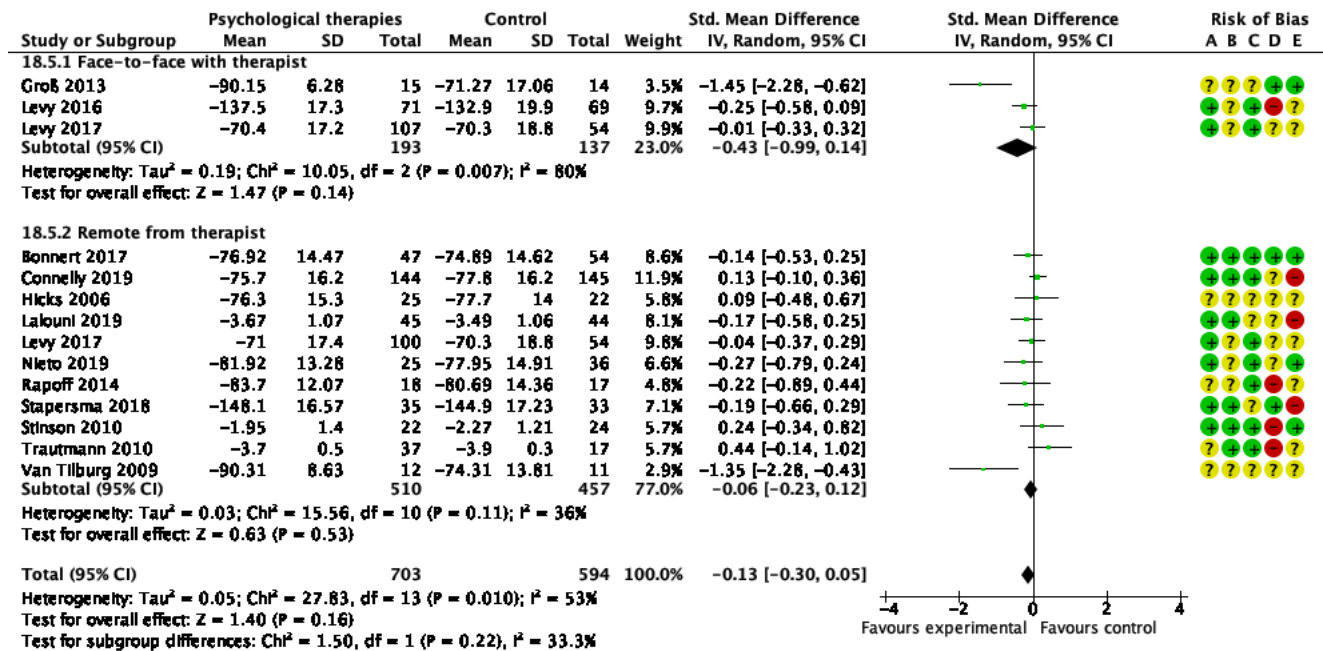
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Health-related  
quality of life,  
post-treatment  
*Lower scores  
indicate better  
quality of life*

### Health-related quality of life, post-treatment

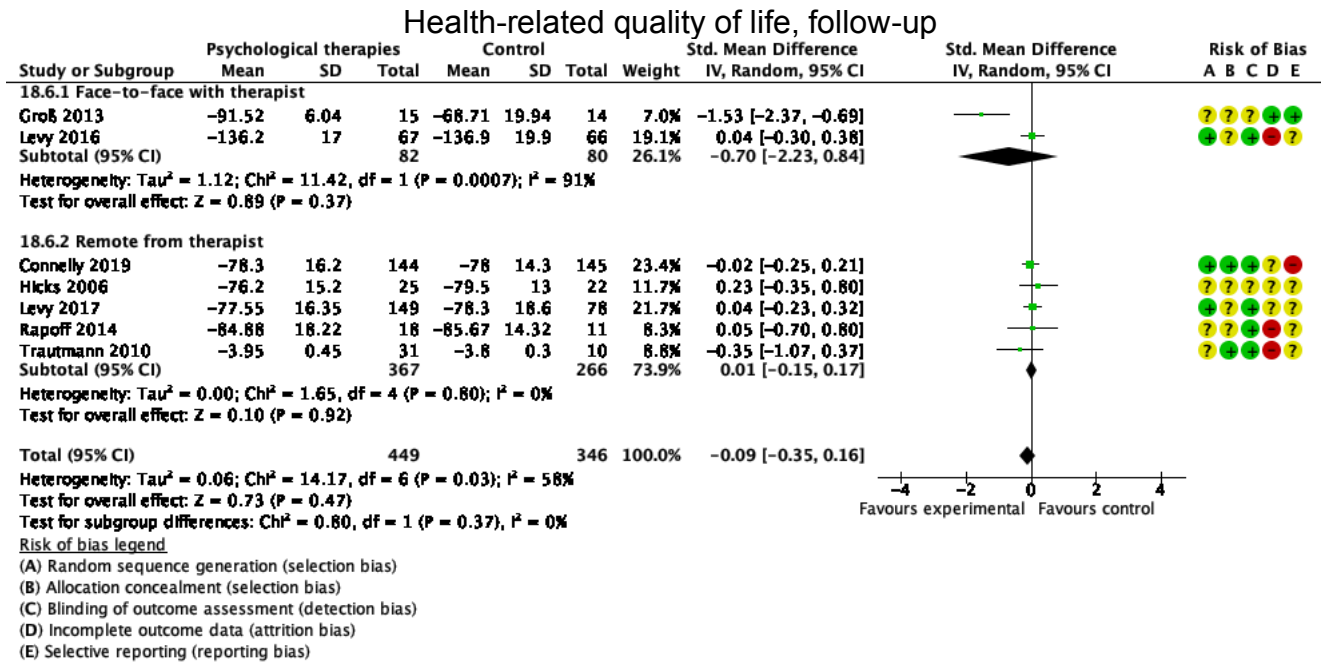


Face to Face with  
therapist:  
⊕○○○  
VERY LOW

Remote from  
therapist:  
⊕⊕⊕○  
MODERATE

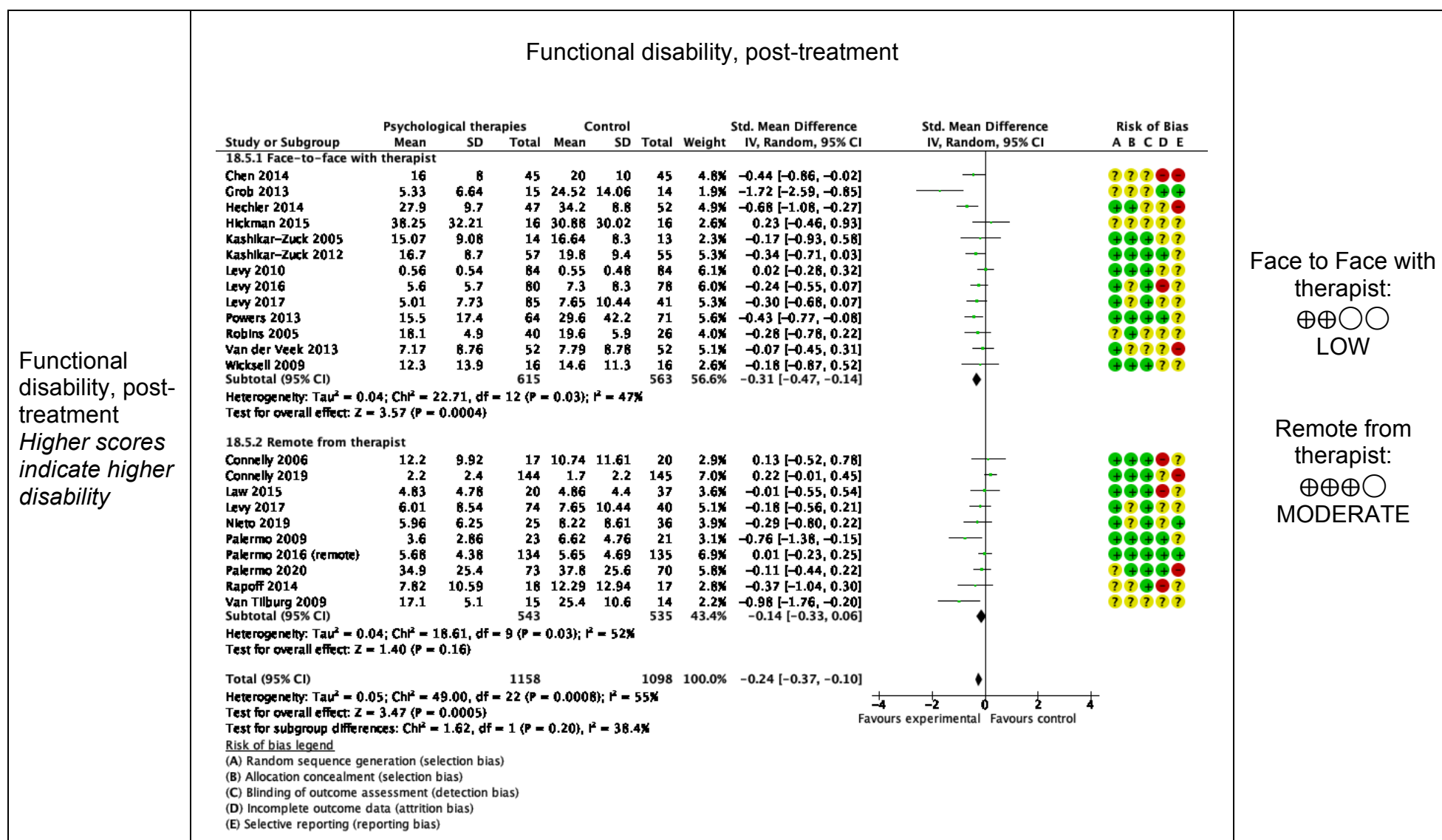


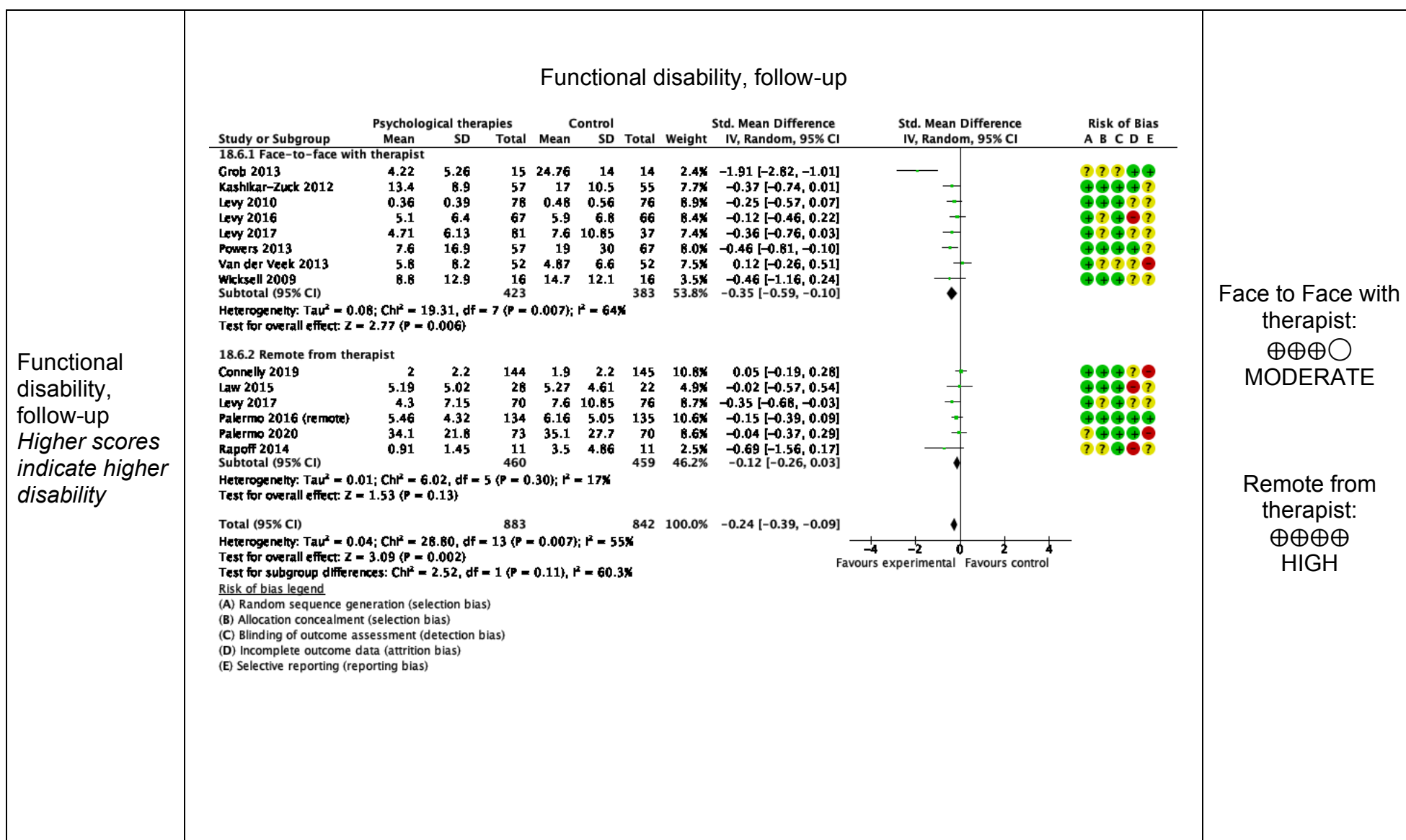
Health-related  
quality of life,  
follow-up  
*Lower scores  
indicate better  
quality of life*



Face to Face with  
therapist:  
⊕○○○  
VERY LOW

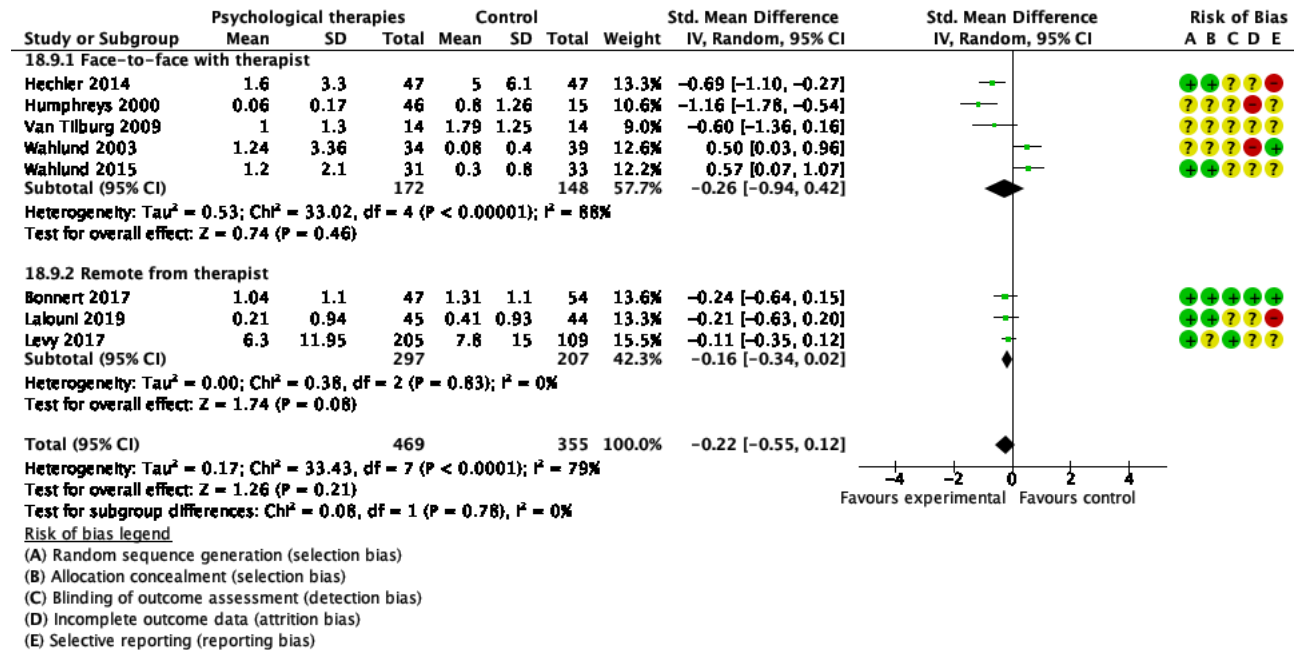
Remote from  
therapist:  
⊕⊕⊕○  
MODERATE





Role functioning (school absence), post-treatment  
Higher scores indicate more absence from school

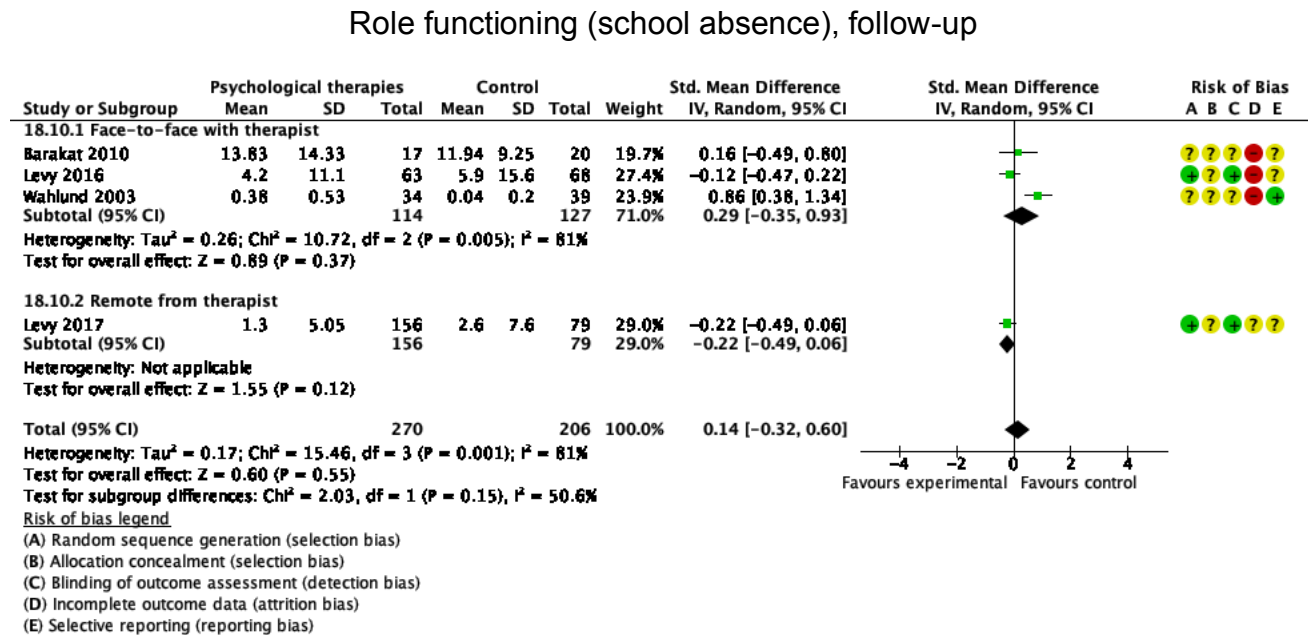
### Role functioning (school absence), post-treatment



Face to Face with therapist:  
⊕○○○  
VERY LOW

Remote from therapist:  
⊕⊕⊕○  
MODERATE

Role functioning (school absence), post-treatment  
Higher scores indicate more absence from school

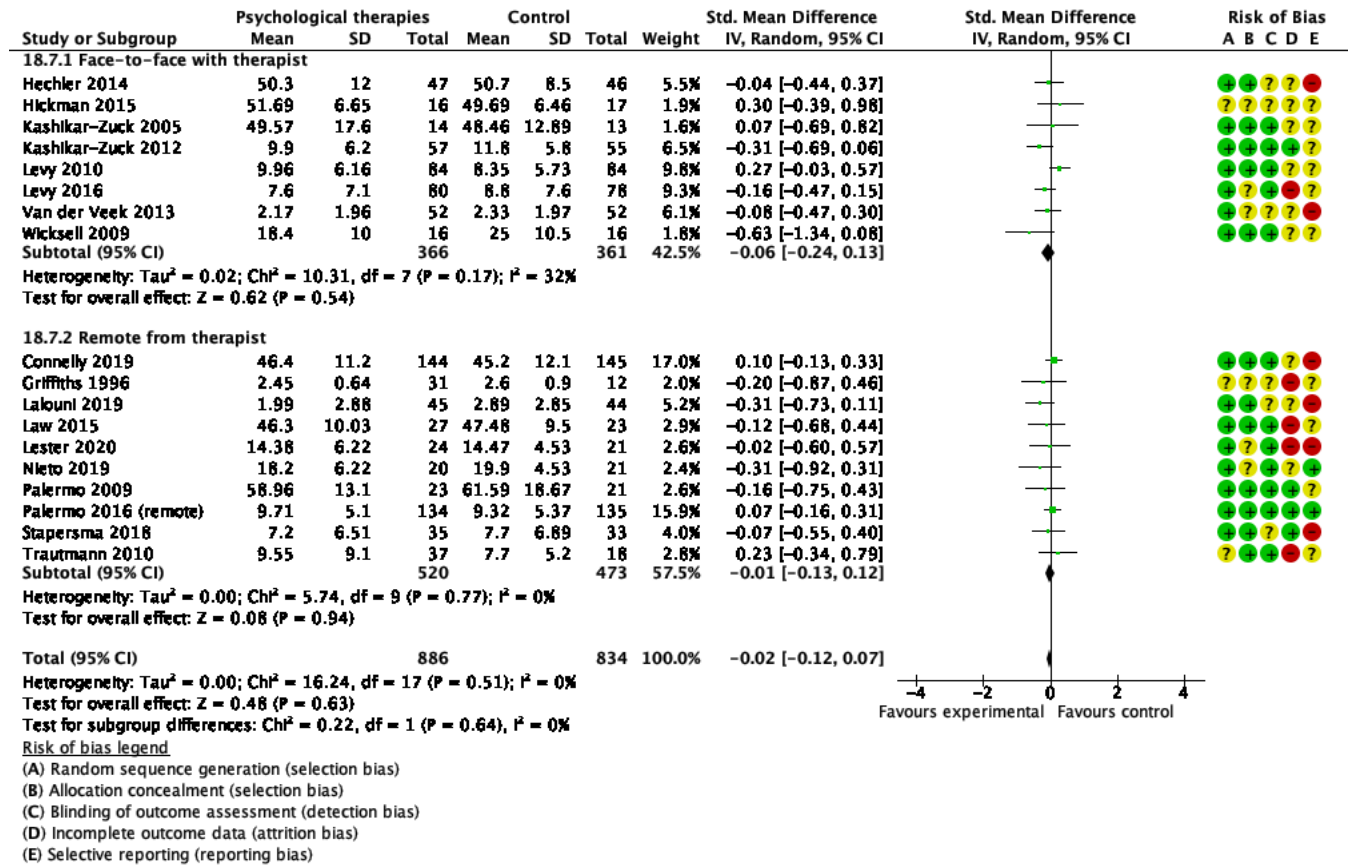


Face to Face with therapist:  
⊕○○○  
VERY LOW

Remote from therapist:  
⊕○○○  
VERY LOW

## Emotional functioning: Depression, post-treatment

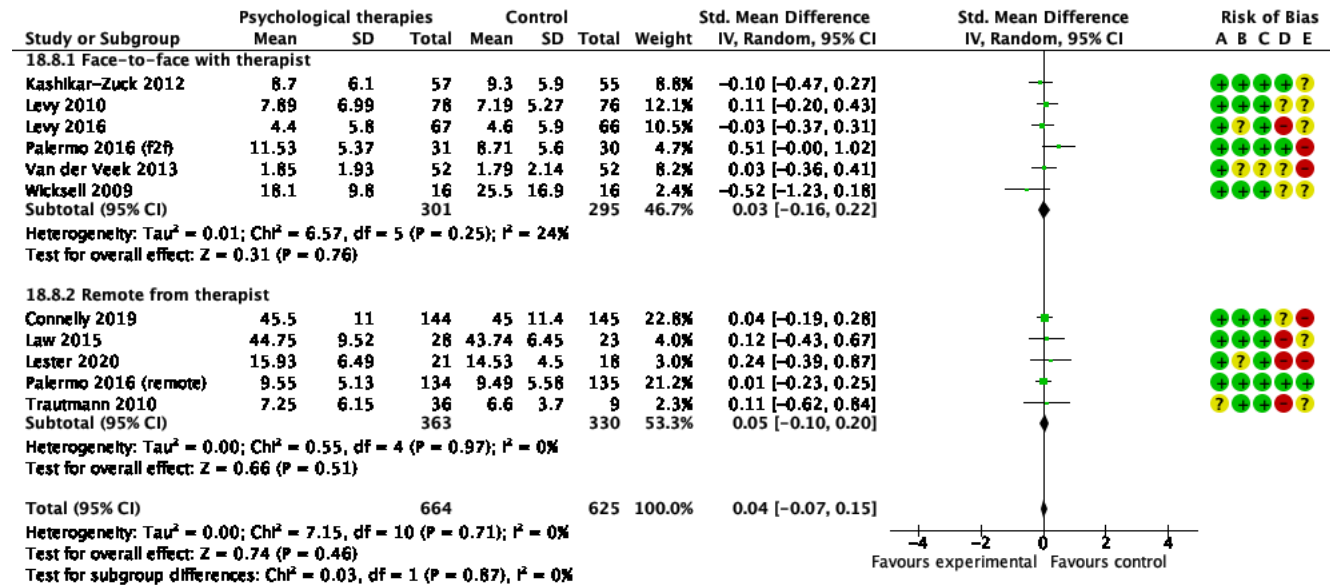
Emotional functioning: Depression, post-treatment  
Higher scores indicate higher depressive symptomology



