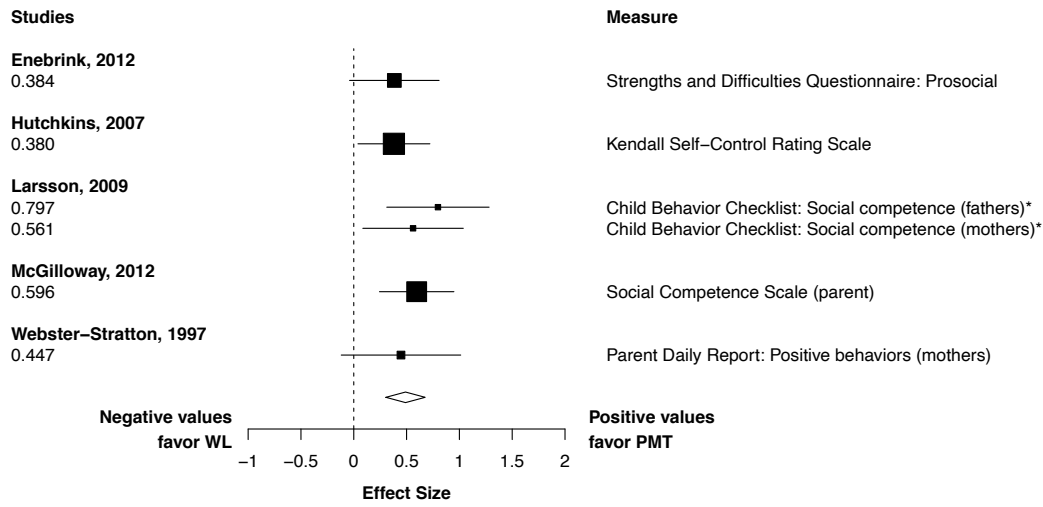**Table S1**

Descriptive data of baseline scores for the Eyberg Child Behavior Inventory Intensity Subscale for studies, divided by type of comparison and inclusion criteria

Condition 1	Condition 2	Inclusion criteria (*k*)	Combined Mean (SD)	Condition 1 Mean (SD)	Condition 2 Mean (SD)
PMT	WL				
		ODD (2)	154 (26)	155 (24)	154 (28)
		Cut-off (8)	150 (27)	150 (27)	149 (27)
		Total (10)	151 (27)	151 (27)	150 (28)
PCIT	WL				
		ODD (3)	170 (28)	167 (25)	173 (32)
		Cut-off (3)	166 (21)	168 (23)	164 (19)
		Total (6)	168 (25)	168 (24)	167 (25)
PMT + Child CBT	WL				
		ODD (2)	153 (27)	153 (26)	154 (28)
		Cut-off (0)	-	-	-
		Total (3)	153 (27)	153 (26)	154 (28)
PMT + Child CBT	PMT				
		ODD (2)	154 (25)	153 (26)	155 (24)
		Cut-off (0)	-	-	-
		Total (2)	154 (25)	153 (26)	155 (24)

Note. Means and standard deviations are derived from sample means and sample standard deviations reported in each study using the sample.