Face to Face with therapist:  
⊕⊕⊕○  
MODERATE

Remote from therapist:  
⊕⊕⊕⊕  
HIGH

## Emotional functioning: Depression, follow-up



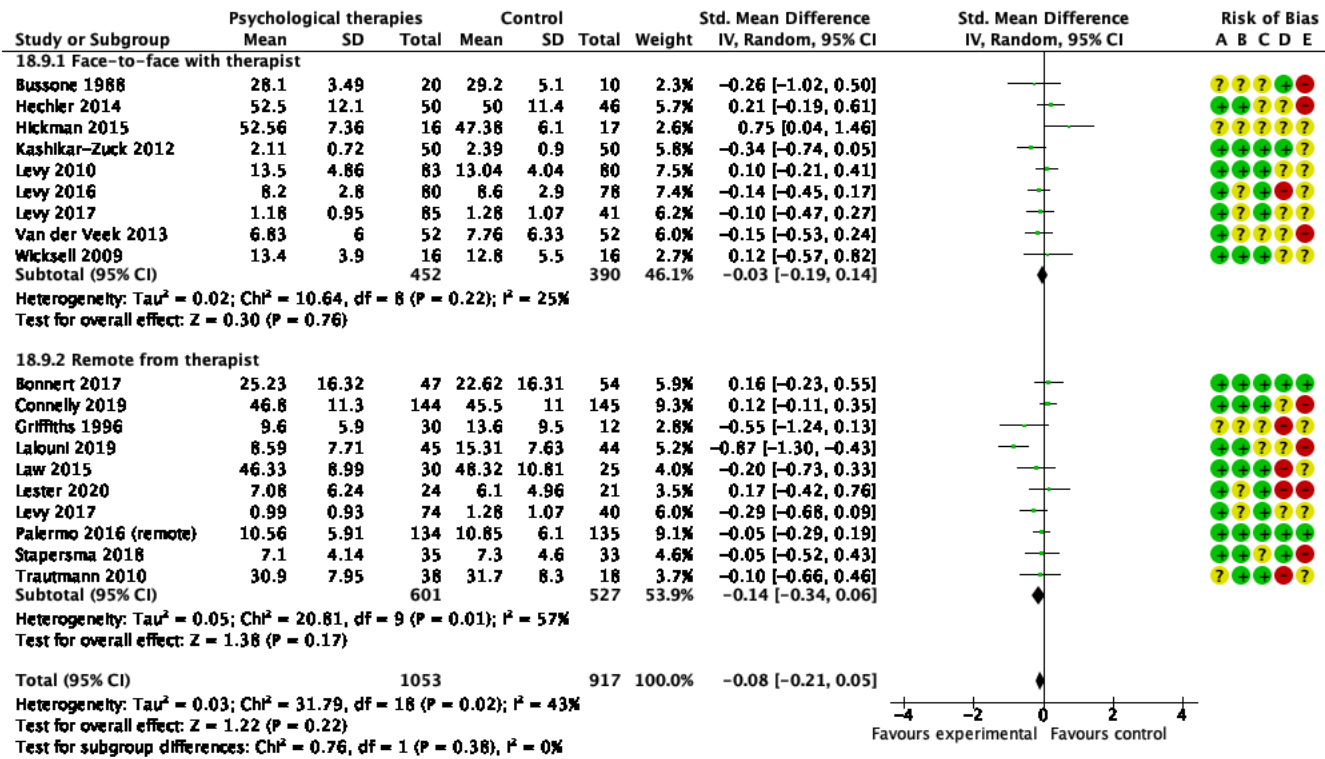
Emotional  
functioning:  
Depression,  
follow-up  
*Higher scores  
indicate higher  
depressive  
symptomology*

Face to Face with  
therapist:  
⊕⊕⊕⊕  
HIGH

Remote from  
therapist:  
⊕⊕⊕⊕  
HIGH

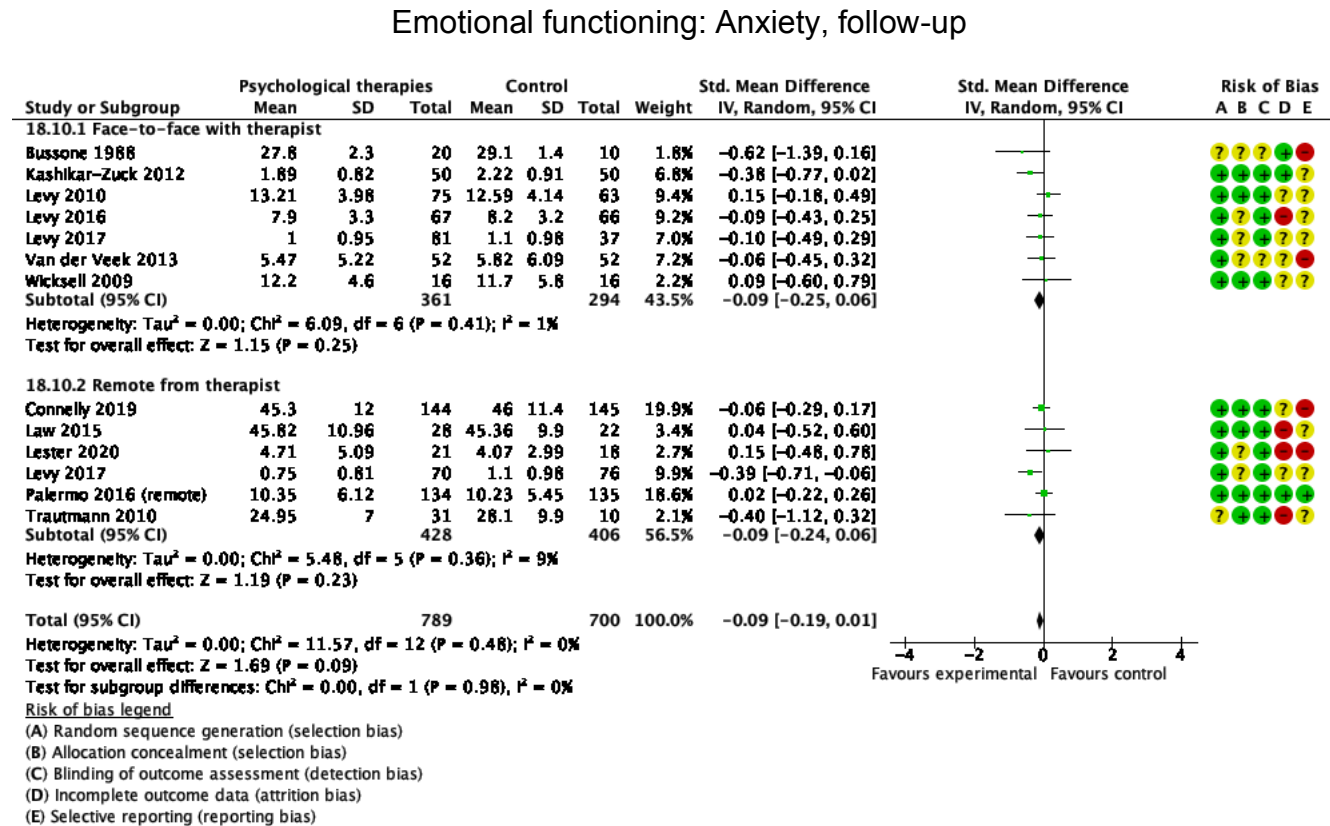
Emotional  
functioning:  
Anxiety, post-  
treatment  
*Higher scores  
indicate higher  
anxious  
symptomology*

### Emotional functioning: Anxiety, post-treatment





Emotional  
functioning:  
Anxiety, follow-  
up  
*Higher scores  
indicate higher  
anxious  
symptomology*



Face to Face with  
therapist:

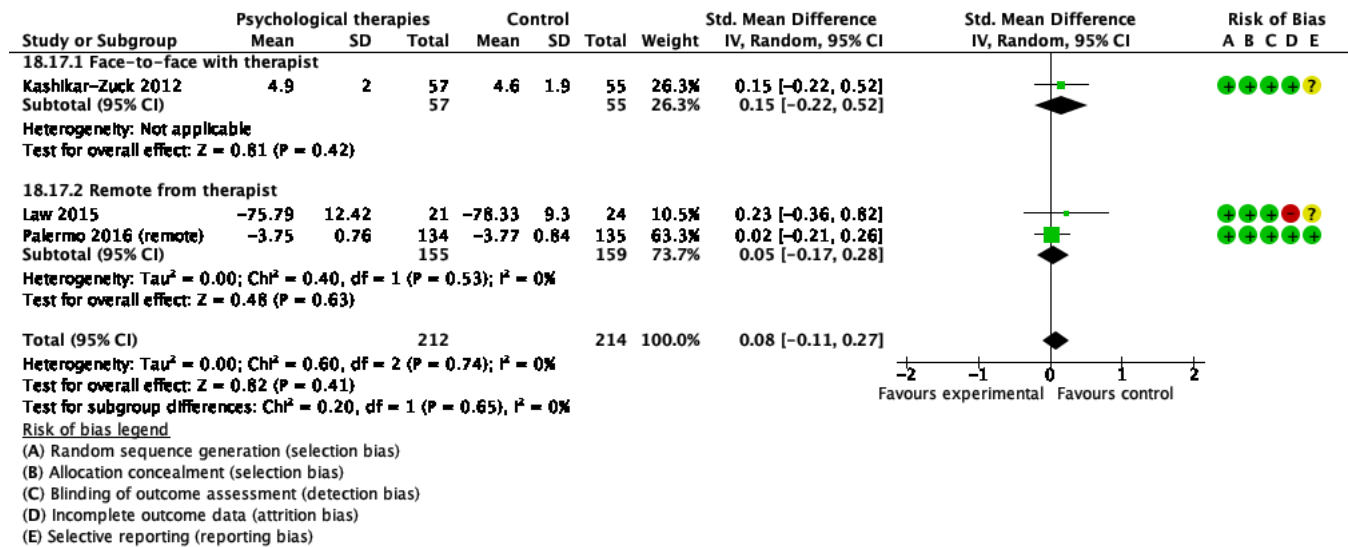
⊕⊕⊕○  
MODERATE

Remote from  
therapist:

⊕⊕⊕⊕  
HIGH

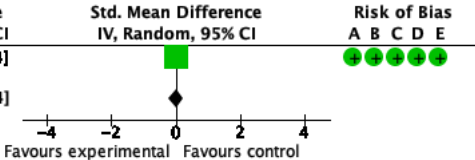
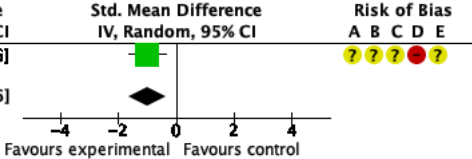
Sleep quality,  
post-treatment  
*Lower scores  
indicate worse  
sleep quality*

### Sleep quality, post-treatment

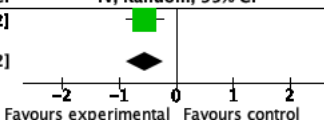
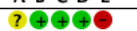
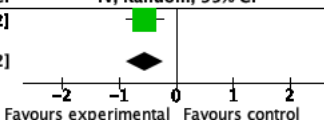
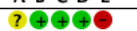
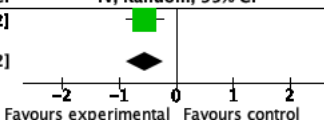
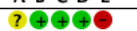
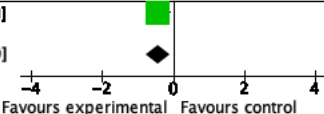

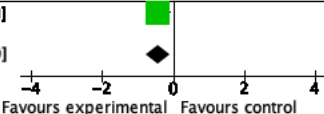

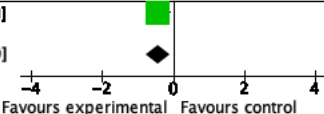



Face to Face with  
therapist:  
⊕○○○  
VERY LOW

Remote from  
therapist:  
⊕⊕○○  
LOW

<p>Sleep quality, follow-up</p> <p><i>Lower scores indicate worse sleep quality</i></p>	<p>Sleep quality, follow-up (remotely delivered)</p> <table><tr><th rowspan="2">Study or Subgroup</th><th colspan="3">Psychological therapies</th><th colspan="3">Control</th><th rowspan="2">Total</th><th rowspan="2">Weight</th><th rowspan="2">Std. Mean Difference IV, Random, 95% CI</th><th rowspan="2">Std. Mean Difference IV, Random, 95% CI</th><th rowspan="2">Risk of Bias A B C D E</th></tr><tr><th>Mean</th><th>SD</th><th>Total</th><th>Mean</th><th>SD</th><th>Total</th></tr><tr><td>Palermo 2016 (remote)</td><td>-3.76</td><td>0.8</td><td>134</td><td>-3.76</td><td>0.77</td><td>135</td><td>100.0%</td><td>0.00 [-0.24, 0.24]</td><td></td><td></td><td>⊕⊕⊕⊕⊕</td></tr><tr><td>Total (95% CI)</td><td></td><td></td><td>134</td><td></td><td></td><td>135</td><td>100.0%</td><td>0.00 [-0.24, 0.24]</td><td></td><td></td><td></td></tr></table> <p>Heterogeneity: Not applicable Test for overall effect: Z = 0.00 (P = 1.00)</p> <p>Risk of bias legend (A) Random sequence generation (selection bias) (B) Allocation concealment (selection bias) (C) Blinding of outcome assessment (detection bias) (D) Incomplete outcome data (attrition bias) (E) Selective reporting (reporting bias)</p> 	Study or Subgroup	Psychological therapies			Control			Total	Weight	Std. Mean Difference IV, Random, 95% CI	Std. Mean Difference IV, Random, 95% CI	Risk of Bias A B C D E	Mean	SD	Total	Mean	SD	Total	Palermo 2016 (remote)	-3.76	0.8	134	-3.76	0.77	135	100.0%	0.00 [-0.24, 0.24]			⊕⊕⊕⊕⊕	Total (95% CI)			134			135	100.0%	0.00 [-0.24, 0.24]				<p>Remote from therapist:</p> <p>⊕⊕○○○ LOW</p>
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<p>Activity participation, follow-up (no post-treatment data)</p> <p><i>Higher scores indicate higher interference with child activities</i></p>	<p>Activity participation, follow-up (face-to-face)</p> <table><tr><th rowspan="2">Study or Subgroup</th><th colspan="3">Psychological therapies</th><th colspan="3">Control</th><th rowspan="2">Total</th><th rowspan="2">Weight</th><th rowspan="2">Std. Mean Difference IV, Random, 95% CI</th><th rowspan="2">Std. Mean Difference IV, Random, 95% CI</th><th rowspan="2">Risk of Bias A B C D E</th></tr><tr><th>Mean</th><th>SD</th><th>Total</th><th>Mean</th><th>SD</th><th>Total</th></tr><tr><td>Sanders 1994</td><td>0.3</td><td>0.8</td><td>22</td><td>1.9</td><td>2.1</td><td>22</td><td>100.0%</td><td>-0.99 [-1.62, -0.36]</td><td></td><td></td><td>⊕⊕⊕⊕⊕</td></tr><tr><td>Total (95% CI)</td><td></td><td></td><td>22</td><td></td><td></td><td>22</td><td>100.0%</td><td>-0.99 [-1.62, -0.36]</td><td></td><td></td><td></td></tr></table> <p>Heterogeneity: Not applicable Test for overall effect: Z = 3.08 (P = 0.002)</p> <p>Risk of bias legend (A) Random sequence generation (selection bias) (B) Allocation concealment (selection bias) (C) Blinding of outcome assessment (detection bias) (D) Incomplete outcome data (attrition bias) (E) Selective reporting (reporting bias)</p> 	Study or Subgroup	Psychological therapies			Control			Total	Weight	Std. Mean Difference IV, Random, 95% CI	Std. Mean Difference IV, Random, 95% CI	Risk of Bias A B C D E	Mean	SD	Total	Mean	SD	Total	Sanders 1994	0.3	0.8	22	1.9	2.1	22	100.0%	-0.99 [-1.62, -0.36]			⊕⊕⊕⊕⊕	Total (95% CI)			22			22	100.0%	-0.99 [-1.62, -0.36]				<p>Face to Face with therapist:</p> <p>⊕○○○○ VERY LOW</p>
Study or Subgroup	Psychological therapies			Control			Total	Weight						Std. Mean Difference IV, Random, 95% CI	Std. Mean Difference IV, Random, 95% CI	Risk of Bias A B C D E																												
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Global satisfaction with treatment, post-treatment  <i>Lower scores indicate higher satisfaction with treatment</i>	<div>Global satisfaction with treatment, post-treatment</div> <table><thead><tr><th rowspan="2">Study or Subgroup</th><th colspan="3">Psychological therapies</th><th colspan="3">Control</th><th rowspan="2">Weight</th><th rowspan="2">Std. Mean Difference IV, Random, 95% CI</th><th rowspan="2">Std. 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Heterogeneity: $\tau^2 = 0.00$ ; $\text{Chi}^2 = 4.63$ , $\text{df} = 5$ ( $P = 0.46$ ); $I^2 = 0\%$ Test for overall effect: $Z = 4.88$ ( $P < 0.00001$ ) Test for subgroup differences: $\text{Chi}^2 = 0.75$ , $\text{df} = 1$ ( $P = 0.39$ ), $I^2 = 0\%$																																																																																																																																																																																																																																																										
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Global satisfaction with treatment, follow-up  <i>Lower scores indicate higher satisfaction with treatment</i>	<div>Global satisfaction with treatment, follow-up</div> <table><thead><tr><th rowspan="2">Study or Subgroup</th><th colspan="3">Psychological therapies</th><th colspan="3">Control</th><th rowspan="2">Weight</th><th rowspan="2">Mean Difference IV, Fixed, 95% CI</th><th rowspan="2">Mean Difference IV, Fixed, 95% CI</th><th rowspan="2">Risk of Bias A B C D E</th></tr><tr><th>Mean</th><th>SD</th><th>Total</th><th>Mean</th><th>SD</th><th>Total</th></tr></thead><tbody><tr><td>Palermo 2016 (remote)</td><td>-31.9</td><td>4.9</td><td>134</td><td>-29.7</td><td>5.9</td><td>135</td><td>100.0%</td><td>-2.20 [-3.50, -0.90]</td><td></td><td>●●●●●●</td></tr><tr><td>Total (95% CI)</td><td></td><td></td><td>134</td><td></td><td></td><td>135</td><td>100.0%</td><td>-2.20 [-3.50, -0.90]</td><td></td><td></td></tr><tr><td colspan="11">Heterogeneity: Not applicable Test for overall effect: <math>Z = 3.33</math> (<math>P = 0.0009</math>)</td></tr><tr><td colspan="11"><u>Risk of bias legend</u></td></tr><tr><td colspan="11">(A) Random sequence generation (selection bias)</td></tr><tr><td colspan="11">(B) Allocation concealment (selection bias)</td></tr><tr><td colspan="11">(C) Blinding of outcome assessment (detection bias)</td></tr><tr><td colspan="11">(D) Incomplete outcome data (attrition bias)</td></tr><tr><td colspan="11">(E) Selective reporting (reporting bias)</td></tr></tbody></table> <div>Remote from therapist: ⊕○○○ VERY LOW</div>	Study or Subgroup	Psychological therapies			Control			Weight	Mean Difference IV, Fixed, 95% CI	Mean Difference IV, Fixed, 95% CI	Risk of Bias A B C D E	Mean	SD	Total	Mean	SD	Total	Palermo 2016 (remote)	-31.9	4.9	134	-29.7	5.9	135	100.0%	-2.20 [-3.50, -0.90]		●●●●●●	Total (95% CI)			134			135	100.0%	-2.20 [-3.50, -0.90]			Heterogeneity: Not applicable Test for overall effect: $Z = 3.33$ ( $P = 0.0009$ )											<u>Risk of bias legend</u>											(A) Random sequence generation (selection bias)											(B) Allocation concealment (selection bias)											(C) Blinding of outcome assessment (detection bias)											(D) Incomplete outcome data (attrition bias)											(E) Selective reporting (reporting bias)																																																																																																																																															
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<p>Patient global impression of change, post-treatment</p> <p><i>Lower scores indicate higher impression of change</i></p>	<p>Patient global impression of change, post-treatment (remotely delivered)</p> <table><tr><th rowspan="2">Study or Subgroup</th><th colspan="3">Psychological therapies</th><th colspan="3">Control</th><th rowspan="2">Weight</th><th rowspan="2">Std. Mean Difference IV, Random, 95% CI</th><th rowspan="2">Std. Mean Difference IV, Random, 95% CI</th><th rowspan="2">Risk of Bias A B C D E</th></tr><tr><th>Mean</th><th>SD</th><th>Total</th><th>Mean</th><th>SD</th><th>Total</th></tr><tr><td>Palermo 2020</td><td>-3.9</td><td>1.8</td><td>73</td><td>-2.9</td><td>1.8</td><td>70</td><td>100.0%</td><td>-0.55 [-0.89, -0.22]</td><td></td><td></td></tr><tr><td>Total (95% CI)</td><td></td><td></td><td>73</td><td></td><td></td><td>70</td><td>100.0%</td><td>-0.55 [-0.89, -0.22]</td><td></td><td></td></tr></table> <p>Heterogeneity: Not applicable Test for overall effect: <math>Z = 3.24</math> (<math>P = 0.001</math>)</p> <p><u>Risk of bias legend</u> (A) Random sequence generation (selection bias) (B) Allocation concealment (selection bias) (C) Blinding of outcome assessment (detection bias) (D) Incomplete outcome data (attrition bias) (E) Selective reporting (reporting bias)</p>	Study or Subgroup	Psychological therapies			Control			Weight	Std. Mean Difference IV, Random, 95% CI	Std. Mean Difference IV, Random, 95% CI	Risk of Bias A B C D E	Mean	SD	Total	Mean	SD	Total	Palermo 2020	-3.9	1.8	73	-2.9	1.8	70	100.0%	-0.55 [-0.89, -0.22]			Total (95% CI)			73			70	100.0%	-0.55 [-0.89, -0.22]			<p>Remote from therapist: ⊕○○○ VERY LOW</p>
Study or Subgroup	Psychological therapies			Control			Weight	Std. Mean Difference IV, Random, 95% CI					Std. Mean Difference IV, Random, 95% CI	Risk of Bias A B C D E																											
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Study or Subgroup	Psychological therapies			Control			Weight	Std. Mean Difference IV, Random, 95% CI					Std. Mean Difference IV, Random, 95% CI	Risk of Bias A B C D E																											
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**Appendix G. 10. WHO review: Psychological interventions for children with chronic pain**  
**Subgroup analysis: by size**

**Comparison:** Psychological therapies versus active (non-psychological), standard care or waitlist control; by size

**Population:** Children and adolescents with chronic pain

**Setting:** Any setting

**Studies:** Randomised controlled trials

Risk of bias legend

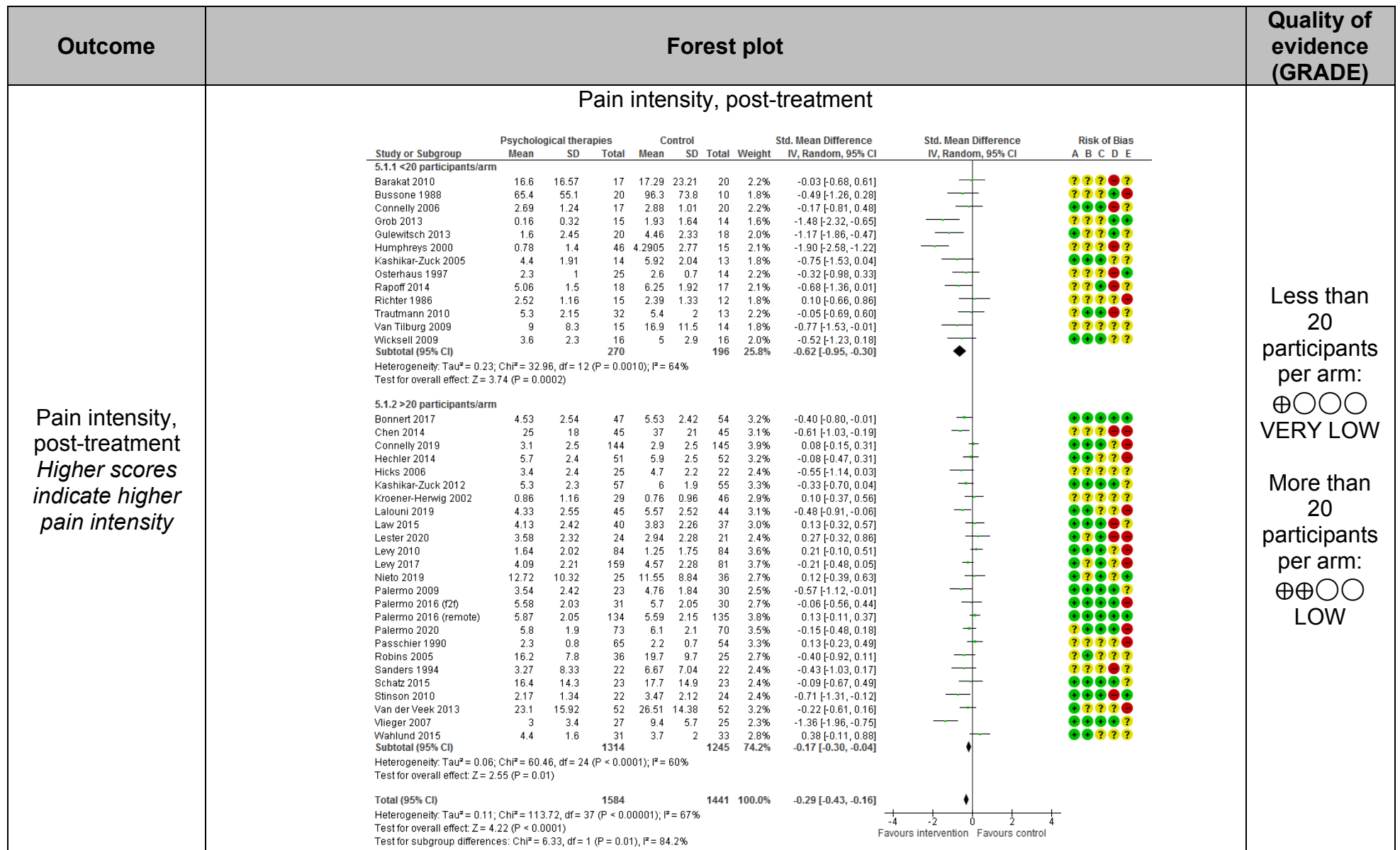
(A) Random sequence generation (selection bias)

(B) Allocation concealment (selection bias)

(C) Blinding of outcome assessment (detection bias)

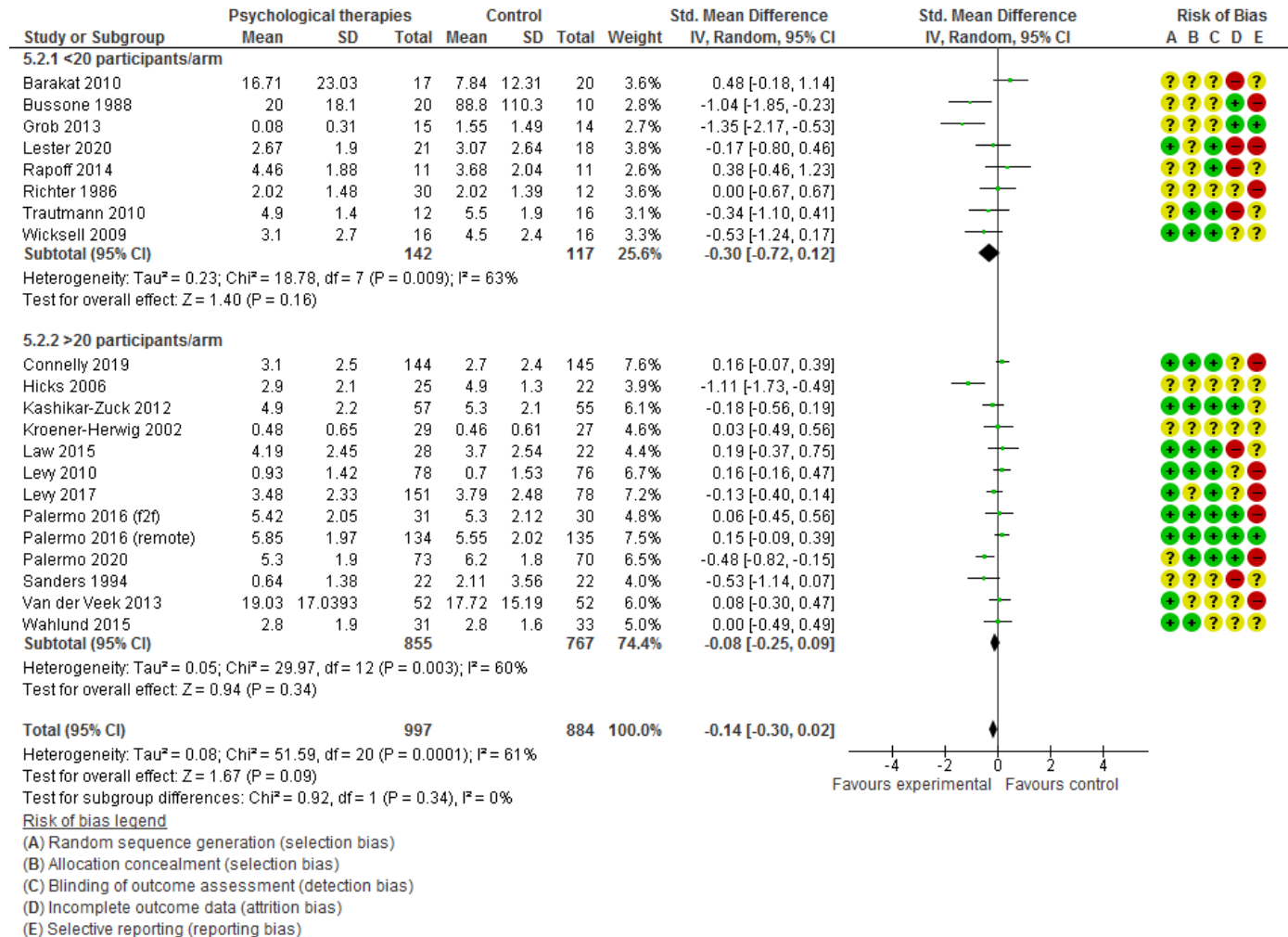
(D) Incomplete outcome data (attrition bias)

(E) Selective reporting (reporting bias)



Pain intensity,  
follow-up  
*Higher scores  
indicate higher  
pain intensity*

### Pain intensity, follow-up



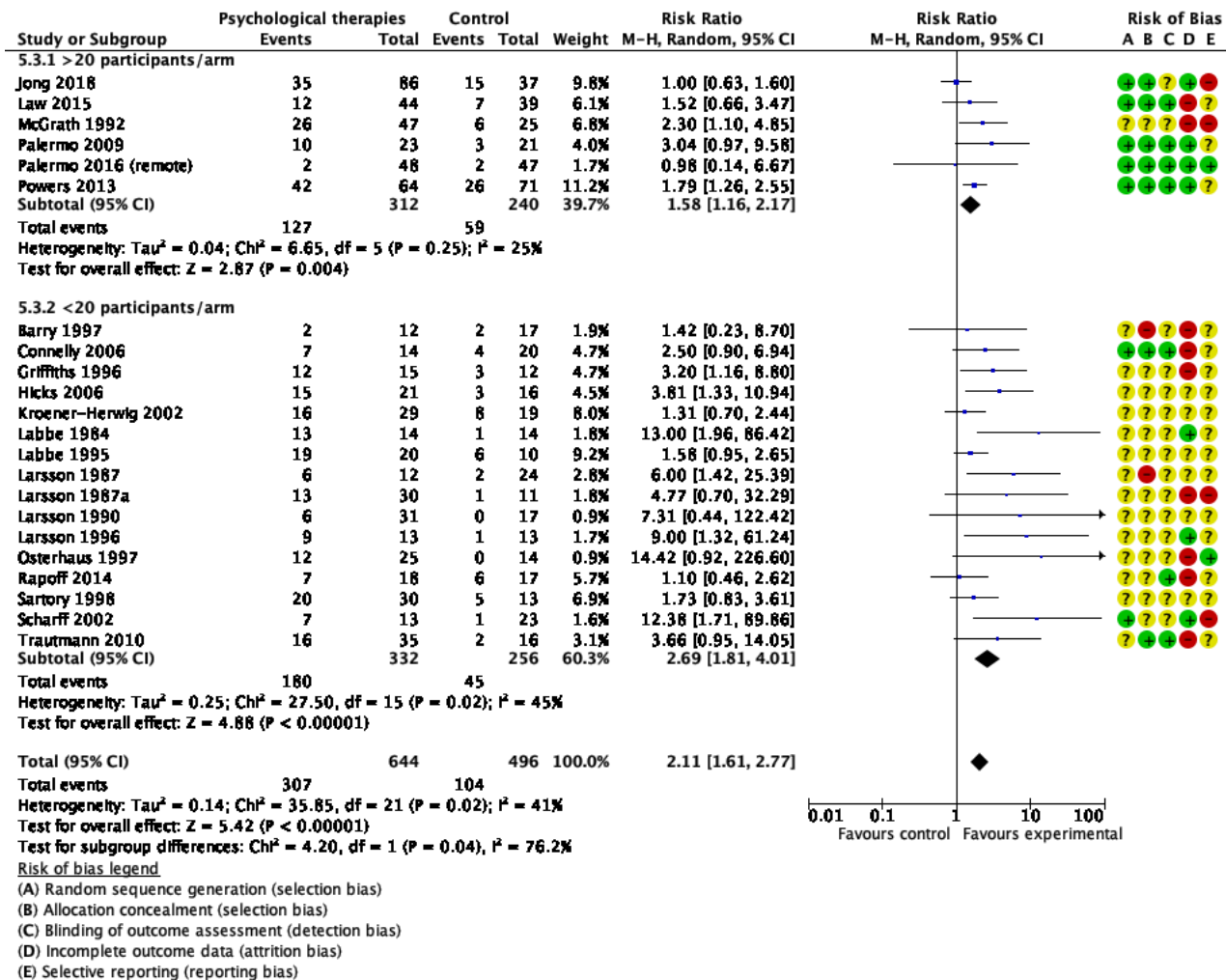
Less than  
20  
participants  
per arm:  
⊕○○○  
VERY LOW

More than  
20  
participants  
per arm:  
⊕⊕○○  
LOW



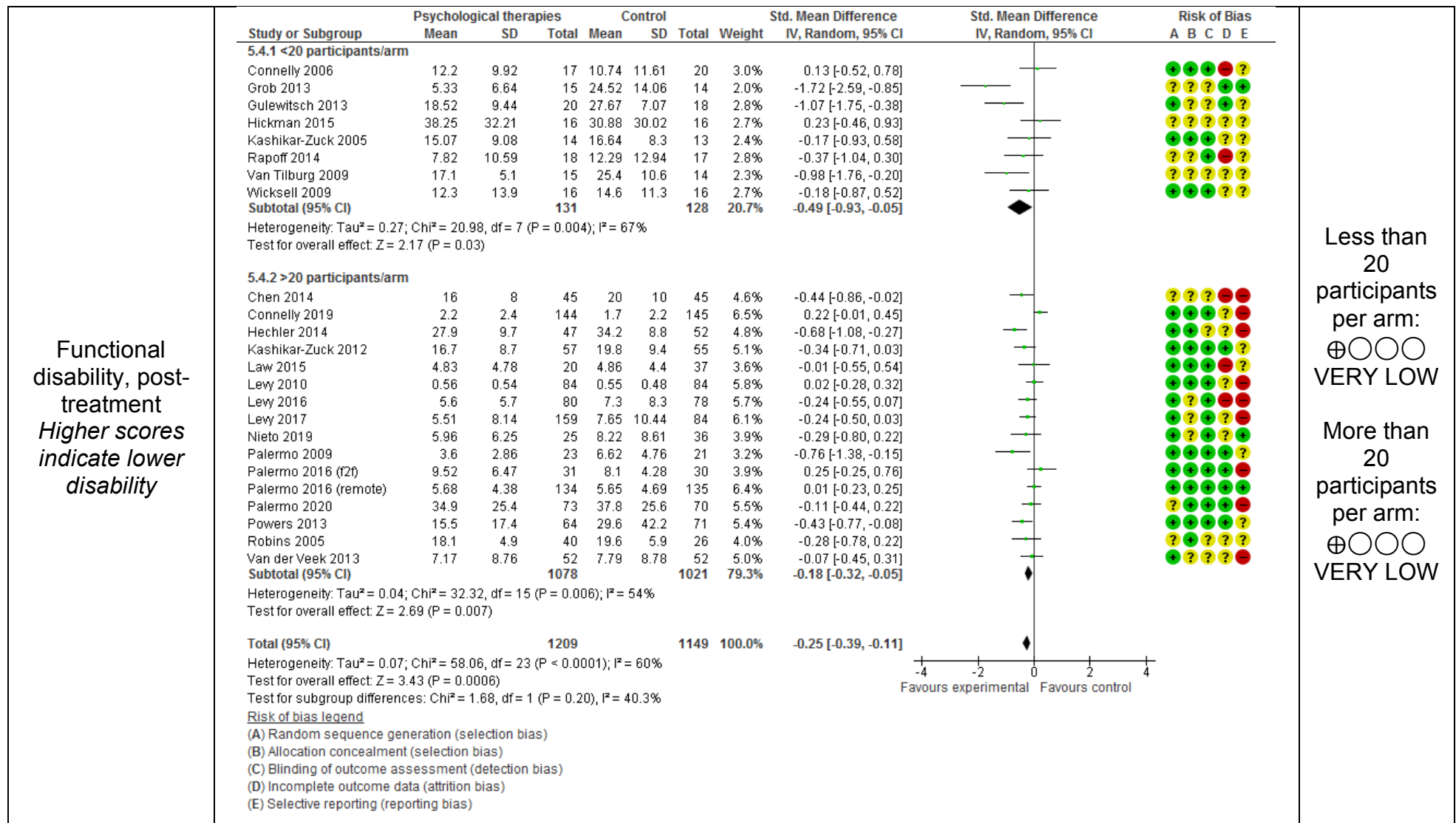
50% reduction,  
post-treatment

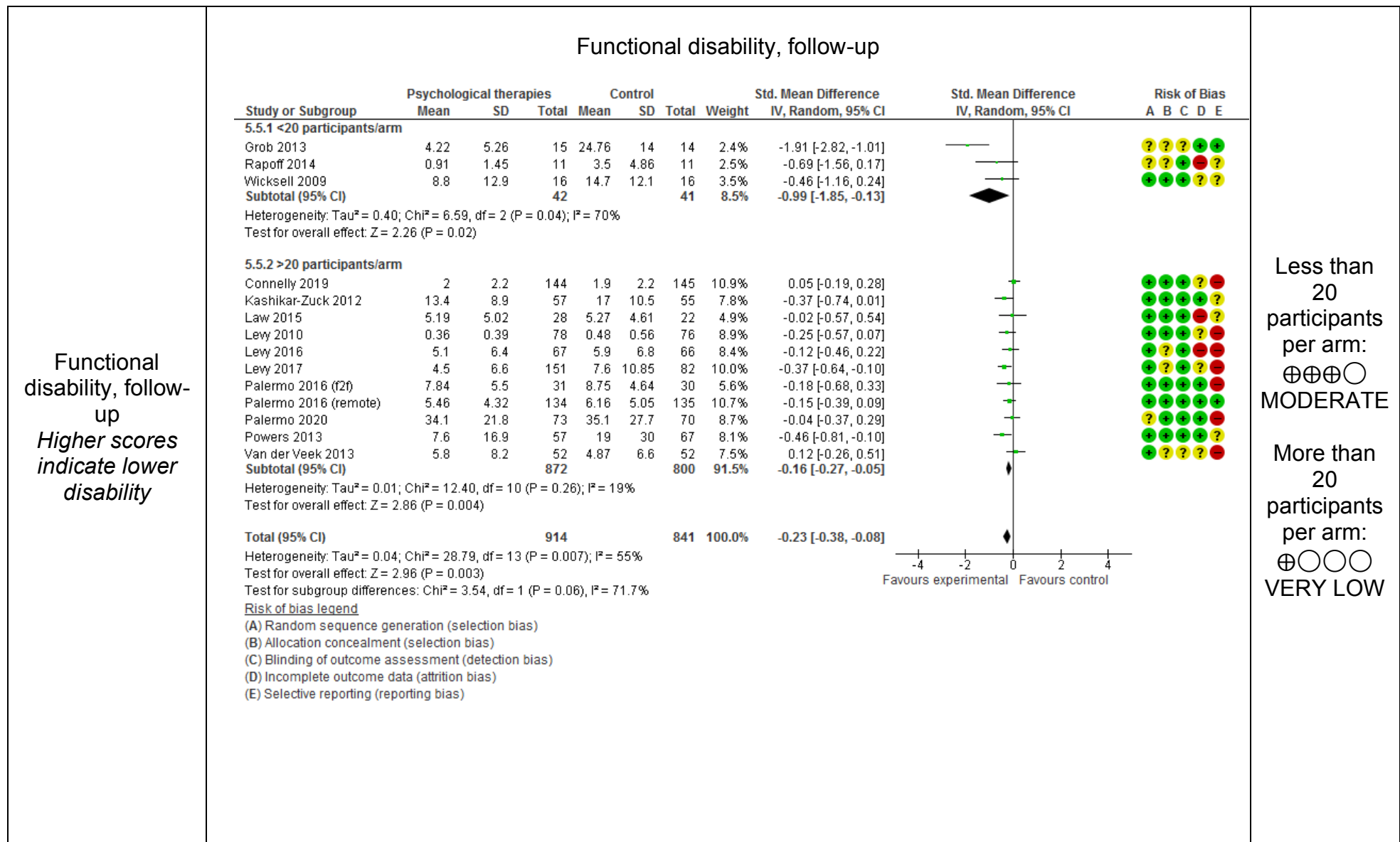
### 50% reduction, post-treatment



Less than  
20  
participants  
per arm:  
⊕○○○  
VERY LOW

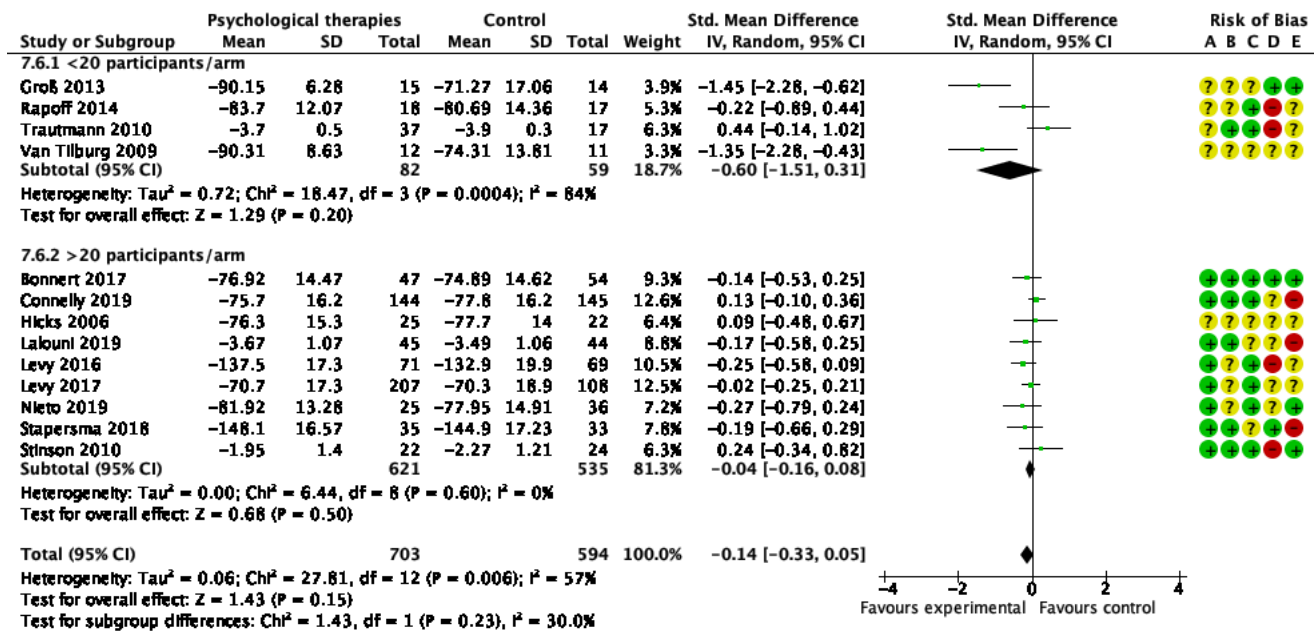
More than  
20  
participants  
per arm:  
⊕○○○  
VERY LOW





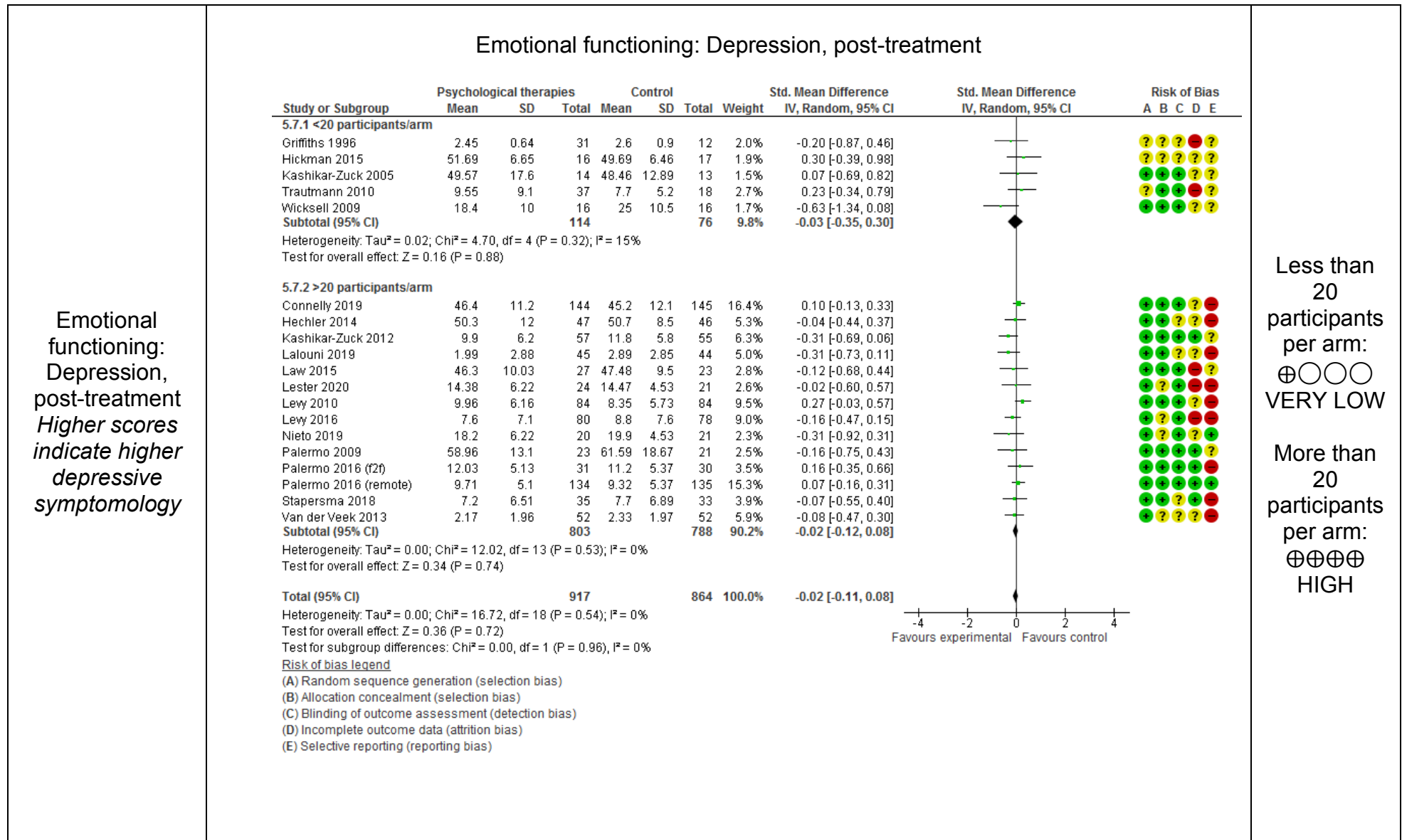
Health-related  
quality of life,  
post-treatment  
*Lower scores  
indicate better  
quality of life*

### Health-related quality of life, post-treatment

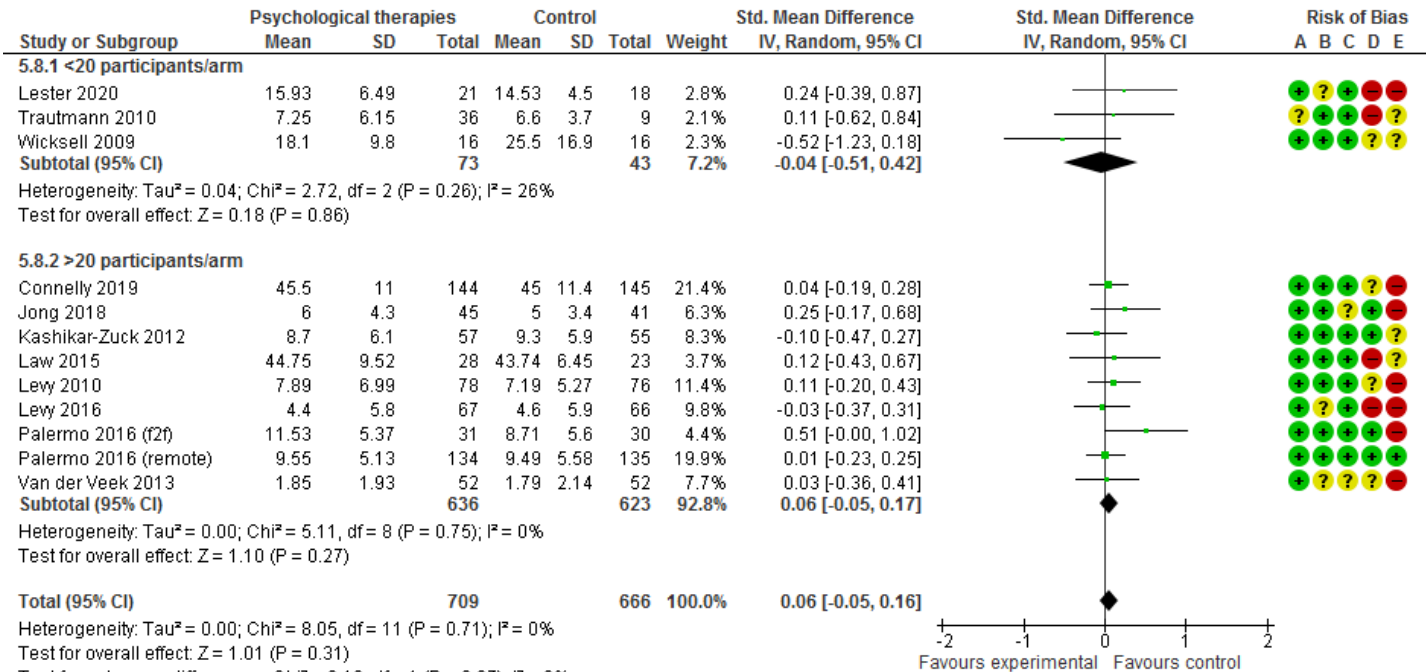


Less than  
20  
participants  
per arm:  
⊕○○○  
VERY LOW

More than  
20  
participants  
per arm:  
⊕⊕⊕⊕  
HIGH



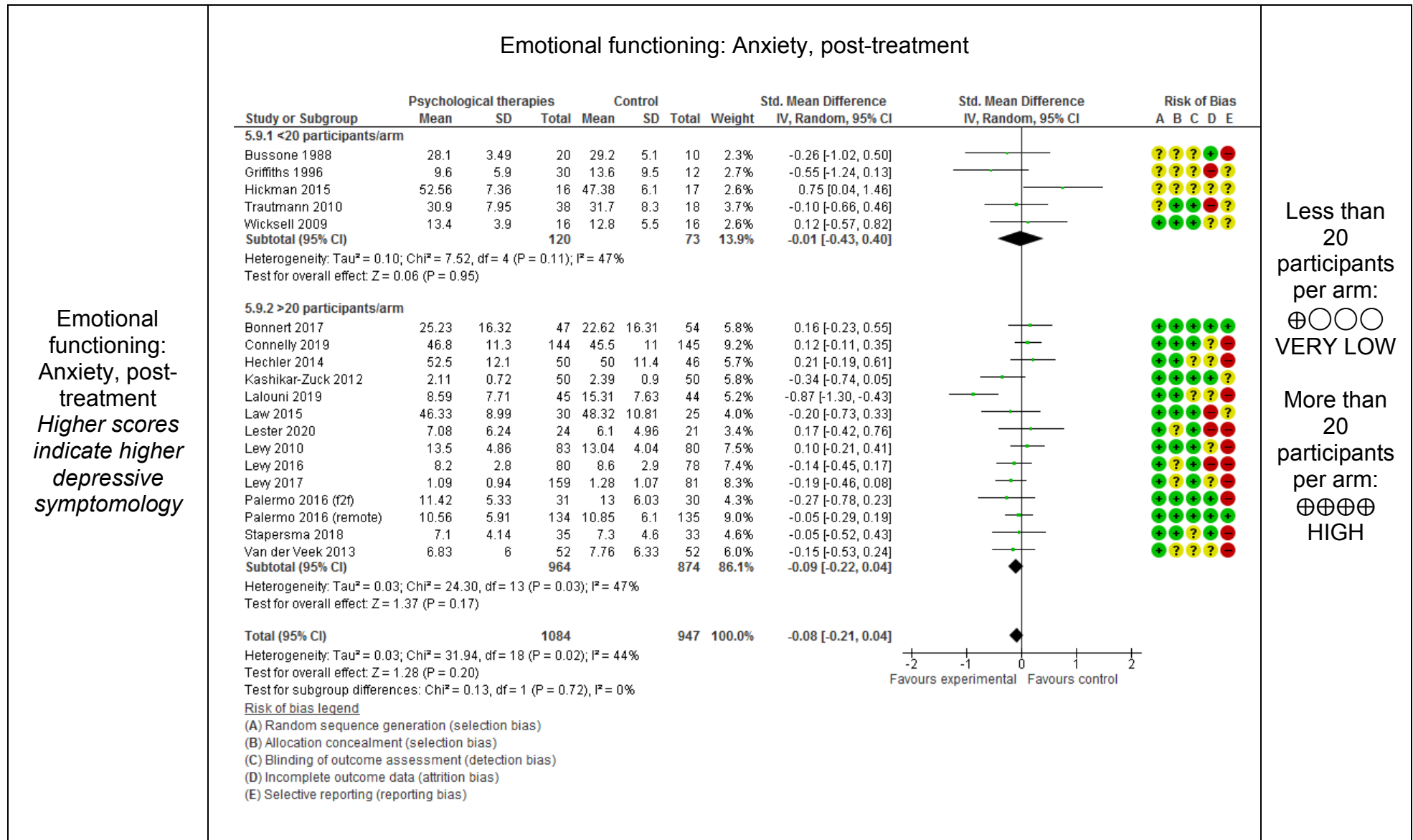
## Emotional functioning: Depression, follow up



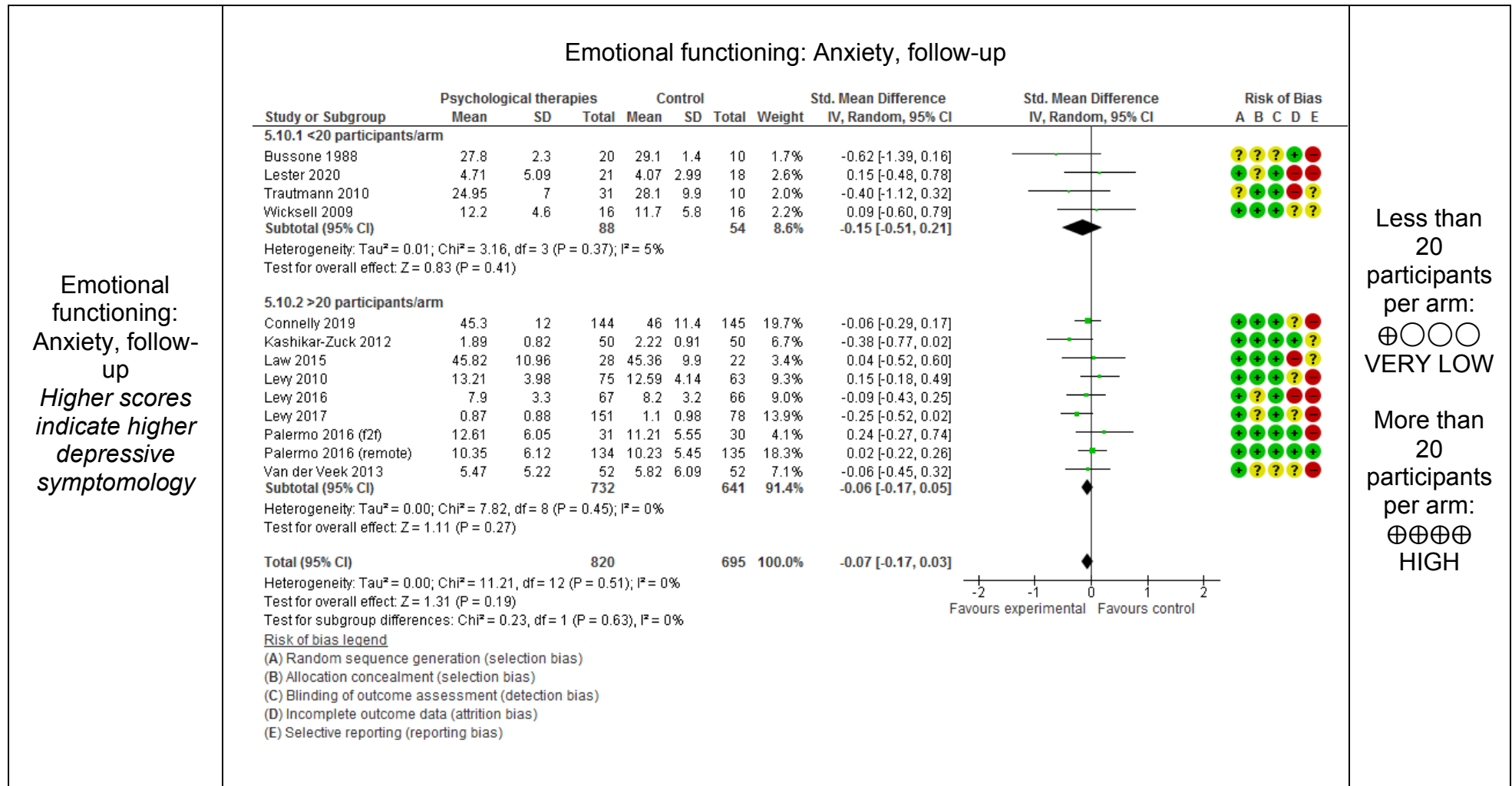
Emotional  
functioning:  
Depression,  
follow up  
*Higher scores  
indicate higher  
depressive  
symptomology*

Less than  
20  
participants  
per arm:  
⊕○○○  
VERY LOW

More than  
20  
participants  
per arm:  
⊕⊕⊕⊕  
HIGH









**Appendix G.11. WHO review: Psychological interventions for children with chronic pain  
Sensitivity Analysis; excluding non-chronic headache**

**Comparison:** Psychological therapies versus active (non-psychological), standard care or waitlist control; excluding studies including children with non-chronic headache

**Population:** Children and adolescents with chronic pain

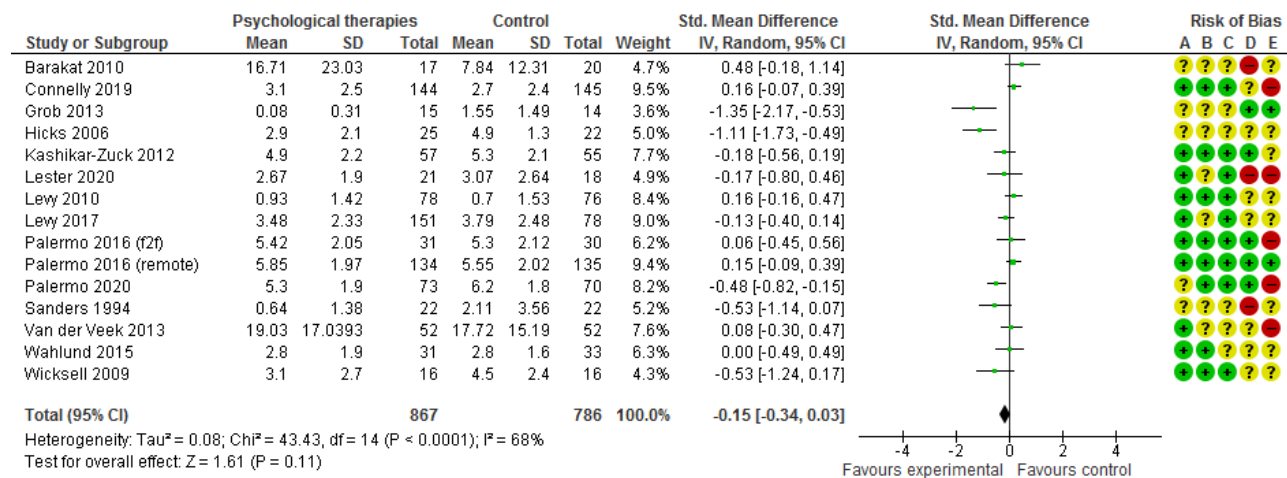
**Setting:** Any setting

**Studies:** Randomised controlled trials

Outcome	Forest Plot	Quality of evidence																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
	<p>Pain intensity, post-treatment</p> <table><tr><th rowspan="2">Study or Subgroup</th><th colspan="3">Psychological therapies</th><th colspan="3">Control</th><th rowspan="2">Weight</th><th colspan="2">Std. Mean Difference</th><th rowspan="2">Std. Mean Difference IV, Random, 95% CI</th><th colspan="5">Risk of Bias</th></tr><tr><th>Mean</th><th>SD</th><th>Total</th><th>Mean</th><th>SD</th><th>Total</th><th colspan="2">IV, Random, 95% CI</th><th>A</th><th>B</th><th>C</th><th>D</th><th>E</th></tr><tr><td>Barakat 2010</td><td>16.6</td><td>16.57</td><td>17</td><td>17.29</td><td>23.21</td><td>20</td><td>3.0%</td><td colspan="2">-0.03 [-0.68, 0.61]</td><td></td><td>?</td><td>?</td><td>?</td><td>?</td></tr><tr><td>Bonnert 2017</td><td>4.53</td><td>2.54</td><td>47</td><td>5.53</td><td>2.42</td><td>54</td><td>4.1%</td><td colspan="2">-0.40 [-0.80, -0.01]</td><td></td><td>+</td><td>+</td><td>+</td><td>+</td></tr><tr><td>Connelly 2019</td><td>3.1</td><td>2.5</td><td>144</td><td>2.9</td><td>2.5</td><td>145</td><td>4.9%</td><td colspan="2">0.08 [-0.15, 0.31]</td><td></td><td>+</td><td>+</td><td>+</td><td>?</td></tr><tr><td>Grob 2013</td><td>0.16</td><td>0.32</td><td>15</td><td>1.93</td><td>1.64</td><td>14</td><td>2.3%</td><td colspan="2">-1.48 [-2.32, -0.65]</td><td></td><td>?</td><td>?</td><td>?</td><td>+</td></tr><tr><td>Gulewitsch 2013</td><td>1.6</td><td>2.45</td><td>20</td><td>4.46</td><td>2.33</td><td>18</td><td>2.8%</td><td colspan="2">-1.17 [-1.86, -0.47]</td><td></td><td>+</td><td>?</td><td>?</td><td>?</td></tr><tr><td>Hechler 2014</td><td>5.7</td><td>2.4</td><td>51</td><td>5.9</td><td>2.5</td><td>52</td><td>4.2%</td><td colspan="2">-0.08 [-0.47, 0.31]</td><td></td><td>+</td><td>+</td><td>?</td><td>?</td></tr><tr><td>Hicks 2006</td><td>3.4</td><td>2.4</td><td>25</td><td>4.7</td><td>2.2</td><td>22</td><td>3.2%</td><td colspan="2">-0.55 [-1.14, 0.03]</td><td></td><td>?</td><td>?</td><td>?</td><td>?</td></tr><tr><td>Humphreys 2000</td><td>0.78</td><td>1.4</td><td>46</td><td>4.2905</td><td>2.77</td><td>15</td><td>2.8%</td><td colspan="2">-1.90 [-2.58, -1.22]</td><td></td><td>?</td><td>?</td><td>?</td><td>?</td></tr><tr><td>Kashikar-Zuck 2005</td><td>4.4</td><td>1.91</td><td>14</td><td>5.92</td><td>2.04</td><td>13</td><td>2.5%</td><td colspan="2">-0.75 [-1.53, 0.04]</td><td></td><td>+</td><td>+</td><td>?</td><td>?</td></tr><tr><td>Kashikar-Zuck 2012</td><td>5.3</td><td>2.3</td><td>57</td><td>6</td><td>1.9</td><td>55</td><td>4.3%</td><td colspan="2">-0.33 [-0.70, 0.04]</td><td></td><td>+</td><td>+</td><td>?</td><td>?</td></tr><tr><td>Lalouni 2019</td><td>4.33</td><td>2.55</td><td>45</td><td>5.57</td><td>2.52</td><td>44</td><td>4.0%</td><td colspan="2">-0.48 [-0.91, -0.06]</td><td></td><td>+</td><td>+</td><td>?</td><td>?</td></tr><tr><td>Lester 2020</td><td>3.58</td><td>2.32</td><td>24</td><td>2.94</td><td>2.28</td><td>21</td><td>3.2%</td><td colspan="2">0.27 [-0.32, 0.86]</td><td></td><td>+</td><td>?</td><td>?</td><td>?</td></tr><tr><td>Levy 2010</td><td>1.64</td><td>2.02</td><td>84</td><td>1.25</td><td>1.75</td><td>84</td><td>4.6%</td><td colspan="2">0.21 [-0.10, 0.51]</td><td></td><td>+</td><td>+</td><td>?</td><td>?</td></tr><tr><td>Levy 2017</td><td>4.09</td><td>2.21</td><td>159</td><td>4.57</td><td>2.28</td><td>81</td><td>4.7%</td><td colspan="2">-0.21 [-0.48, 0.05]</td><td></td><td>+</td><td>?</td><td>?</td><td>?</td></tr><tr><td>Nieto 2019</td><td>12.72</td><td>10.32</td><td>25</td><td>11.55</td><td>8.84</td><td>36</td><td>3.6%</td><td colspan="2">0.12 [-0.39, 0.63]</td><td></td><td>+</td><td>?</td><td>?</td><td>?</td></tr><tr><td>Palermo 2009</td><td>3.54</td><td>2.42</td><td>23</td><td>4.76</td><td>1.84</td><td>30</td><td>3.4%</td><td colspan="2">-0.57 [-1.12, -0.01]</td><td></td><td>+</td><td>+</td><td>+</td><td>?</td></tr><tr><td>Palermo 2016 (f2f)</td><td>5.58</td><td>2.03</td><td>31</td><td>5.7</td><td>2.05</td><td>30</td><td>3.6%</td><td colspan="2">-0.06 [-0.56, 0.44]</td><td></td><td>+</td><td>+</td><td>+</td><td>?</td></tr><tr><td>Palermo 2016 (remote)</td><td>5.87</td><td>2.05</td><td>134</td><td>5.59</td><td>2.15</td><td>135</td><td>4.9%</td><td colspan="2">0.13 [-0.11, 0.37]</td><td></td><td>+</td><td>+</td><td>+</td><td>+</td></tr><tr><td>Palermo 2020</td><td>5.8</td><td>1.9</td><td>73</td><td>6.1</td><td>2.1</td><td>70</td><td>4.5%</td><td colspan="2">-0.15 [-0.48, 0.18]</td><td></td><td>?</td><td>+</td><td>+</td><td>?</td></tr><tr><td>Robins 2005</td><td>16.2</td><td>7.8</td><td>36</td><td>19.7</td><td>9.7</td><td>25</td><td>3.6%</td><td colspan="2">-0.40 [-0.92, 0.11]</td><td></td><td>?</td><td>+</td><td>?</td><td>?</td></tr><tr><td>Sanders 1994</td><td>3.27</td><td>8.33</td><td>22</td><td>6.67</td><td>7.04</td><td>22</td><td>3.2%</td><td colspan="2">-0.43 [-1.03, 0.17]</td><td></td><td>?</td><td>?</td><td>?</td><td>?</td></tr><tr><td>Schatz 2015</td><td>16.4</td><td>14.3</td><td>23</td><td>17.7</td><td>14.9</td><td>23</td><td>3.3%</td><td colspan="2">-0.09 [-0.67, 0.49]</td><td></td><td>+</td><td>+</td><td>+</td><td>?</td></tr><tr><td>Stinson 2010</td><td>2.17</td><td>1.34</td><td>22</td><td>3.47</td><td>2.12</td><td>24</td><td>3.2%</td><td colspan="2">-0.71 [-1.31, -0.12]</td><td></td><td>+</td><td>+</td><td>?</td><td>?</td></tr><tr><td>Van der Veek 2013</td><td>23.1</td><td>15.92</td><td>52</td><td>26.51</td><td>14.38</td><td>52</td><td>4.2%</td><td colspan="2">-0.22 [-0.61, 0.16]</td><td></td><td>+</td><td>?</td><td>?</td><td>?</td></tr><tr><td>Van Tilburg 2009</td><td>9</td><td>8.3</td><td>15</td><td>16.9</td><td>11.5</td><td>14</td><td>2.5%</td><td colspan="2">-0.77 [-1.53, -0.01]</td><td></td><td>?</td><td>?</td><td>?</td><td>?</td></tr><tr><td>Vlieger 2007</td><td>3</td><td>3.4</td><td>27</td><td>9.4</td><td>5.7</td><td>25</td><td>3.1%</td><td colspan="2">-1.36 [-1.96, -0.75]</td><td></td><td>+</td><td>+</td><td>+</td><td>?</td></tr><tr><td>Wahlund 2015</td><td>4.4</td><td>1.6</td><td>31</td><td>3.7</td><td>2</td><td>33</td><td>3.7%</td><td colspan="2">0.38 [-0.11, 0.88]</td><td></td><td>+</td><td>+</td><td>?</td><td>?</td></tr><tr><td>Wicksell 2009</td><td>3.6</td><td>2.3</td><td>16</td><td>5</td><td>2.9</td><td>16</td><td>2.7%</td><td colspan="2">-0.52 [-1.23, 0.18]</td><td></td><td>+</td><td>+</td><td>?</td><td>?</td></tr><tr><td colspan="7"><b>Total (95% CI)</b></td><td><b>1278</b></td><td><b>1173</b></td><td><b>100.0%</b></td><td><b>-0.34 [-0.51, -0.18]</b></td><td colspan="5"></td></tr></table> <p>Heterogeneity: Tau<sup>2</sup> = 0.13; Chi<sup>2</sup> = 100.12, df = 27 (P &lt; 0.00001); I<sup>2</sup> = 73% Test for overall effect: Z = 4.03 (P &lt; 0.0001)</p> <p><u>Risk of bias legend</u> (A) Random sequence generation (selection bias) (B) Allocation concealment (selection bias) (C) Blinding of outcome assessment (detection bias) (D) Incomplete outcome data (attrition bias) (E) Selective reporting (reporting bias)</p>	Study or Subgroup	Psychological therapies			Control			Weight	Std. Mean Difference		Std. Mean Difference IV, Random, 95% CI	Risk of Bias					Mean	SD	Total	Mean	SD	Total	IV, Random, 95% CI		A	B	C	D	E	Barakat 2010	16.6	16.57	17	17.29	23.21	20	3.0%	-0.03 [-0.68, 0.61]			?	?	?	?	Bonnert 2017	4.53	2.54	47	5.53	2.42	54	4.1%	-0.40 [-0.80, -0.01]			+	+	+	+	Connelly 2019	3.1	2.5	144	2.9	2.5	145	4.9%	0.08 [-0.15, 0.31]			+	+	+	?	Grob 2013	0.16	0.32	15	1.93	1.64	14	2.3%	-1.48 [-2.32, -0.65]			?	?	?	+	Gulewitsch 2013	1.6	2.45	20	4.46	2.33	18	2.8%	-1.17 [-1.86, -0.47]			+	?	?	?	Hechler 2014	5.7	2.4	51	5.9	2.5	52	4.2%	-0.08 [-0.47, 0.31]			+	+	?	?	Hicks 2006	3.4	2.4	25	4.7	2.2	22	3.2%	-0.55 [-1.14, 0.03]			?	?	?	?	Humphreys 2000	0.78	1.4	46	4.2905	2.77	15	2.8%	-1.90 [-2.58, -1.22]			?	?	?	?	Kashikar-Zuck 2005	4.4	1.91	14	5.92	2.04	13	2.5%	-0.75 [-1.53, 0.04]			+	+	?	?	Kashikar-Zuck 2012	5.3	2.3	57	6	1.9	55	4.3%	-0.33 [-0.70, 0.04]			+	+	?	?	Lalouni 2019	4.33	2.55	45	5.57	2.52	44	4.0%	-0.48 [-0.91, -0.06]			+	+	?	?	Lester 2020	3.58	2.32	24	2.94	2.28	21	3.2%	0.27 [-0.32, 0.86]			+	?	?	?	Levy 2010	1.64	2.02	84	1.25	1.75	84	4.6%	0.21 [-0.10, 0.51]			+	+	?	?	Levy 2017	4.09	2.21	159	4.57	2.28	81	4.7%	-0.21 [-0.48, 0.05]			+	?	?	?	Nieto 2019	12.72	10.32	25	11.55	8.84	36	3.6%	0.12 [-0.39, 0.63]			+	?	?	?	Palermo 2009	3.54	2.42	23	4.76	1.84	30	3.4%	-0.57 [-1.12, -0.01]			+	+	+	?	Palermo 2016 (f2f)	5.58	2.03	31	5.7	2.05	30	3.6%	-0.06 [-0.56, 0.44]			+	+	+	?	Palermo 2016 (remote)	5.87	2.05	134	5.59	2.15	135	4.9%	0.13 [-0.11, 0.37]			+	+	+	+	Palermo 2020	5.8	1.9	73	6.1	2.1	70	4.5%	-0.15 [-0.48, 0.18]			?	+	+	?	Robins 2005	16.2	7.8	36	19.7	9.7	25	3.6%	-0.40 [-0.92, 0.11]			?	+	?	?	Sanders 1994	3.27	8.33	22	6.67	7.04	22	3.2%	-0.43 [-1.03, 0.17]			?	?	?	?	Schatz 2015	16.4	14.3	23	17.7	14.9	23	3.3%	-0.09 [-0.67, 0.49]			+	+	+	?	Stinson 2010	2.17	1.34	22	3.47	2.12	24	3.2%	-0.71 [-1.31, -0.12]			+	+	?	?	Van der Veek 2013	23.1	15.92	52	26.51	14.38	52	4.2%	-0.22 [-0.61, 0.16]			+	?	?	?	Van Tilburg 2009	9	8.3	15	16.9	11.5	14	2.5%	-0.77 [-1.53, -0.01]			?	?	?	?	Vlieger 2007	3	3.4	27	9.4	5.7	25	3.1%	-1.36 [-1.96, -0.75]			+	+	+	?	Wahlund 2015	4.4	1.6	31	3.7	2	33	3.7%	0.38 [-0.11, 0.88]			+	+	?	?	Wicksell 2009	3.6	2.3	16	5	2.9	16	2.7%	-0.52 [-1.23, 0.18]			+	+	?	?	<b>Total (95% CI)</b>							<b>1278</b>	<b>1173</b>	<b>100.0%</b>	<b>-0.34 [-0.51, -0.18]</b>						<p>⊕⊕○○ LOW</p>
Study or Subgroup	Psychological therapies			Control			Weight	Std. Mean Difference		Std. Mean Difference IV, Random, 95% CI	Risk of Bias																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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Palermo 2016 (remote)	5.87	2.05	134	5.59	2.15	135	4.9%	0.13 [-0.11, 0.37]			+	+	+	+																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
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Pain intensity,  
follow-up

### Pain intensity, follow-up

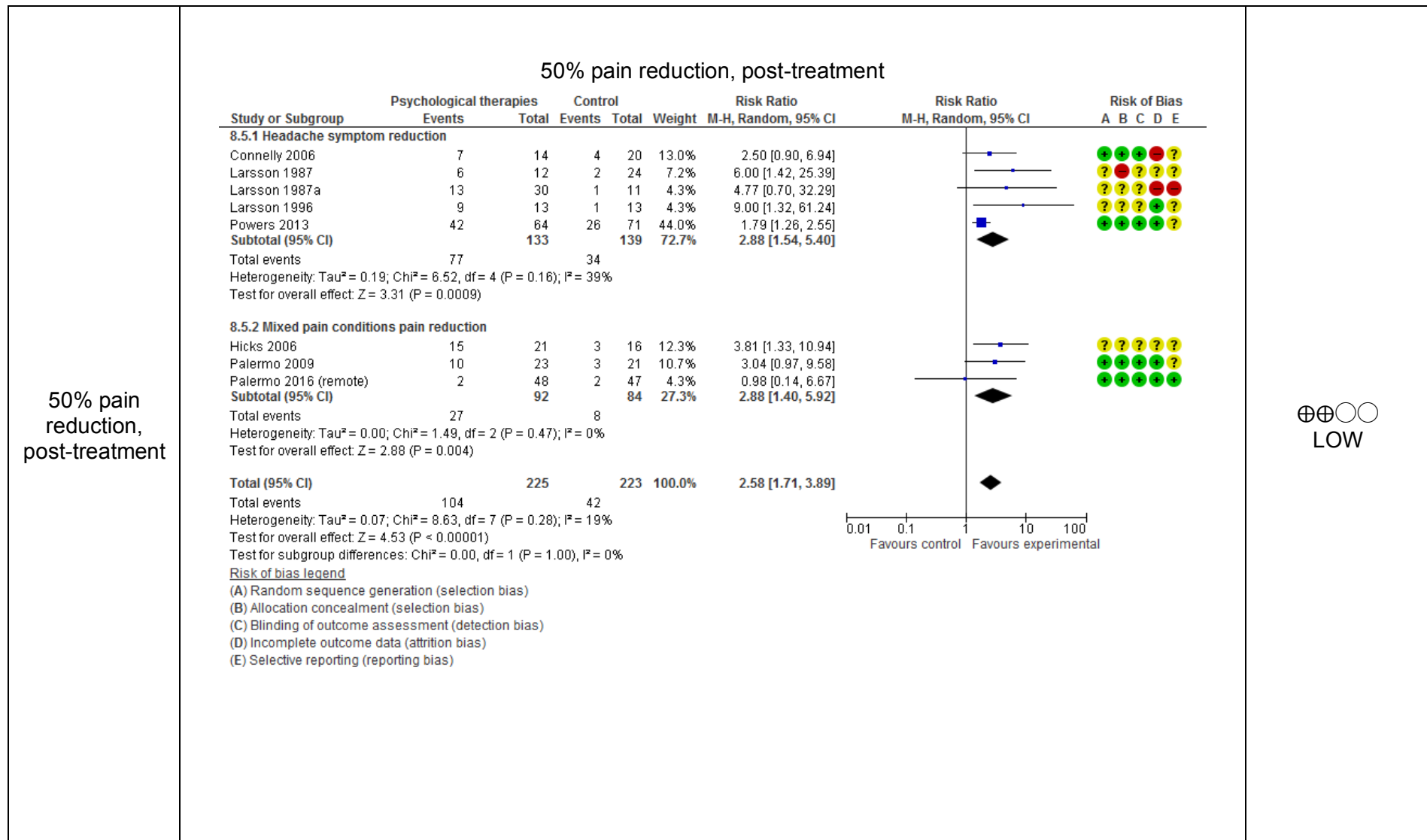


#### Risk of bias legend

- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of outcome assessment (detection bias)
- (D) Incomplete outcome data (attrition bias)
- (E) Selective reporting (reporting bias)

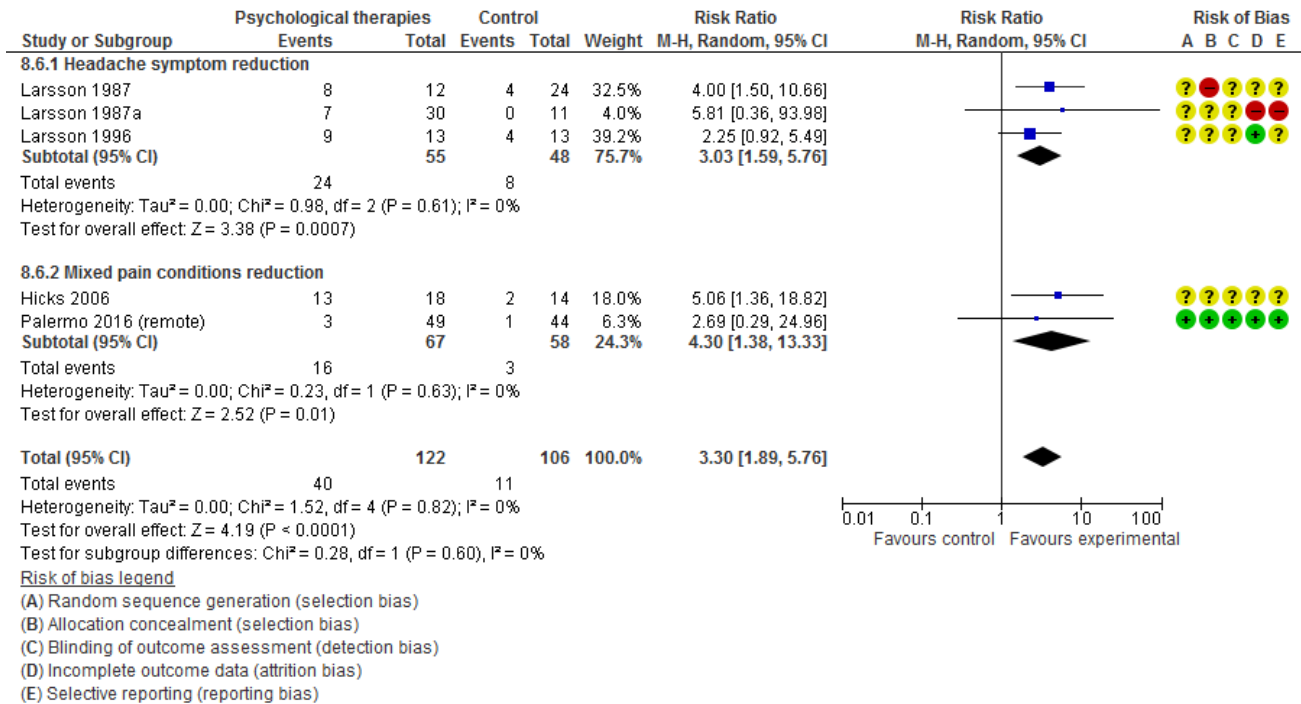
⊕⊕○○  
LOW

30% pain reduction, post-treatment	<div>30% pain reduction, post-treatment</div> <table><tr><th rowspan="2">Study or Subgroup</th><th colspan="2">Psychological therapies</th><th colspan="2">Control</th><th rowspan="2">Weight</th><th colspan="2">Risk Ratio</th><th rowspan="2">Risk Ratio M-H, Fixed, 95% CI</th><th colspan="5">Risk of Bias</th></tr><tr><th>Events</th><th>Total</th><th>Events</th><th>Total</th><th>M-H, Fixed, 95% CI</th><th>M-H, Fixed, 95% CI</th><th>A</th><th>B</th><th>C</th><th>D</th><th>E</th></tr><tr><td>Van der Veek 2013</td><td>17</td><td>52</td><td>15</td><td>52</td><td>100.0%</td><td>1.13</td><td>[0.64, 2.02]</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td><b>Total (95% CI)</b></td><td></td><td><b>52</b></td><td></td><td><b>52</b></td><td><b>100.0%</b></td><td><b>1.13</b></td><td><b>[0.64, 2.02]</b></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>Total events</td><td>17</td><td></td><td>15</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td colspan="14">Heterogeneity: Not applicable</td></tr><tr><td colspan="14">Test for overall effect: Z = 0.42 (P = 0.67)</td></tr><tr><td colspan="14"><u>Risk of bias legend</u></td></tr><tr><td colspan="14">(A) Random sequence generation (selection bias)</td></tr><tr><td colspan="14">(B) Allocation concealment (selection bias)</td></tr><tr><td colspan="14">(C) Blinding of outcome assessment (detection bias)</td></tr><tr><td colspan="14">(D) Incomplete outcome data (attrition bias)</td></tr><tr><td colspan="14">(E) Selective reporting (reporting bias)</td></tr></table> <div><p>0.01 0.1 1 10 100 Favours control Favours experimental</p></div> <div><p>⊕○○○ VERY LOW</p></div>	Study or Subgroup	Psychological therapies		Control		Weight	Risk Ratio		Risk Ratio M-H, Fixed, 95% CI	Risk of Bias					Events	Total	Events	Total	M-H, Fixed, 95% CI	M-H, Fixed, 95% CI	A	B	C	D	E	Van der Veek 2013	17	52	15	52	100.0%	1.13	[0.64, 2.02]							<b>Total (95% CI)</b>		<b>52</b>		<b>52</b>	<b>100.0%</b>	<b>1.13</b>	<b>[0.64, 2.02]</b>							Total events	17		15											Heterogeneity: Not applicable														Test for overall effect: Z = 0.42 (P = 0.67)														<u>Risk of bias legend</u>														(A) Random sequence generation (selection bias)														(B) Allocation concealment (selection bias)														(C) Blinding of outcome assessment (detection bias)														(D) Incomplete outcome data (attrition bias)														(E) Selective reporting (reporting bias)														
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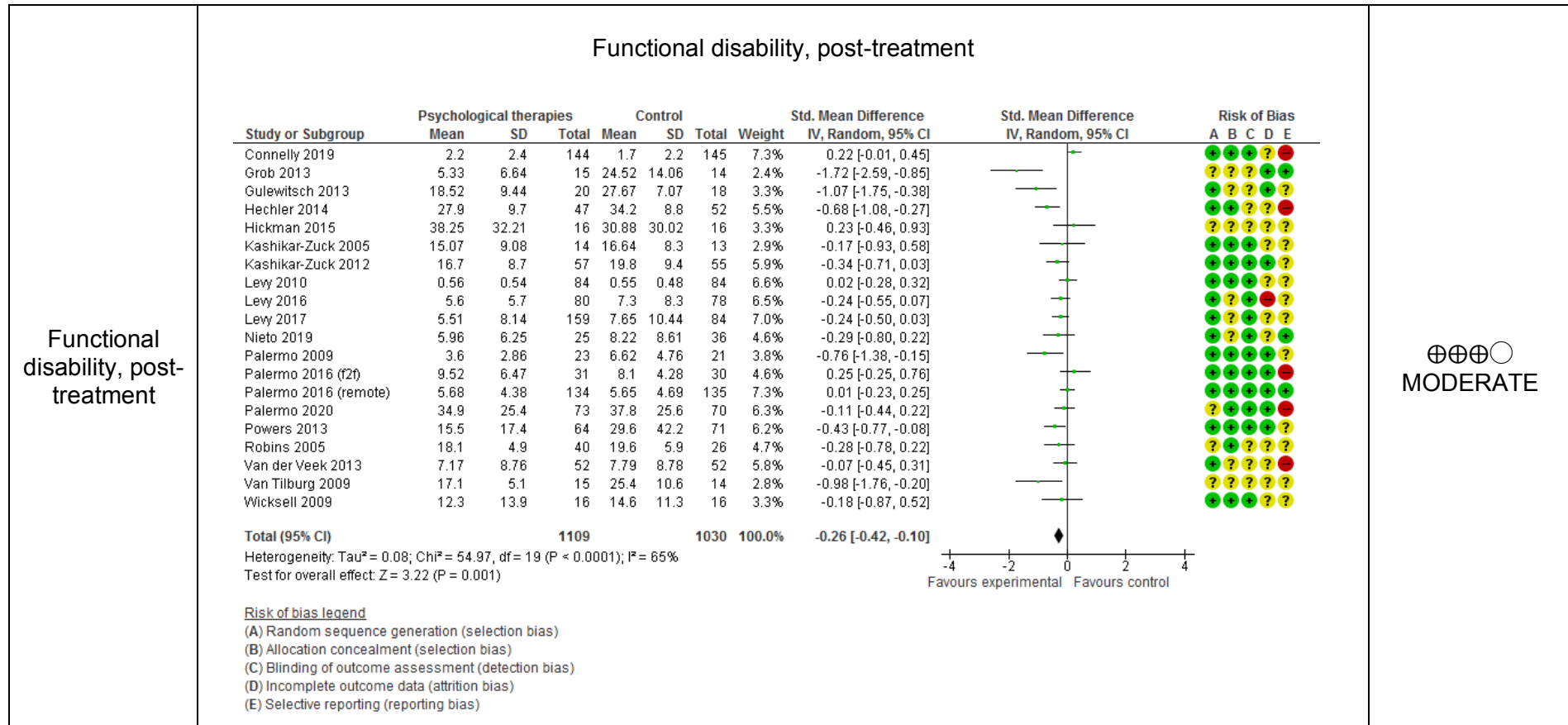
50% pain  
reduction,  
follow-up

### 50% pain reduction, follow-up



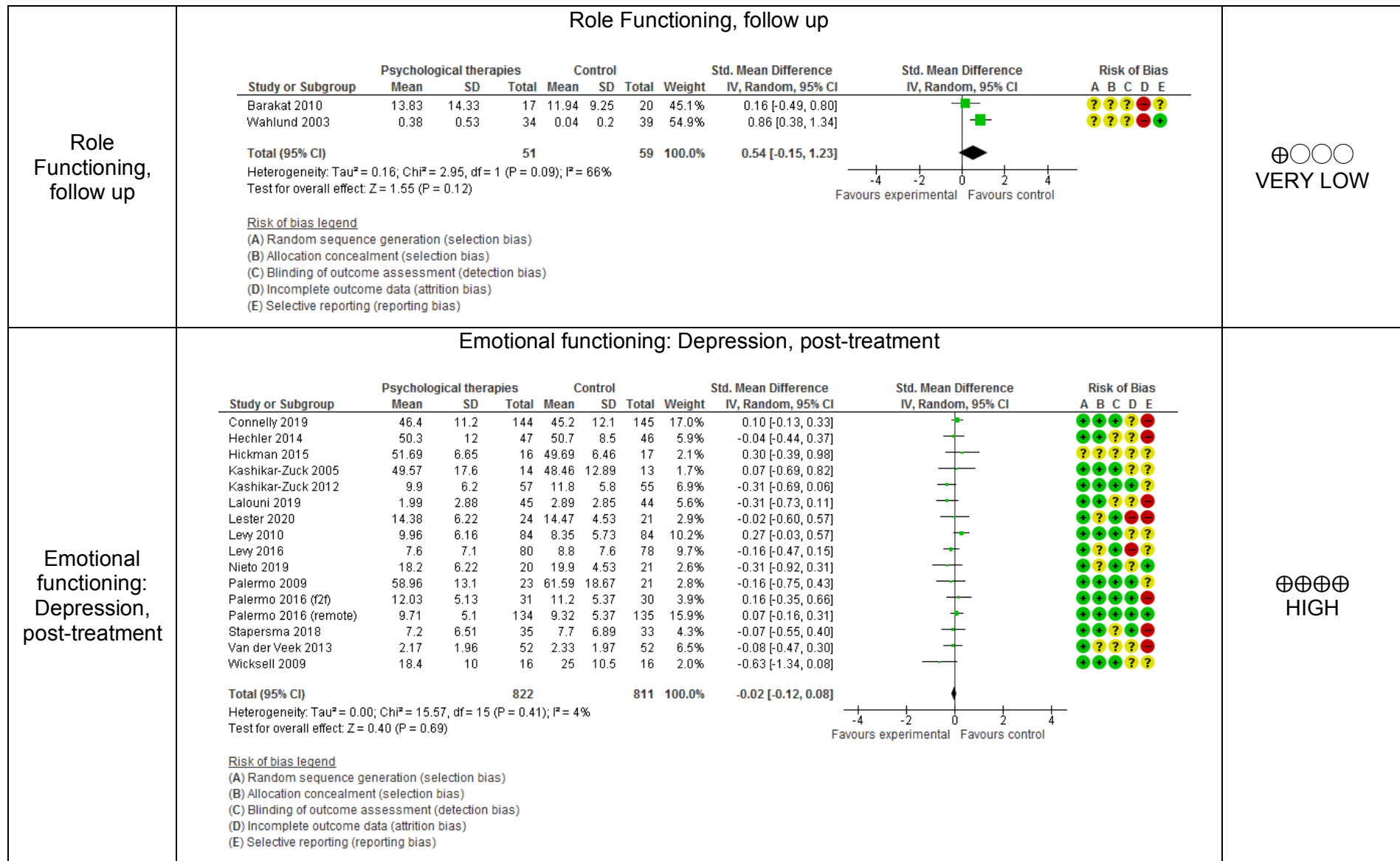
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VERY LOW

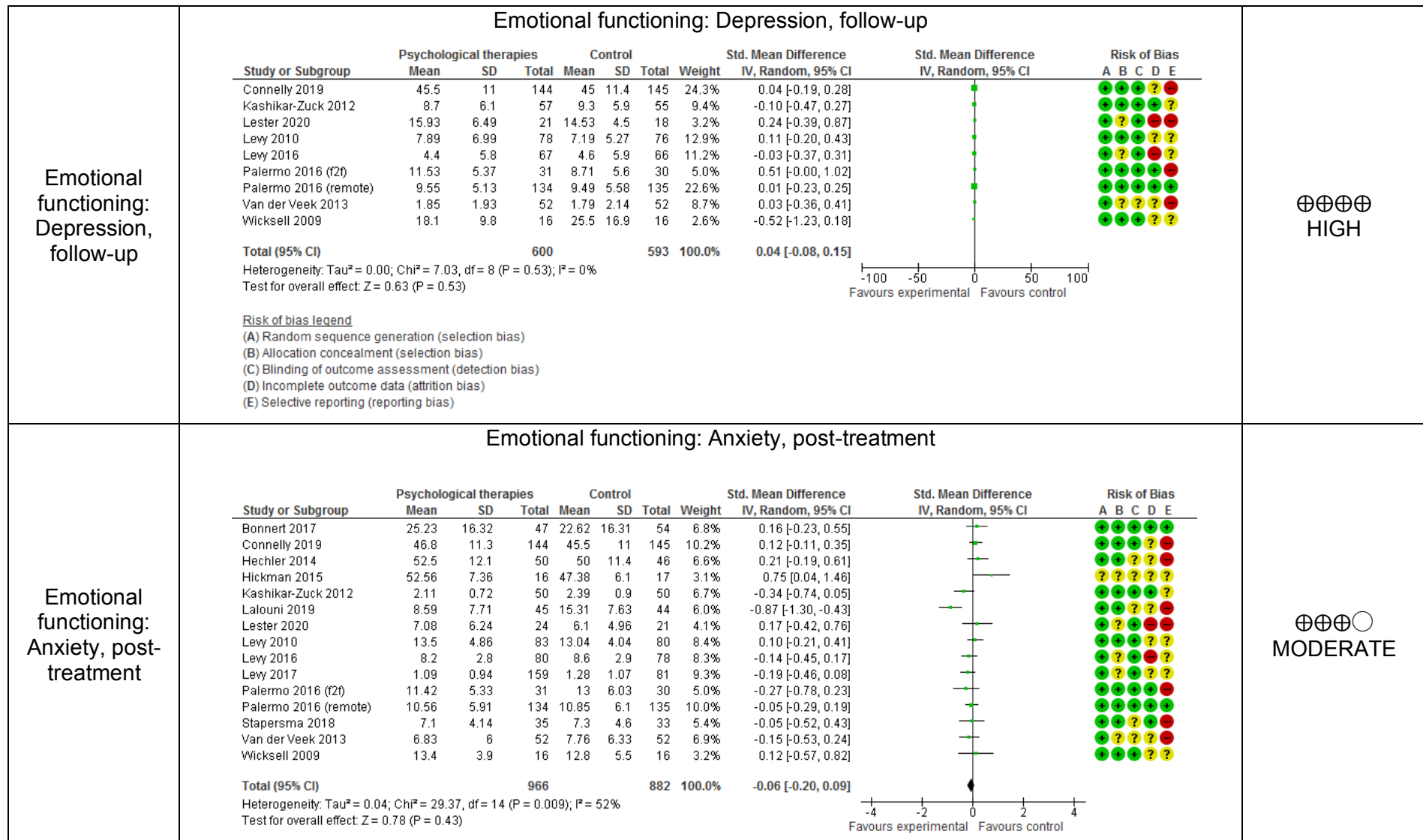
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Heterogeneity: $\tau^2 = 0.35$ ; $\chi^2 = 12.27$ , $df = 2$ ( $P = 0.002$ ); $I^2 = 84\%$ Test for overall effect: $Z = 1.26$ ( $P = 0.21$ )																																																																																																																																																																		
<u>Risk of bias legend</u> (A) Random sequence generation (selection bias) (B) Allocation concealment (selection bias) (C) Blinding of outcome assessment (detection bias) (D) Incomplete outcome data (attrition bias) (E) Selective reporting (reporting bias)																																																																																																																																																																		





	<div>Functional disability, follow-up</div> <table><tr><th rowspan="2">Study or Subgroup</th><th colspan="3">Psychological therapies</th><th colspan="3">Control</th><th rowspan="2">Weight</th><th rowspan="2">Std. Mean Difference IV, Random, 95% CI</th><th rowspan="2">Std. Mean Difference IV, Random, 95% CI</th><th colspan="5">Risk of Bias</th></tr><tr><th>Mean</th><th>SD</th><th>Total</th><th>Mean</th><th>SD</th><th>Total</th><th>A</th><th>B</th><th>C</th><th>D</th><th>E</th></tr><tr><td>Connelly 2019</td><td>2</td><td>2.2</td><td>144</td><td>1.9</td><td>2.2</td><td>145</td><td>11.7%</td><td>0.05 [-0.19, 0.28]</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>Grob 2013</td><td>4.22</td><td>5.26</td><td>15</td><td>24.76</td><td>14</td><td>14</td><td>2.7%</td><td>-1.91 [-2.82, -1.01]</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>Kashikar-Zuck 2012</td><td>13.4</td><td>8.9</td><td>57</td><td>17</td><td>10.5</td><td>55</td><td>8.4%</td><td>-0.37 [-0.74, 0.01]</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>Levy 2010</td><td>0.36</td><td>0.39</td><td>78</td><td>0.48</td><td>0.56</td><td>76</td><td>9.6%</td><td>-0.25 [-0.57, 0.07]</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>Levy 2016</td><td>5.1</td><td>6.4</td><td>67</td><td>5.9</td><td>6.8</td><td>66</td><td>9.1%</td><td>-0.12 [-0.46, 0.22]</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>Levy 2017</td><td>4.5</td><td>6.6</td><td>151</td><td>7.6</td><td>10.85</td><td>82</td><td>10.7%</td><td>-0.37 [-0.64, -0.10]</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>Palermo 2016 (f2f)</td><td>7.84</td><td>5.5</td><td>31</td><td>8.75</td><td>4.64</td><td>30</td><td>6.2%</td><td>-0.18 [-0.68, 0.33]</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>Palermo 2016 (remote)</td><td>5.46</td><td>4.32</td><td>134</td><td>6.16</td><td>5.05</td><td>135</td><td>11.5%</td><td>-0.15 [-0.39, 0.09]</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>Palermo 2020</td><td>34.1</td><td>21.8</td><td>73</td><td>35.1</td><td>27.7</td><td>70</td><td>9.4%</td><td>-0.04 [-0.37, 0.29]</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>Powers 2013</td><td>7.6</td><td>16.9</td><td>57</td><td>19</td><td>30</td><td>67</td><td>8.7%</td><td>-0.46 [-0.81, -0.10]</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>Van der Veek 2013</td><td>5.8</td><td>8.2</td><td>52</td><td>4.87</td><td>6.6</td><td>52</td><td>8.2%</td><td>0.12 [-0.26, 0.51]</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>Wicksell 2009</td><td>8.8</td><td>12.9</td><td>16</td><td>14.7</td><td>12.1</td><td>16</td><td>3.9%</td><td>-0.46 [-1.16, 0.24]</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td><b>Total (95% CI)</b></td><td></td><td></td><td><b>875</b></td><td></td><td></td><td><b>808</b></td><td><b>100.0%</b></td><td><b>-0.23 [-0.39, -0.07]</b></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table> <div>Heterogeneity: Tau<sup>2</sup> = 0.04; Chi<sup>2</sup> = 27.11, df = 11 (P = 0.004); I<sup>2</sup> = 59% Test for overall effect: Z = 2.80 (P = 0.005)</div> <div><u>Risk of bias legend</u> (A) Random sequence generation (selection bias) (B) Allocation concealment (selection bias) (C) Blinding of outcome assessment (detection bias) (D) Incomplete outcome data (attrition bias) (E) Selective reporting (reporting bias)</div>	Study or Subgroup	Psychological therapies			Control			Weight	Std. Mean Difference IV, Random, 95% CI	Std. Mean Difference IV, Random, 95% CI	Risk of Bias					Mean	SD	Total	Mean	SD	Total	A	B	C	D	E	Connelly 2019	2	2.2	144	1.9	2.2	145	11.7%	0.05 [-0.19, 0.28]							Grob 2013	4.22	5.26	15	24.76	14	14	2.7%	-1.91 [-2.82, -1.01]							Kashikar-Zuck 2012	13.4	8.9	57	17	10.5	55	8.4%	-0.37 [-0.74, 0.01]							Levy 2010	0.36	0.39	78	0.48	0.56	76	9.6%	-0.25 [-0.57, 0.07]							Levy 2016	5.1	6.4	67	5.9	6.8	66	9.1%	-0.12 [-0.46, 0.22]							Levy 2017	4.5	6.6	151	7.6	10.85	82	10.7%	-0.37 [-0.64, -0.10]							Palermo 2016 (f2f)	7.84	5.5	31	8.75	4.64	30	6.2%	-0.18 [-0.68, 0.33]							Palermo 2016 (remote)	5.46	4.32	134	6.16	5.05	135	11.5%	-0.15 [-0.39, 0.09]							Palermo 2020	34.1	21.8	73	35.1	27.7	70	9.4%	-0.04 [-0.37, 0.29]							Powers 2013	7.6	16.9	57	19	30	67	8.7%	-0.46 [-0.81, -0.10]							Van der Veek 2013	5.8	8.2	52	4.87	6.6	52	8.2%	0.12 [-0.26, 0.51]							Wicksell 2009	8.8	12.9	16	14.7	12.1	16	3.9%	-0.46 [-1.16, 0.24]							<b>Total (95% CI)</b>			<b>875</b>			<b>808</b>	<b>100.0%</b>	<b>-0.23 [-0.39, -0.07]</b>							<div>⊕⊕⊕○ MODERATE</div>
Study or Subgroup	Psychological therapies			Control			Weight	Std. Mean Difference IV, Random, 95% CI				Std. Mean Difference IV, Random, 95% CI	Risk of Bias																																																																																																																																																																																																																		
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Emotional functioning: Anxiety, follow-up

Study or Subgroup	Psychological therapies			Control			Weight	Std. Mean Difference IV, Random, 95% CI	Std. Mean Difference IV, Random, 95% CI	Risk of Bias A B C D E
	Mean	SD	Total	Mean	SD	Total				
Connelly 2019	45.3	12	144	46	11.4	145	21.2%	-0.06 [-0.29, 0.17]		++?+
Kashikar-Zuck 2012	1.89	0.82	50	2.22	0.91	50	7.2%	-0.38 [-0.77, 0.02]		++?+
Lester 2020	4.71	5.09	21	4.07	2.99	18	2.8%	0.15 [-0.48, 0.78]		++?+
Levy 2010	13.21	3.98	75	12.59	4.14	63	10.0%	0.15 [-0.18, 0.49]		++?+
Levy 2016	7.9	3.3	67	8.2	3.2	66	9.7%	-0.09 [-0.43, 0.25]		++?+
Levy 2017	0.87	0.88	151	1.1	0.98	78	15.0%	-0.25 [-0.52, 0.02]		++?+
Palermo 2016 (f2f)	12.61	6.05	31	11.21	5.55	30	4.4%	0.24 [-0.27, 0.74]		++?+
Palermo 2016 (remote)	10.35	6.12	134	10.23	5.45	135	19.7%	0.02 [-0.22, 0.26]		++?+
Van der Veek 2013	5.47	5.22	52	5.82	6.09	52	7.6%	-0.06 [-0.45, 0.32]		++?+
Wicksell 2009	12.2	4.6	16	11.7	5.8	16	2.3%	0.09 [-0.60, 0.79]		++?+
<b>Total (95% CI)</b>			<b>741</b>			<b>653</b>	<b>100.0%</b>	<b>-0.05 [-0.16, 0.05]</b>		

Heterogeneity:  $\tau^2 = 0.00$ ;  $\chi^2 = 8.28$ ,  $df = 9$  ( $P = 0.51$ );  $I^2 = 0\%$   
Test for overall effect:  $Z = 1.01$  ( $P = 0.31$ )

Risk of bias legend  
(A) Random sequence generation (selection bias)  
(B) Allocation concealment (selection bias)  
(C) Blinding of outcome assessment (detection bias)  
(D) Incomplete outcome data (attrition bias)  
(E) Selective reporting (reporting bias)

Emotional functioning: Anxiety, follow-up

⊕⊕⊕⊕  
HIGH

Sleep quality, post-treatment

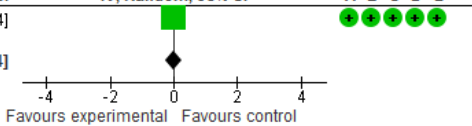
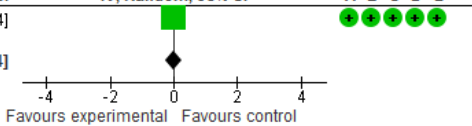
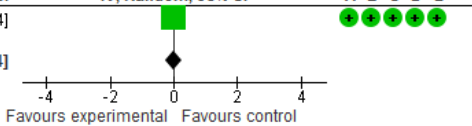
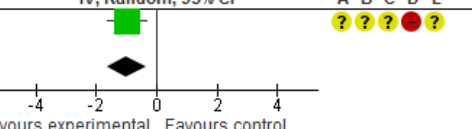
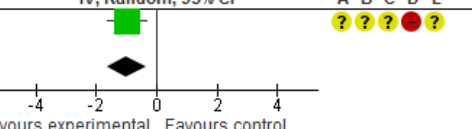
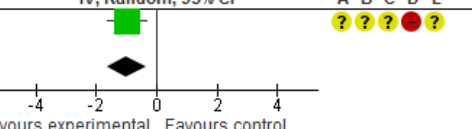
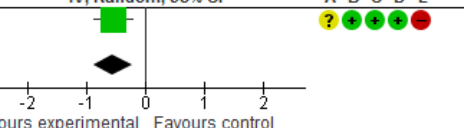
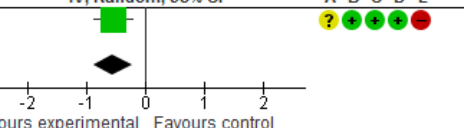
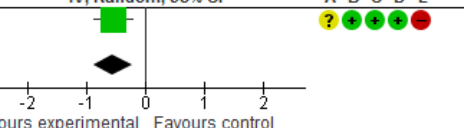
Study or Subgroup	Psychological therapies			Control			Weight	Std. Mean Difference IV, Random, 95% CI	Std. Mean Difference IV, Random, 95% CI	Risk of Bias A B C D E
	Mean	SD	Total	Mean	SD	Total				
Kashikar-Zuck 2012	4.9	2	57	4.6	1.9	55	29.3%	0.15 [-0.22, 0.52]		++++?
Palermo 2016 (remote)	3.75	0.76	134	3.77	0.84	135	70.7%	-0.02 [-0.26, 0.21]		++++
<b>Total (95% CI)</b>			<b>191</b>			<b>190</b>	<b>100.0%</b>	<b>0.03 [-0.17, 0.23]</b>		

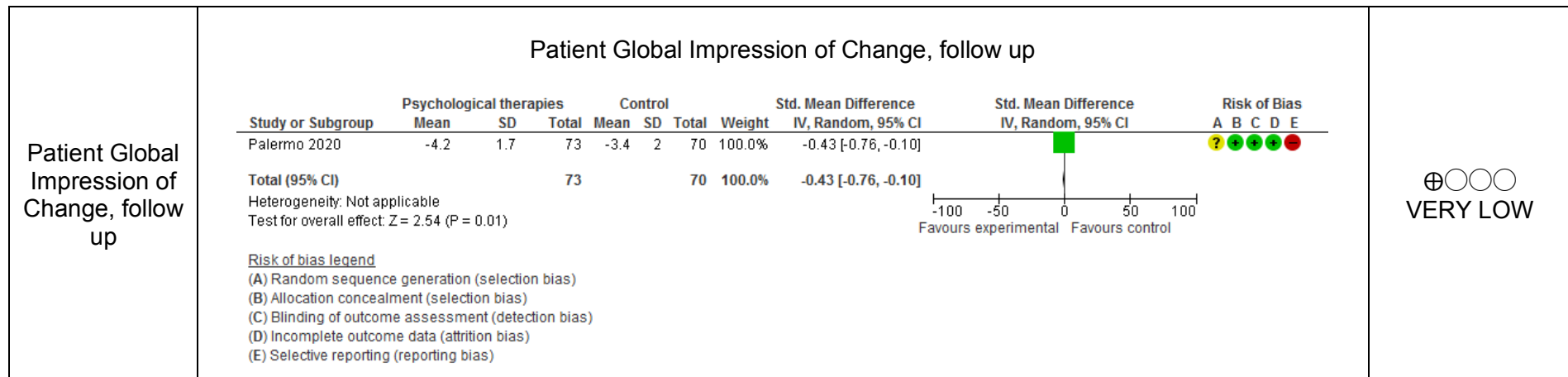
Heterogeneity:  $\tau^2 = 0.00$ ;  $\chi^2 = 0.62$ ,  $df = 1$  ( $P = 0.43$ );  $I^2 = 0\%$   
Test for overall effect:  $Z = 0.27$  ( $P = 0.79$ )

Risk of bias legend  
(A) Random sequence generation (selection bias)  
(B) Allocation concealment (selection bias)  
(C) Blinding of outcome assessment (detection bias)  
(D) Incomplete outcome data (attrition bias)  
(E) Selective reporting (reporting bias)

Sleep quality, post-treatment

⊕○○○  
VERY LOW

Sleep quality, follow up	<div><p>Sleep quality, follow up</p><table><thead><tr><th rowspan="2">Study or Subgroup</th><th colspan="3">Psychological therapies</th><th colspan="3">Control</th><th rowspan="2">Weight</th><th rowspan="2">Std. Mean Difference IV, Random, 95% CI</th><th rowspan="2">Std. Mean Difference IV, Random, 95% CI</th><th rowspan="2">Risk of Bias A B C D E</th></tr><tr><th>Mean</th><th>SD</th><th>Total</th><th>Mean</th><th>SD</th><th>Total</th></tr></thead><tbody><tr><td>Palermo 2016 (remote)</td><td>3.76</td><td>0.8</td><td>134</td><td>3.76</td><td>0.77</td><td>135</td><td>100.0%</td><td>0.00 [-0.24, 0.24]</td><td></td></tr><tr><td><b>Total (95% CI)</b></td><td></td><td></td><td><b>134</b></td><td></td><td></td><td><b>135</b></td><td><b>100.0%</b></td><td><b>0.00 [-0.24, 0.24]</b></td><td></td></tr></tbody></table><p>Heterogeneity: Not applicable Test for overall effect: Z = 0.00 (P = 1.00)</p><p><u>Risk of bias legend</u> (A) Random sequence generation (selection bias) (B) Allocation concealment (selection bias) (C) Blinding of outcome assessment (detection bias) (D) Incomplete outcome data (attrition bias) (E) Selective reporting (reporting bias)</p></div>	Study or Subgroup	Psychological therapies			Control			Weight	Std. Mean Difference IV, Random, 95% CI	Std. Mean Difference IV, Random, 95% CI	Risk of Bias A B C D E	Mean	SD	Total	Mean	SD	Total	Palermo 2016 (remote)	3.76	0.8	134	3.76	0.77	135	100.0%	0.00 [-0.24, 0.24]		<b>Total (95% CI)</b>			<b>134</b>			<b>135</b>	<b>100.0%</b>	<b>0.00 [-0.24, 0.24]</b>		<div><p>⊕○○○ VERY LOW</p></div>
Study or Subgroup	Psychological therapies			Control			Weight	Std. Mean Difference IV, Random, 95% CI					Std. Mean Difference IV, Random, 95% CI	Risk of Bias A B C D E																									
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Activity participation, follow up	<div><p>Activity participation, follow up</p><table><thead><tr><th rowspan="2">Study or Subgroup</th><th colspan="3">Psychological therapies</th><th colspan="3">Control</th><th rowspan="2">Weight</th><th rowspan="2">Std. Mean Difference IV, Random, 95% CI</th><th rowspan="2">Std. Mean Difference IV, Random, 95% CI</th><th rowspan="2">Risk of Bias A B C D E</th></tr><tr><th>Mean</th><th>SD</th><th>Total</th><th>Mean</th><th>SD</th><th>Total</th></tr></thead><tbody><tr><td>Sanders 1994</td><td>0.3</td><td>0.8</td><td>22</td><td>1.9</td><td>2.1</td><td>22</td><td>100.0%</td><td>-0.99 [-1.62, -0.36]</td><td></td></tr><tr><td><b>Total (95% CI)</b></td><td></td><td></td><td><b>22</b></td><td></td><td></td><td><b>22</b></td><td><b>100.0%</b></td><td><b>-0.99 [-1.62, -0.36]</b></td><td></td></tr></tbody></table><p>Heterogeneity: Not applicable Test for overall effect: Z = 3.08 (P = 0.002)</p><p><u>Risk of bias legend</u> (A) Random sequence generation (selection bias) (B) Allocation concealment (selection bias) (C) Blinding of outcome assessment (detection bias) (D) Incomplete outcome data (attrition bias) (E) Selective reporting (reporting bias)</p></div>	Study or Subgroup	Psychological therapies			Control			Weight	Std. Mean Difference IV, Random, 95% CI	Std. Mean Difference IV, Random, 95% CI	Risk of Bias A B C D E	Mean	SD	Total	Mean	SD	Total	Sanders 1994	0.3	0.8	22	1.9	2.1	22	100.0%	-0.99 [-1.62, -0.36]		<b>Total (95% CI)</b>			<b>22</b>			<b>22</b>	<b>100.0%</b>	<b>-0.99 [-1.62, -0.36]</b>		<div><p>⊕○○○ VERY LOW</p></div>
Study or Subgroup	Psychological therapies			Control			Weight	Std. Mean Difference IV, Random, 95% CI					Std. Mean Difference IV, Random, 95% CI	Risk of Bias A B C D E																									
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Patient Global Impression of Change, post treatment	<div><p>Patient Global Impression of Change, post treatment</p><table><thead><tr><th rowspan="2">Study or Subgroup</th><th colspan="3">Psychological therapies</th><th colspan="3">Control</th><th rowspan="2">Weight</th><th rowspan="2">Std. Mean Difference IV, Random, 95% CI</th><th rowspan="2">Std. Mean Difference IV, Random, 95% CI</th><th rowspan="2">Risk of Bias A B C D E</th></tr><tr><th>Mean</th><th>SD</th><th>Total</th><th>Mean</th><th>SD</th><th>Total</th></tr></thead><tbody><tr><td>Palermo 2020</td><td>-3.9</td><td>1.8</td><td>73</td><td>-2.9</td><td>1.8</td><td>70</td><td>100.0%</td><td>-0.55 [-0.89, -0.22]</td><td></td></tr><tr><td><b>Total (95% CI)</b></td><td></td><td></td><td><b>73</b></td><td></td><td></td><td><b>70</b></td><td><b>100.0%</b></td><td><b>-0.55 [-0.89, -0.22]</b></td><td></td></tr></tbody></table><p>Heterogeneity: Not applicable Test for overall effect: Z = 3.24 (P = 0.001)</p><p><u>Risk of bias legend</u> (A) Random sequence generation (selection bias) (B) Allocation concealment (selection bias) (C) Blinding of outcome assessment (detection bias) (D) Incomplete outcome data (attrition bias) (E) Selective reporting (reporting bias)</p></div>	Study or Subgroup	Psychological therapies			Control			Weight	Std. Mean Difference IV, Random, 95% CI	Std. Mean Difference IV, Random, 95% CI	Risk of Bias A B C D E	Mean	SD	Total	Mean	SD	Total	Palermo 2020	-3.9	1.8	73	-2.9	1.8	70	100.0%	-0.55 [-0.89, -0.22]		<b>Total (95% CI)</b>			<b>73</b>			<b>70</b>	<b>100.0%</b>	<b>-0.55 [-0.89, -0.22]</b>		<div><p>⊕○○○ VERY LOW</p></div>
Study or Subgroup	Psychological therapies			Control			Weight	Std. Mean Difference IV, Random, 95% CI					Std. Mean Difference IV, Random, 95% CI	Risk of Bias A B C D E																									
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## Appendix H.

Table 6: WHO GRADE Profile: Psychological therapies vs. active/standard care or waitlist for children and adolescents with chronic pain, by control group

**Question:** Psychological therapies compared to active/standard care or waitlist control in children and adolescents with chronic pain

**Setting:** Global

Certainty assessment							No of patients		Effect		Certainty	Importance
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Subgroup analysis: by control	placebo	Relative (95% CI)	Absolute (95% CI)		

## Pain intensity, post-treatment - Active or standard care control

30	randomised trials	serious <sup>a</sup>	serious <sup>b</sup>	not serious	not serious	none	1349	1184	-	SMD <b>0.28 lower</b> (0.44 lower to 0.13 lower)	⊕⊕○○ LOW	
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## Pain intensity, post-treatment - Waitlist control

8	randomised trials	serious <sup>a</sup>	serious <sup>b</sup>	not serious	not serious	none	235	257	-	SMD <b>0.34 lower</b> (0.66 lower to 0.01 lower)	⊕⊕○○ LOW	
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## Pain intensity, follow-up - Active or standard care control

19	randomised trials	serious <sup>a</sup>	serious <sup>b</sup>	not serious	not serious	none	953	843	-	SMD <b>0.11 lower</b> (0.26 lower to 0.05 higher)	⊕⊕○○ LOW	
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## Pain intensity, follow-up - Wait-list control

Certainty assessment							No of patients		Effect		Certainty	Importance
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Subgroup analysis: by control	placebo	Relative (95% CI)	Absolute (95% CI)		
2	randomised trials	very serious <sup>c</sup>	not serious	not serious	very serious <sup>d</sup>	none	44	41	-	SMD <b>0.62 lower</b> (1.97 lower to 0.73 higher)	⊕○○○ VERY LOW	

50% reduction in pain, post-treatment - Active or standard care control

14	randomised trials	serious <sup>a</sup>	not serious	serious <sup>e</sup>	not serious	none	230/489 (47.0%)	84/359 (23.4%)	RR <b>1.95</b> (1.46 to 2.61)	<b>222 more per 1,000</b> (from 108 more to 377 more)	⊕⊕○○ LOW	
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50% reduction in pain, post-treatment - Waitlist control

8	randomised trials	very serious <sup>c</sup>	not serious	serious <sup>e</sup>	not serious	none	77/155 (49.7%)	20/137 (14.6%)	RR <b>3.17</b> (1.50 to 6.67)	<b>317 more per 1,000</b> (from 73 more to 828 more)	⊕○○○ VERY LOW	
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Health-related quality of life, post-treatment - Active or standard care control

10	randomised trials	serious <sup>a</sup>	not serious	not serious	not serious	none	616	490	-	SMD <b>0.05 SD lower</b> (0.23 lower to 0.13 higher)	⊕⊕⊕○ MODERATE	
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Health-related quality of life, post-treatment - Waitlist control



Certainty assessment							No of patients		Effect		Certainty	Importance
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Subgroup analysis: by control	placebo	Relative (95% CI)	Absolute (95% CI)		
2	randomised trials	not serious	not serious	serious <sup>e</sup>	very serious <sup>f</sup>	none	72	90	-	SMD <b>0.19 lower</b> (0.5 lower to 0.12 higher)	⊕○○○ VERY LOW	

**Functional disability, post-treatment - Active or standard care control**

21	randomised trials	serious <sup>a</sup>	not serious	not serious	not serious	none	1127	1065	-	SMD <b>0.15 lower</b> (0.27 lower to 0.04 lower)	⊕⊕⊕○ MODERATE	
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**Functional disability, post-treatment - Waitlist control**

3	randomised trials	serious <sup>a</sup>	not serious	not serious	very serious <sup>d</sup>	none	82	84	-	SMD <b>1.05 lower</b> (1.62 lower to 0.49 lower)	⊕○○○ VERY LOW	
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**Functional disability, follow-up - Active or standard care control**

13	randomised trials	not serious	not serious	not serious	not serious	none	899	827	-	SMD <b>0.18 lower</b> (0.28 lower to 0.07 lower)	⊕⊕⊕⊕ HIGH	
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**Emotional functioning (depression), post-treatment - Active or standard care control**

Certainty assessment							№ of patients		Effect		Certainty	Importance
№ of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Subgroup analysis: by control	placebo	Relative (95% CI)	Absolute (95% CI)		
18	randomised trials	not serious	not serious	not serious	not serious	none	870	818	-	SMD <b>0.02 lower</b> (0.11 lower to 0.08 higher)	⊕⊕⊕⊕ HIGH	

Emotional functioning (depression), follow-up - Active or standard care control

12	randomised trials	not serious	not serious	not serious	not serious	none	709	666	-	SMD <b>0.06 higher</b> (0.05 lower to 0.16 higher)	⊕⊕⊕⊕ HIGH	
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Emotional functioning (anxiety), post-treatment - Active or standard care control

16	randomised trials	serious <sup>a</sup>	not serious	not serious	not serious	none	957	835	-	SMD <b>0.1 lower</b> (0.24 lower to 0.03 higher)	⊕⊕⊕○ MODERATE	
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Emotional functioning (anxiety), post-treatment - Waitlist control

3	randomised trials	serious <sup>a</sup>	not serious	serious <sup>e</sup>	serious <sup>f</sup>	none	127	112	-	SMD <b>0.03 higher</b> (0.35 lower to 0.41 higher)	⊕○○○ VERY LOW	
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Emotional functioning (anxiety), follow-up - Active or standard care control

Certainty assessment							No of patients		Effect		Certainty	Importance
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Subgroup analysis: by control	placebo	Relative (95% CI)	Absolute (95% CI)		
13	randomised trials	serious <sup>a</sup>	not serious	not serious	not serious	none	820	695	-	SMD 0.07 lower (0.17 lower to 0.03 higher)	⊕⊕⊕○ MODERATE	

CI: Confidence interval; SMD: Standardised mean difference; RR: Risk ratio

#### Explanations

- a. Downgraded one level for serious limitations in study design or execution: >50% of risk of bias judgements were rated unclear or high risk of bias.
- b. Downgraded one level for serious inconsistency: unexplained statistical heterogeneity >50%.
- c. Downgraded two levels for very serious limitations in study design or execution: >75% of risk of bias judgements were rated unclear or high risk of bias.
- d. Downgraded by two levels for very serious imprecision: very small number of participants (<200 participants) or studies (<2 studies) contributing to the analyses.
- e. Downgraded by one level for indirectness: few conditions presented in the meta-analysis so estimate may not be applicable to other chronic pain conditions.
- f. Downgraded by one level for serious imprecision: small number of participants (<400 participants) or studies (<2 studies) contributing to the analyses.

Table 7: WHO GRADE Profile: Psychological therapies vs. active (non-psychological)/standard care or waitlist for children and adolescents with chronic pain, by pain condition

**Question:** Psychological therapies compared to active (non-psychological)/standard care or waitlist in children and adolescents with chronic pain. Subgroup analysis: by pain condition.

**Setting:** Global

Certainty assessment							No of patients		Effect		Certainty	Importance
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Subgroup analysis: by pain condition	placebo	Relative (95% CI)	Absolute (95% CI)		

**Pain intensity, post-treatment - Chronic primary visceral pain**

10	randomised trials	very serious <sup>a</sup>	very serious <sup>b</sup>	not serious	not serious	none	479	365	-	SMD <b>0.49 lower</b> (0.83 lower to 0.15 lower)	⊕○○○ VERY LOW	CRITICAL
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**Pain intensity, post-treatment - Mixed pain conditions**

12	randomised trials	not serious	serious <sup>c</sup>	not serious	not serious	none	484	484	-	SMD <b>0.3 lower</b> (0.55 lower to 0.05 lower)	⊕⊕⊕○ MODERATE	CRITICAL
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**Pain intensity, post-treatment - Headache (TTH, Migraine)**

10	randomised trials	very serious <sup>a</sup>	not serious	not serious	not serious	none	306	268	-	SMD <b>0.15 lower</b> (0.36 lower to 0.06 higher)	⊕⊕○○ LOW	CRITICAL
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**Pain intensity, follow-up - Chronic primary visceral pain**

Certainty assessment							No of patients		Effect		Certainty	Importance
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Subgroup analysis: by pain condition	placebo	Relative (95% CI)	Absolute (95% CI)		
6	randomised trials	serious <sup>d</sup>	very serious <sup>b</sup>	not serious	not serious	none	343	264	-	SMD <b>0.38 lower</b> (0.77 lower to 0.02 higher)	⊕○○○ VERY LOW	CRITICAL

## Pain intensity, follow-up - Mixed pain conditions

6	randomised trials	not serious	serious <sup>c</sup>	not serious	not serious	none	292	289	-	SMD <b>0.08 lower</b> (0.39 lower to 0.23 higher)	⊕⊕⊕○ MODERATE	CRITICAL
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## Pain intensity, follow-up - Headache (TTH, Migraine)

6	randomised trials	very serious <sup>a</sup>	not serious	not serious	serious <sup>e</sup>	none	130	98	-	SMD <b>0.09 lower</b> (0.44 lower to 0.26 higher)	⊕○○○ VERY LOW	CRITICAL
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## 50% reduction in pain, post-treatment - Chronic primary headache and orofacial pain

3	randomised trials	serious <sup>d</sup>	not serious	not serious	serious <sup>e</sup>	none	61/106 (57.5%)	29/106 (27.4%)	RR <b>2.80</b> (1.16 to 6.75)	<b>492 more per 1,000</b> (from 44 more to 1,000 more)	⊕⊕○○ LOW	CRITICAL
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## 50% reduction in pain, post-treatment - Mixed pain conditions pain reduction

Certainty assessment							No of patients		Effect		Certainty	Importance
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Subgroup analysis: by pain condition	placebo	Relative (95% CI)	Absolute (95% CI)		
3	randomised trials	not serious	not serious	not serious	serious <sup>d</sup>	none	27/92 (29.3%)	8/84 (9.5%)	<b>RR 2.88</b> (1.40 to 5.92)	<b>179 more per 1,000</b> (from 38 more to 469 more)	⊕⊕⊕○ MODERATE	CRITICAL

#### 50% reduction in pain, post-treatment - Headache (TTH, Migraine)

16	randomised trials	very serious <sup>a</sup>	not serious	not serious	not serious	none	219/446 (49.1%)	67/306 (21.9%)	<b>RR 2.04</b> (1.45 to 2.87)	<b>228 more per 1,000</b> (from 99 more to 409 more)	⊕⊕○○ LOW	CRITICAL
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#### Health-related quality of life, post-treatment - Chronic primary visceral pain

5	randomised trials	serious <sup>d</sup>	not serious	not serious	serious <sup>e</sup>	none	154	167	-	<b>SMD 0.24 lower</b> (0.55 lower to 0.07 higher)	⊕⊕○○ LOW	CRITICAL
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#### Functional disability, post-treatment - Chronic primary visceral pain

7	randomised trials	serious <sup>d</sup>	serious <sup>c</sup>	not serious	not serious	none	390	310	-	<b>SMD 0.35 lower</b> (0.65 lower to 0.06 lower)	⊕⊕○○ LOW	CRITICAL
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#### Functional disability, post-treatment - Mixed pain

Certainty assessment							No of patients		Effect		Certainty	Importance
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Subgroup analysis: by pain condition	placebo	Relative (95% CI)	Absolute (95% CI)		
7	randomised trials	not serious	serious <sup>c</sup>	not serious	not serious	none	344	342	-	SMD <b>0.31 lower</b> (0.63 lower to 0 )	⊕⊕⊕○ MODERATE	CRITICAL

#### Functional disability, post-treatment - Headache (TTH, Migraine)

4	randomised trials	serious <sup>d</sup>	not serious	not serious	serious <sup>e</sup>	none	100	119	-	SMD <b>0.22 lower</b> (0.49 lower to 0.05 higher)	⊕⊕○○ LOW	CRITICAL
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#### Functional disability, follow-up - Chronic primary visceral pain

4	randomised trials	serious <sup>d</sup>	very serious <sup>b</sup>	not serious	not serious	none	296	224	-	SMD <b>0.43 lower</b> (0.91 lower to 0.04 higher)	⊕○○○ VERY LOW	CRITICAL
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#### Functional disability, follow-up - Mixed pain

4	randomised trials	not serious	not serious	not serious	not serious	none	254	251	-	SMD <b>0.14 lower</b> (0.32 lower to 0.03 higher)	⊕⊕⊕⊕ HIGH	CRITICAL
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#### Emotional functioning (depression), post-treatment - Chronic primary visceral pain

Certainty assessment							No of patients		Effect		Certainty	Importance
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Subgroup analysis: by pain condition	placebo	Relative (95% CI)	Absolute (95% CI)		
5	randomised trials	serious <sup>d</sup>	not serious	not serious	not serious	none	281	279	-	SMD <b>0.08 lower</b> (0.3 lower to 0.15 higher)	⊕⊕⊕○ MODERATE	CRITICAL

**Emotional functioning (depression), post-treatment - Mixed pain**

6	randomised trials	not serious <sup>d</sup>	not serious	not serious	not serious	none	275	269	-	SMD <b>0</b> (0.17 lower to 0.17 higher)	⊕⊕⊕⊕ HIGH	CRITICAL
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**Emotional functioning (depression), post-treatment - Headache (TTH, Migraine)**

3	randomised trials	serious <sup>d</sup>	not serious	not serious	very serious <sup>f</sup>	none	95	53	-	SMD <b>0.02 lower</b> (0.36 lower to 0.33 higher)	⊕○○○ VERY LOW	CRITICAL
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**Emotional functioning (depression), follow-up - Chronic primary visceral pain**

3	randomised trials	serious <sup>d</sup>	not serious	not serious	serious <sup>e</sup>	none	197	194	-	SMD <b>0.04 higher</b> (0.16 lower to 0.24 higher)	⊕⊕○○ LOW	CRITICAL
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**Emotional functioning (depression), follow-up - Mixed pain**



Certainty assessment							No of patients		Effect		Certainty	Importance
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Subgroup analysis: by pain condition	placebo	Relative (95% CI)	Absolute (95% CI)		
4	randomised trials	not serious	serious <sup>c</sup>	not serious	serious <sup>e</sup>	none	202	199	-	SMD <b>0.09 higher</b> (0.26 lower to 0.43 higher)	⊕⊕○○ LOW	CRITICAL

Emotional functioning (depression), follow-up - Headache (TTH, Migraine)

3	randomised trials	not serious	not serious	not serious	serious <sup>e</sup>	none	109	73	-	SMD <b>0.19 higher</b> (0.12 lower to 0.49 higher)	⊕⊕⊕○ MODERATE	CRITICAL
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Emotional functioning (anxiety), post-treatment - Chronic primary visceral pain

5	randomised trials	serious <sup>d</sup>	serious <sup>c</sup>	not serious	not serious	none	307	308	-	SMD <b>0.16 lower</b> (0.48 lower to 0.15 higher)	⊕⊕○○ LOW	CRITICAL
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Emotional functioning (anxiety), post-treatment - Mixed pain

5	randomised trials	not serious	not serious	not serious	not serious	none	255	248	-	SMD <b>0</b> (0.17 lower to 0.18 higher)	⊕⊕⊕⊕ HIGH	CRITICAL
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Emotional functioning (anxiety), post-treatment - Headache (TTH, Migraine)

Certainty assessment							No of patients		Effect		Certainty	Importance
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Subgroup analysis: by pain condition	placebo	Relative (95% CI)	Absolute (95% CI)		
4	randomised trials	serious <sup>d</sup>	not serious	not serious	serious <sup>e</sup>	none	118	65	-	SMD <b>0.25 lower</b> (0.56 lower to 0.06 higher)	⊕⊕○○ LOW	CRITICAL

**Emotional functioning (anxiety), follow-up - Chronic primary visceral pain**

3	randomised trials	serious <sup>d</sup>	not serious	not serious	serious <sup>e</sup>	none	194	181	-	SMD <b>0.01 higher</b> (0.2 lower to 0.21 higher)	⊕⊕○○ LOW	CRITICAL
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**Emotional functioning (anxiety), follow-up - Mixed pain**

4	randomised trials	not serious	not serious	not serious	not serious	none	202	199	-	SMD <b>0.07 higher</b> (0.12 lower to 0.27 higher)	⊕⊕⊕⊕ HIGH	CRITICAL
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**Emotional functioning (anxiety), follow-up - Headache (TTH, Migraine)**

3	randomised trials	serious <sup>d</sup>	not serious	not serious	very serious <sup>f</sup>	none	79	42	-	SMD <b>0.25 lower</b> (0.64 lower to 0.15 higher)	⊕○○○ VERY LOW	CRITICAL
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CI: Confidence interval; SMD: Standardised mean difference; RR: Risk ratio

**Explanations**

- a. Downgraded two levels for very serious limitations in study design or execution: >75% of risk of bias judgements were rated unclear or high risk of bias.
- b. Downgraded by two levels for very serious inconsistency: unexplained statistical heterogeneity >75%.
- c. Downgraded one level for serious inconsistency: unexplained statistical heterogeneity >50%.
- d. Downgraded one level for serious limitations in study design or execution: >50% of risk of bias judgements were rated unclear or high risk of bias.
- e. Downgraded by one level for serious imprecision: small number of participants (<400 participants) or studies (<2 studies) contributing to the analyses.
- f. Downgraded by two levels for very serious imprecision: very small number of participants (<200 participants) or studies (<2 studies) contributing to the analyses.



Certainty assessment							No of patients		Effect		Certainty	Importance
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Subgroup analysis: by treatment duration	placebo	Relative (95% CI)	Absolute (95% CI)		
8	randomised trials	serious <sup>a</sup>	not serious	serious <sup>c</sup>	serious <sup>d</sup>	none	68/195 (34.9%)	23/197 (11.7%)	<b>RR 2.50</b> (1.47 to 4.25)	<b>175 more per 1,000</b> (from 55 more to 379 more)	⊕○○○ VERY LOW	

**50% reduction in pain, post-treatment - Treatment duration, >4 hours**

6	randomised trials	very serious <sup>e</sup>	serious <sup>b</sup>	serious <sup>c</sup>	serious <sup>d</sup>	none	108/204 (52.9%)	31/105 (29.5%)	<b>RR 1.92</b> (1.02 to 3.60)	<b>272 more per 1,000</b> (from 6 more to 768 more)	⊕○○○ VERY LOW	
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**Health-related quality of life - Treatment duration ≤4 hours**

3	randomised trials	serious <sup>a</sup>	very serious <sup>f</sup>	not serious	serious <sup>d</sup>	none	290	188	-	<b>SMD 0.33 SD lower</b> (0.79 lower to 0.13 higher)	⊕○○○ VERY LOW	
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**Health-related quality of life, post-treatment - Treatment duration, >4 hours**

2	randomised trials	not serious	not serious	serious <sup>c</sup>	serious <sup>d</sup>	none	166	169	-	<b>SMD 0.14 higher</b> (0.07 lower to 0.36 higher)	⊕⊕○○ LOW	
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**Functional disability, post-treatment - Treatment duration, ≤4 hours**

10	randomised trials	serious <sup>a</sup>	not serious	not serious	not serious	none	629	575	-	<b>SMD 0.16 lower</b> (0.31 lower to 0.01 lower)	⊕⊕⊕○ MODERATE	
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**Functional disability, post-treatment - Treatment duration, >4 hours**

Certainty assessment							No of patients		Effect		Certainty	Importance
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Subgroup analysis: by treatment duration	placebo	Relative (95% CI)	Absolute (95% CI)		
8	randomised trials	serious <sup>a</sup>	very serious <sup>f</sup>	not serious	not serious	none	365	353	-	SMD <b>0.36 lower</b> (0.75 lower to 0.02 higher)	⊕○○○ VERY LOW	

**Functional disability, follow-up - Treatment duration, ≤4 hours**

6	randomised trials	not serious	not serious	serious <sup>c</sup>	not serious	none	531	451	-	SMD <b>0.19 SD lower</b> (0.31 lower to 0.06 lower)	⊕⊕⊕○ MODERATE	
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**Functional disability, follow-up - Treatment duration, >4 hours**

5	randomised trials	not serious	very serious <sup>f</sup>	serious <sup>c</sup>	not serious	none	258	257	-	SMD <b>0.33 lower</b> (0.79 lower to 0.13 higher)	⊕○○○ VERY LOW	
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**Emotional functioning (depression), post-treatment - Treatment duration, ≤4 hours**

8	randomised trials	not serious	not serious	not serious	not serious	none	419	409	-	SMD <b>0.05 higher</b> (0.08 lower to 0.19 higher)	⊕⊕⊕⊕ HIGH	
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**Emotional functioning (depression), post-treatment - Treatment duration, >4 hours**

4	randomised trials	serious <sup>a</sup>	not serious	not serious	not serious	none	259	259	-	SMD <b>0.03 lower</b> (0.25 lower to 0.18 higher)	⊕⊕⊕○ MODERATE	
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**Emotional functioning (depression), follow-up - Treatment duration, ≤4 hours**

Certainty assessment							No of patients		Effect		Certainty	Importance
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Subgroup analysis: by treatment duration	placebo	Relative (95% CI)	Absolute (95% CI)		
5	randomised trials	not serious	not serious	not serious	not serious	none	338	330	-	SMD <b>0.08 higher</b> (0.07 lower to 0.23 higher)	⊕⊕⊕⊕ HIGH	

Emotional functioning (depression), follow-up - Treatment duration, >4 hours

5	randomised trials	serious <sup>a</sup>	not serious	not serious	not serious	none	278	272	-	SMD <b>0.06 higher</b> (0.11 lower to 0.22 higher)	⊕⊕⊕○ MODERATE	
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Emotional functioning (anxiety), post-treatment - Treatment duration, ≤4 hours

7	randomised trials	serious <sup>a</sup>	not serious	not serious	not serious	none	522	426	-	SMD <b>0.05 lower</b> (0.21 lower to 0.1 higher)	⊕⊕⊕○ MODERATE	
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Emotional functioning (anxiety), post-treatment - Treatment duration, >4 hours

6	randomised trials	serious <sup>a</sup>	not serious	not serious	not serious	none	317	310	-	SMD <b>0.05 higher</b> (0.1 lower to 0.21 higher)	⊕⊕⊕○ MODERATE	
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Emotional functioning (anxiety), follow-up - Treatment duration, ≤4 hours

6	randomised trials	not serious	not serious	not serious	not serious	none	475	374	-	SMD <b>0.06 lower</b> (0.22 lower to 0.09 higher)	⊕⊕⊕⊕ HIGH	
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Emotional functioning (anxiety), follow-up - Treatment duration, >4 hours

Certainty assessment							No of patients		Effect		Certainty	Importance
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Subgroup analysis: by treatment duration	placebo	Relative (95% CI)	Absolute (95% CI)		
5	randomised trials	not serious	not serious	not serious	not serious	none	264	261	-	SMD 0 (0.17 lower to 0.17 higher)	⊕⊕⊕⊕ HIGH	

**CI:** Confidence interval; **SMD:** Standardised mean difference; **RR:** Risk ratio

### Explanations

- Downgraded one level for serious limitations in study design or execution: >50% of risk of bias judgements were rated unclear or high risk of bias.
- Downgraded one level for serious inconsistency: unexplained statistical heterogeneity >50%.
- Downgraded by one level for indirectness: few conditions presented in the meta-analysis so estimate may not be applicable to other chronic pain conditions.
- Downgraded by one level for serious imprecision: small number of participants (<400 participants) or studies (<2 studies) contributing to the analyses.
- Downgraded two levels for very serious limitations in study design or execution: >75% of risk of bias judgements were rated unclear or high risk of bias.
- Downgraded by two levels for very serious inconsistency: unexplained statistical heterogeneity >75%.



Table 9: WHO GRADE Profile: Psychological therapies vs. active (non-psychological)/standard care or waitlist for children and adolescents with chronic pain, by route

**Question:** Psychological therapies compared to active (non-psychological)/standard care or waitlist in children and adolescents with chronic pain. Subgroup analysis by route (face-to-face from therapist vs. remotely delivered)

**Setting:** Global

Certainty assessment							№ of patients		Effect		Certainty	Importance
№ of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Subgroup analysis: by route		Relative (95% CI)	Absolute (95% CI)		

**Pain intensity, post-treatment - Face-to-face with therapist**

23	randomised trials	serious <sup>a</sup>	serious <sup>b</sup>	not serious	not serious	none	826	682	-	SMD <b>0.38 lower</b> (0.58 lower to 0.17 lower)	⊕⊕○○ LOW	
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**Pain intensity, post-treatment - Remote from therapist**

17	randomised trials	serious <sup>a</sup>	not serious	not serious	not serious	none	785	731	-	SMD <b>0.19 lower</b> (0.35 lower to 0.04 lower)	⊕⊕⊕○ MODERATE	
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**Pain intensity, follow-up - Face-to-face with therapist**

13	randomised trials	serious <sup>a</sup>	serious <sup>b</sup>	not serious	not serious	none	479	404	-	SMD <b>0.15 lower</b> (0.35 lower to 0.06 higher)	⊕⊕○○ LOW	
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**Pain intensity, follow-up - Remote from therapist**

Certainty assessment							No of patients		Effect		Certainty	Importance
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Subgroup analysis: by route		Relative (95% CI)	Absolute (95% CI)		
9	randomised trials	serious <sup>a</sup>	serious <sup>b</sup>	not serious	not serious	none	518	475	-	SMD 0.13 lower (0.39 lower to 0.13 higher)	⊕⊕○○ LOW	

#### 50% reduction in pain, post-treatment - Face-to-face with therapist

14	randomised trials	very serious <sup>c</sup>	serious <sup>b</sup>	not serious	not serious	none	210/402 (52.2%)	74/295 (25.1%)	RR 2.02 (1.36 to 2.98)	256 more per 1,000 (from 90 more to 497 more)	⊕○○○ VERY LOW	
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#### 50% reduction in pain, post-treatment - Remote from therapist

9	randomised trials	serious <sup>a</sup>	not serious	not serious	serious <sup>d</sup>	none	97/242 (40.1%)	36/200 (18.0%)	RR 1.91 (1.38 to 2.66)	164 more per 1,000 (from 68 more to 299 more)	⊕⊕○○ LOW	
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#### Functional disability, post-treatment - Face-to-face with therapist

15	randomised trials	serious <sup>a</sup>	serious <sup>b</sup>	not serious	not serious	none	666	611	-	SMD 0.31 lower (0.49 lower to 0.13 lower)	⊕⊕○○ LOW	
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#### Functional disability, post-treatment - Remote from therapist

Certainty assessment							No of patients		Effect		Certainty	Importance
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Subgroup analysis: by route		Relative (95% CI)	Absolute (95% CI)		
10	randomised trials	not serious	serious <sup>b</sup>	not serious	not serious	none	543	535	-	SMD <b>0.14 lower</b> (0.33 lower to 0.06 higher)	⊕⊕⊕○ MODERATE	

#### Functional disability, follow-up - Face-to-face with therapist

9	randomised trials	not serious	serious <sup>b</sup>	not serious	not serious	none	454	413	-	SMD <b>0.33 lower</b> (0.55 lower to 0.1 lower)	⊕⊕⊕○ MODERATE	
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#### Functional disability, follow-up - Remote from therapist

7	randomised trials	not serious	not serious	not serious	not serious	none	474	473	-	SMD <b>0.05 lower</b> (0.29 lower to 0.2 higher)	⊕⊕⊕⊕ HIGH	
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#### Emotional functioning (depression), post-treatment - Face-to-face with therapist

9	randomised trials	serious <sup>a</sup>	not serious	not serious	not serious	none	397	391	-	SMD <b>0.04 lower</b> (0.21 lower to 0.13 higher)	⊕⊕⊕○ MODERATE	
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#### Emotional functioning (depression), post-treatment - Remote from therapist

Certainty assessment							No of patients		Effect		Certainty	Importance
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Subgroup analysis: by route		Relative (95% CI)	Absolute (95% CI)		
10	randomised trials	not serious	not serious	not serious	not serious	none	520	473	-	SMD <b>0.01 lower</b> (0.13 lower to 0.12 higher)	⊕⊕⊕⊕ HIGH	

Emotional functioning (depression), follow-up - Face-to-face with therapist

7	randomised trials	not serious	not serious	not serious	not serious	none	346	336	-	SMD <b>0.06 higher</b> (0.11 lower to 0.23 higher)	⊕⊕⊕⊕ HIGH	
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Emotional functioning (depression), follow-up - Remote from therapist

5	randomised trials	not serious	not serious	not serious	not serious	none	363	330	-	SMD <b>0.05 higher</b> (0.1 lower to 0.2 higher)	⊕⊕⊕⊕ HIGH	
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Emotional functioning (anxiety), post-treatment - Face-to-face with therapist

10	randomised trials	serious <sup>a</sup>	not serious	not serious	not serious	none	483	420	-	SMD <b>0.05 lower</b> (0.2 lower to 0.11 higher)	⊕⊕⊕○ MODERATE	
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Emotional functioning (anxiety), post-treatment - Remote from therapist

Certainty assessment							No of patients		Effect		Certainty	Importance
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Subgroup analysis: by route		Relative (95% CI)	Absolute (95% CI)		
10	randomised trials	not serious	serious <sup>b</sup>	not serious	not serious	none	601	527	-	SMD <b>0.14 lower</b> (0.34 lower to 0.06 higher)	⊕⊕⊕○ MODERATE	

Emotional functioning (anxiety), follow-up - Face-to-face with therapist

8	randomised trials	serious <sup>a</sup>	not serious	not serious	not serious	none	392	324	-	SMD <b>0.06 lower</b> (0.22 lower to 0.09 higher)	⊕⊕⊕○ MODERATE	
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Emotional functioning (anxiety), follow-up - Remote from therapist

6	randomised trials	not serious	not serious	not serious	not serious	none	428	406	-	SMD <b>0.09 lower</b> (0.24 lower to 0.06 higher)	⊕⊕⊕⊕ HIGH	
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Health-related quality of life, post-treatment - Face-to-face with therapist

2	randomised trials	serious <sup>a</sup>	not serious	serious <sup>e</sup>	serious <sup>d</sup>	none	178	123	-	SMD <b>0.12 lower</b> (0.36 lower to 0.11 higher)	⊕○○○ VERY LOW	
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Health-related quality of life, post-treatment - Remote from therapist

Certainty assessment							No of patients		Effect		Certainty	Importance
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Subgroup analysis: by route		Relative (95% CI)	Absolute (95% CI)		
11	randomised trials	serious <sup>a</sup>	not serious	not serious	not serious	none	510	457	-	SMD <b>0.06 lower</b> (0.23 lower to 0.12 higher)	⊕⊕⊕○ MODERATE	

CI: Confidence interval; SMD: Standardised mean difference; RR: Risk ratio

#### Explanations

- a. Downgraded one level for serious limitations in study design or execution: >50% of risk of bias judgements were rated unclear or high risk of bias.
- b. Downgraded one level for serious inconsistency: unexplained statistical heterogeneity >50%.
- c. Downgraded two levels for very serious limitations in study design or execution: >75% of risk of bias judgements were rated unclear or high risk of bias.
- d. Downgraded by one level for serious imprecision: small number of participants (<400 participants) or studies (<2 studies) contributing to the analyses.
- e. Downgraded by one level for indirectness: few conditions presented in the meta-analysis so estimate may not be applicable to other chronic pain conditions.

Table 10: WHO GRADE Profile: Psychological therapies vs. active (non-psychological)/standard care or waitlist for children and adolescents with chronic pain, by therapy classification

**Question:** Psychological therapies compared to active (non-psychological)/standard care or waitlist in children and adolescents with chronic pain. Subgroup analysis by therapy classification

**Setting:** Global

Certainty assessment							No of patients		Effect		Certainty	Importance
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Subgroup analysis: by therapy type	placebo	Relative (95% CI)	Absolute (95% CI)		

**Pain intensity, post-treatment - CBT**

31	randomised trials	serious <sup>a</sup>	serious <sup>b</sup>	not serious	not serious	none	1344	1259	-	SMD <b>0.27 lower</b> (0.4 lower to 0.14 lower)	⊕⊕○○ LOW	
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**Pain intensity, post-treatment - Relaxation training**

4	randomised trials	very serious <sup>c</sup>	not serious	serious <sup>d</sup>	serious <sup>e</sup>	none	136	113	-	SMD <b>0.13 higher</b> (0.13 lower to 0.38 higher)	⊕○○○ VERY LOW	
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**Pain intensity, post-treatment - Behavioural therapy**

2	randomised trials	very serious <sup>c</sup>	very serious <sup>f</sup>	serious <sup>d</sup>	very serious <sup>g</sup>	none	35	25	-	SMD <b>1.23 lower</b> (2.74 lower to 0.27 higher)	⊕○○○ VERY LOW	
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**Pain intensity, follow-up - CBT**

Certainty assessment							No of patients		Effect		Certainty	Importance
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Subgroup analysis: by therapy type	placebo	Relative (95% CI)	Absolute (95% CI)		
17	randomised trials	serious <sup>a</sup>	serious <sup>b</sup>	not serious	not serious	none	918	809	-	SMD <b>0.09 lower</b> (0.27 lower to 0.08 higher)	⊕⊕○○ LOW	

#### Pain intensity, follow-up - Relaxation training

2	randomised trials	serious <sup>a</sup>	not serious	serious <sup>d</sup>	very serious <sup>g</sup>	none	43	49	-	SMD <b>0.1 lower</b> (0.51 lower to 0.31 higher)	⊕○○○ VERY LOW	
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#### 50% reduction in pain, post-treatment - CBT

12	randomised trials	serious <sup>a</sup>	not serious	serious <sup>d</sup>	not serious	none	161/351 (45.9%)	72/312 (23.1%)	<b>RR 1.86</b> (1.48 to 2.32)	<b>198 more per 1,000</b> (from 111 more to 305 more)	⊕⊕○○ LOW	
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#### 50% reduction in pain, post-treatment - Relaxation therapy

7	randomised trials	very serious <sup>c</sup>	very serious <sup>f</sup>	serious <sup>d</sup>	serious <sup>e</sup>	none	64/145 (44.1%)	11/93 (11.8%)	<b>RR 3.78</b> (0.99 to 14.46)	<b>329 more per 1,000</b> (from 1 fewer to 1,000 more)	⊕○○○ VERY LOW	
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#### 50% reduction in pain, post-treatment - Behaviour therapy



Certainty assessment							No of patients		Effect		Certainty	Importance
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Subgroup analysis: by therapy type	placebo	Relative (95% CI)	Absolute (95% CI)		
4	randomised trials	very serious <sup>c</sup>	very serious <sup>f</sup>	serious <sup>d</sup>	very serious <sup>g</sup>	none	47/62 (75.8%)	13/53 (24.5%)	<b>RR 2.71</b> (0.69 to 10.60)	<b>419 more per 1,000</b> (from 76 fewer to 1,000 more)	⊕○○○ VERY LOW	

#### Functional disability, post-treatment - CBT

21	randomised trials	serious <sup>a</sup>	serious <sup>b</sup>	not serious	not serious	none	1142	1085	-	<b>SMD 0.24 lower</b> (0.38 lower to 0.1 lower)	⊕⊕○○ LOW	
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#### Functional disability, follow-up - CBT

12	randomised trials	not serious	serious <sup>b</sup>	not serious	not serious	none	867	795	-	<b>SMD 0.23 lower</b> (0.4 lower to 0.06 lower)	⊕⊕⊕○ MODERATE	
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#### Emotional functioning (depression), post-treatment - CBT

17	randomised trials	serious <sup>a</sup>	not serious	not serious	not serious	none	850	809	-	<b>SMD 0.01 lower</b> (0.11 lower to 0.08 higher)	⊕⊕⊕○ MODERATE	
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#### Emotional functioning (depression), follow-up - CBT

Certainty assessment							No of patients		Effect		Certainty	Importance
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Subgroup analysis: by therapy type	placebo	Relative (95% CI)	Absolute (95% CI)		
8	randomised trials	not serious	not serious	not serious	not serious	none	581	570	-	SMD <b>0.03 higher</b> (0.08 lower to 0.15 higher)	⊕⊕⊕⊕ HIGH	

#### Emotional functioning (anxiety), post-treatment - CBT

16	randomised trials	serious <sup>a</sup>	serious <sup>b</sup>	not serious	not serious	none	997	882	-	SMD <b>0.09 lower</b> (0.23 lower to 0.06 higher)	⊕⊕○○ LOW	
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#### Emotional functioning (anxiety), follow-up - CBT

10	randomised trials	not serious	not serious	serious <sup>d</sup>	not serious	none	734	634	-	SMD <b>0.07 lower</b> (0.18 lower to 0.03 higher)	⊕⊕⊕○ MODERATE	
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CI: Confidence interval; SMD: Standardised mean difference; RR: Risk ratio

#### Explanations

- Downgraded one level for serious limitations in study design or execution: >50% of risk of bias judgements were rated unclear or high risk of bias.
- Downgraded one level for serious inconsistency: unexplained statistical heterogeneity >50%.
- Downgraded two levels for very serious limitations in study design or execution: >75% of risk of bias judgements were rated unclear or high risk of bias.
- Downgraded by one level for indirectness: few conditions presented in the meta-analysis so estimate may not be applicable to other chronic pain conditions.
- Downgraded by one level for serious imprecision: small number of participants (<400 participants) or studies (<2 studies) contributing to the analyses.

f. Downgraded by two levels for very serious inconsistency: unexplained statistical heterogeneity >75%.

g. Downgraded by two levels for very serious imprecision: very small number of participants (<200 participants) or studies (<2 studies) contributing to the analyses.

Table 11: WHO GRADE Profile: Psychological therapies vs. active (non-psychological)/standard care or waitlist for children and adolescents with chronic pain, by size

**Question:** Psychological therapies compared to active (non-psychological)/standard care or waitlist in children and adolescents with chronic pain. Subgroup analysis by size (less than and more than 20 participants/arm)

**Setting:** Global

Certainty assessment							Nº of patients		Effect		Certainty	Importance
Nº of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Subgroup analysis: by size	placebo	Relative (95% CI)	Absolute (95% CI)		

**Pain intensity, post-treatment - <20 participants/arm**

13	randomised trials	serious <sup>a</sup>	serious <sup>b</sup>	not serious	very serious <sub>c,d</sub>	none	270	196	-	SMD <b>0.62 lower</b> (0.95 lower to 0.3 lower)	⊕○○○ VERY LOW	
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**Pain intensity, post-treatment - >20 participants/arm**

25	randomised trials	serious <sup>a</sup>	serious <sup>b</sup>	not serious	not serious	none	1314	1245	-	SMD <b>0.17 lower</b> (0.3 lower to 0.04 lower)	⊕⊕○○ LOW	
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**Pain intensity, follow-up - <20 participants/arm**

8	randomised trials	serious <sup>a</sup>	serious <sup>b</sup>	not serious	very serious <sub>c,d</sub>	none	142	117	-	SMD <b>0.3 lower</b> (0.72 lower to 0.12 higher)	⊕○○○ VERY LOW	
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**Pain intensity, follow-up - >20 participants/arm**

Certainty assessment							No of patients		Effect		Certainty	Importance
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Subgroup analysis: by size	placebo	Relative (95% CI)	Absolute (95% CI)		
13	randomised trials	serious <sup>a</sup>	serious <sup>b</sup>	not serious	not serious	none	855	767	-	SMD 0.08 lower (0.25 lower to 0.09 higher)	⊕⊕○○ LOW	

50% reduction in pain, post-treatment - >20 participants/arm

6	randomised trials	serious <sup>a</sup>	not serious	serious <sup>e</sup>	serious <sup>e</sup>	none	127/312 (40.7%)	59/240 (24.6%)	RR 1.58 (1.16 to 2.17)	143 more per 1,000 (from 39 more to 288 more)	⊕○○○ VERY LOW	
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50% reduction in pain, post-treatment - <20 participants/arm

16	randomised trials	very serious <sup>f</sup>	not serious	serious <sup>e</sup>	not serious	none	180/332 (54.2%)	45/256 (17.6%)	RR 2.69 (1.81 to 4.01)	297 more per 1,000 (from 142 more to 529 more)	⊕○○○ VERY LOW	
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Functional disability, post-treatment - <20 participants/arm

8	randomised trials	serious <sup>a</sup>	serious <sup>b</sup>	not serious	very serious <sup>c,d</sup>	none	131	128	-	SMD 0.49 lower (0.93 lower to 0.05 lower)	⊕○○○ VERY LOW	
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Functional disability, post-treatment - >20 participants/arm

Certainty assessment							№ of patients		Effect		Certainty	Importance
№ of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Subgroup analysis: by size	placebo	Relative (95% CI)	Absolute (95% CI)		
16	randomised trials	not serious	serious <sup>b</sup>	not serious	not serious	none	1078	1021	-	SMD <b>0.18 lower</b> (0.32 lower to 0.05 lower)	⊕⊕⊕○ MODERATE	

Functional disability, follow-up - <20 participants/arm

3	randomised trials	serious <sup>a</sup>	serious <sup>b</sup>	not serious	very serious <sup>c,d</sup>	none	42	41	-	SMD <b>0.99 lower</b> (1.85 lower to 0.13 lower)	⊕○○○ VERY LOW	
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Functional disability, follow-up - >20 participants/arm

11	randomised trials	not serious	not serious	not serious	not serious	none	872	800	-	SMD <b>0.16 lower</b> (0.27 lower to 0.05 lower)	⊕⊕⊕⊕ HIGH	
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Health-related quality of life, post-treatment - <20 participants/arm

3	randomised trials	very serious <sup>f,g</sup>	very serious <sup>g</sup>	not serious	very serious <sup>d,h</sup>	none	67	45	-	SMD <b>0.32 lower</b> (1.26 lower to 0.62 higher)	⊕○○○ VERY LOW	
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Health-related quality of life, post-treatment - >20 participants/arm

Certainty assessment							No of patients		Effect		Certainty	Importance
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Subgroup analysis: by size	placebo	Relative (95% CI)	Absolute (95% CI)		
9	randomised trials	not serious	not serious	not serious	not serious	none	621	535	-	SMD <b>0.04 lower</b> (0.16 lower to 0.08 higher)	⊕⊕⊕⊕ HIGH	

Emotional functioning (depression), post-treatment - <20 participants/arm

5	randomised trials	serious <sup>a</sup>	not serious	not serious	very serious <sub>c,d</sub>	none	114	76	-	SMD <b>0.03 lower</b> (0.35 lower to 0.3 higher)	⊕○○○ VERY LOW	
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Emotional functioning (depression), post-treatment - >20 participants/arm

14	randomised trials	not serious	not serious	not serious	not serious	none	803	788	-	SMD <b>0.02 lower</b> (0.12 lower to 0.08 higher)	⊕⊕⊕⊕ HIGH	
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Emotional functioning (depression), follow-up - <20 participants/arm

3	randomised trials	serious <sup>a</sup>	not serious	not serious	very serious <sub>h</sub>	none	73	43	-	SMD <b>0.04 lower</b> (0.51 lower to 0.42 higher)	⊕○○○ VERY LOW	
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Emotional functioning (depression), follow-up - >20 participants/arm

Certainty assessment							No of patients		Effect		Certainty	Importance
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Subgroup analysis: by size	placebo	Relative (95% CI)	Absolute (95% CI)		
9	randomised trials	not serious	not serious	not serious	not serious	none	636	623	-	SMD <b>0.06 higher</b> (0.05 lower to 0.17 higher)	⊕⊕⊕⊕ HIGH	

Emotional functioning (anxiety), post-treatment - <20 participants/arm

5	randomised trials	very serious <sup>a</sup>	not serious	not serious	very serious <sup>h</sup>	none	120	73	-	SMD <b>0.01 lower</b> (0.43 lower to 0.4 higher)	⊕○○○ VERY LOW	
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Emotional functioning (anxiety), post-treatment - >20 participants/arm

14	randomised trials	not serious	not serious	not serious	not serious	none	964	874	-	SMD <b>0.09 lower</b> (0.22 lower to 0.04 higher)	⊕⊕⊕⊕ HIGH	
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Emotional functioning (anxiety), follow-up - <20 participants/arm

4	randomised trials	serious <sup>a</sup>	not serious	not serious	very serious <sup>d,e</sup>	none	88	54	-	SMD <b>0.15 lower</b> (0.51 lower to 0.21 higher)	⊕○○○ VERY LOW	
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Emotional functioning (anxiety), follow-up - >20 participants/arm



Certainty assessment							No of patients		Effect		Certainty	Importance
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Subgroup analysis: by size	placebo	Relative (95% CI)	Absolute (95% CI)		
9	randomised trials	not serious	not serious	not serious	not serious	none	732	641	-	SMD <b>0.06 lower</b> (0.17 lower to 0.05 higher)	⊕⊕⊕⊕ HIGH	

CI: Confidence interval; SMD: Standardised mean difference; RR: Risk ratio

#### Explanations

- a. Downgraded one level for serious limitations in study design or execution: >50% of risk of bias judgements were rated unclear or high risk of bias.
- b. Downgraded one level for serious inconsistency: unexplained statistical heterogeneity >50%.
- c. Downgraded by one level for serious imprecision: small number of participants (<400 participants) or studies (<2 studies) contributing to the analyses.
- d. Downgraded by one level for serious imprecision: wide confidence intervals
- e. Downgraded one level for serious inconsistency: unexplained statistical heterogeneity >50%.
- f. Downgraded by two levels for very serious imprecision: very small number of participants (<200 participants) or studies (<2 studies) contributing to the analyses.
- g. Downgraded by two levels for very serious inconsistency: unexplained statistical heterogeneity >75%.
- h. Downgraded by two levels for very serious imprecision: very small number of participants (<200 participants) or studies (<2 studies) contributing to the analyses.

**Table 12. Sensitivity analysis with and without non-chronic headache/migraine studies**

Outcome	Psychological therapy vs. any control		Sensitivity analysis excluding non-chronic headache	
	Effect size	Quality of evidence	Effect size	Quality of evidence
Pain intensity, post-treatment	SMD -0.29, 95% CI -0.43 to -0.16, $I^2$ 67% $K = 38$ ; $N = 3025$	⊕⊕○○ LOW	SMD -0.34, 95% CI -0.51 to -0.18, $I^2$ 73% $K = 28$ ; $N = 2451$	⊕⊕○○ LOW
Pain intensity, follow-up	SMD -0.14, 95% CI -0.30 to 0.02, $I^2$ 61% $K = 21$ ; $N = 1881$	⊕⊕○○ LOW	SMD -0.15, 95% CI -0.34 to 0.03, $I^2$ 68% $K = 15$ ; $N = 1653$	⊕⊕○○ LOW
30% pain reduction, post-treatment	RR 1.13, 95% CI 0.64 to 2.02, $I^2 = NA$ $K = 1$ ; $N = 104$	⊕○○○ VERY LOW	RR 1.13, 95% CI 0.64 to 2.02, $I^2 = NA$ $K = 1$ ; $N = 104$	⊕○○○ VERY LOW
30% pain reduction, follow-up	RR 1.07, 95% CI 0.77 to 1.49, $I^2 = NA$ $K = 1$ ; $N = 104$	⊕○○○ VERY LOW	RR 1.07, 95% CI 0.77 to 1.49, $I^2 = NA$ $K = 1$ ; $N = 104$	⊕○○○ VERY LOW
50% pain reduction, post-treatment	RR 2.11, 95% CI 1.61 to 2.77, $I^2 = 41\%$ $K = 22$ ; $N = 1140$	⊕⊕○○ LOW	RR 2.58, 95% CI 1.71 to 3.89, $I^2$ 19% $K = 8$ ; $N = 448$	⊕⊕○○ LOW
50% pain reduction, follow-up	RR 2.09, 95% CI 1.29 to 3.38, $I^2 = 56\%$ $K = 9$ ; $N = 445$	⊕○○○ VERY LOW	SMD 3.30, 95% CI 1.89 to 5.76, $I^2$ 0% $K = 5$ ; $N = 228$	⊕○○○ VERY LOW
Health-related quality of life, post-treatment	SMD -0.07, 95% CI -0.27 to 0.14, $I^2$ 36% $K = 12$ ; $N = 1268$	⊕⊕⊕○ MODERATE	SMD -0.03, 95% CI -0.15 to 0.09, $I^2$ 0% $K = 9$ ; $N = 1156$	⊕⊕⊕⊕ HIGH
Health-related quality of life, follow-up	SMD -0.01, 95% CI -0.21 to 0.19, $I^2$ 0% $K = 6$ ; $N = 766$	⊕⊕○○ LOW	SMD -0.01, 95% CI -0.23 to 0.20, $I^2$ 0% $K = 2$ ; $N = 336$	⊕○○○ VERY LOW
Functional disability, post-treatment	SMD -0.25, 95% CI -0.39 to -0.11, $I^2$ 60% $K = 24$ ; $N = 2358$	⊕⊕○○ LOW	SMD -0.26, 95% CI -0.42 to 0.10, $I^2$ 65% $K = 20$ ; $N = 2139$	⊕⊕⊕○ MODERATE
Functional disability, follow-up	SMD -0.23, 95% CI -0.38 to 0.08, $I^2$ 55% $K = 14$ ; $N = 1755$	⊕⊕⊕○ MODERATE	SMD -0.23, 95% CI -0.39 to -0.07, $I^2$ 59% $K = 12$ ; $N = 1683$	⊕⊕⊕○ MODERATE
Role Functioning, post treatment	SMD -0.23, 95% CI -0.62 to 0.16, $I^2$ 76% $K = 9$ ; $N = 856$	⊕○○○ VERY LOW	SMD -0.19, 95% CI -0.61 to 0.24, $I^2$ 81% $K = 7$ ; $N = 514$	⊕○○○ VERY LOW
Role Functioning, follow up	SMD 0.54, 95% CI -0.15 to 1.23, $I^2$ 81% $K = 4$ ; $N = 476$	⊕○○○ VERY LOW	SMD 0.54, 95% CI -0.15 to 1.23, $I^2$ 66% $K = 2$ ; $N = 110$	⊕○○○ VERY LOW

Emotional functioning: Depression, post-treatment	SMD -0.02, 95% CI -0.11 to 0.08, I <sup>2</sup> 0% K = 19; N = 1781	⊕⊕⊕⊕ HIGH	SMD -0.02, 95% CI -0.12 to 0.08, I <sup>2</sup> 4% K = 16; N = 1633	⊕⊕⊕⊕ HIGH
Emotional functioning: Depression, follow-up	SMD 0.06, 95% CI -0.05 to 0.16, I <sup>2</sup> 0% K = 12; N = 1375	⊕⊕⊕⊕ HIGH	SMD 0.04, 95% CI -0.08 to 0.15, I <sup>2</sup> 0% K = 9; N = 1193	⊕⊕⊕⊕ HIGH
Emotional functioning: Anxiety, post-treatment	SMD -0.08, 95% CI -0.21 to 0.04, I <sup>2</sup> 44% K = 19; N = 2031	⊕⊕⊕○ MODERATE	SMD -0.06, 95% CI -0.20 to 0.09, I <sup>2</sup> 52% K = 15; N = 1848	⊕⊕⊕○ MODERATE
Emotional functioning: Anxiety, follow-up	SMD -0.07, 95% CI -0.17 to 0.03, I <sup>2</sup> 0% K = 13; N = 1515	⊕⊕⊕⊕ HIGH	SMD -0.05, 95% CI -0.16 to 0.05, I <sup>2</sup> 0% K = 10; N = 1348	⊕⊕⊕⊕ HIGH
Sleep quality, post-treatment	SMD -0.08, 95% CI -0.110 to 0.27, I <sup>2</sup> 0% K = 3; N = 426	⊕⊕○○ LOW	SMD 0.03, 95% CI -0.17 to 0.23, I <sup>2</sup> 0% K = 2; N = 381	⊕○○○ VERY LOW
Sleep quality, follow up	SMD 0, 95% CI -0.24 to 0.24, I <sup>2</sup> NA K = 1; N = 269	⊕○○○ VERY LOW	SMD 0.00, 95% CI -0.24 to 0.24, I <sup>2</sup> NA K = 1; N = 269	⊕○○○ VERY LOW
Activity participation, follow up	SMD -0.99, 95% CI -1.62 to -0.36, I <sup>2</sup> NA K = 1; N = 44	⊕○○○ VERY LOW	SMD -0.99, 95% CI -1.62 to -0.36, I <sup>2</sup> NA K = 1; N = 44	⊕○○○ VERY LOW
Global satisfaction with treatment, post treatment	SMD -0.43, 95% CI -0.6 to -0.26, I <sup>2</sup> 0% K = 6; N = 535	⊕⊕⊕○ MODERATE	K = 0; N = 0	N/A
Global satisfaction with treatment, follow up	MD 2.20, 95% CI 3.5 to 0.9, I <sup>2</sup> NA K = 1; N = 269	⊕○○○ VERY LOW	K = 0; N = 0	N/A
Patient Global Impression of Change, post treatment	SMD -0.55, 95% CI -0.89 to -0.22, I <sup>2</sup> NA K = 1; N = 143	⊕○○○ VERY LOW	SMD -0.55, 95% CI -0.89 to -0.22, I <sup>2</sup> NA K = 1; N = 143	⊕○○○ VERY LOW
Patient Global Impression of Change, follow up	SMD -0.43, 95% CI -0.76 to -0.1, I <sup>2</sup> NA K = 1; N = 143	⊕○○○ VERY LOW	SMD -0.43, 95% CI -0.76 to -0.10, I <sup>2</sup> NA K = 1; N = 143	⊕○○○ VERY LOW

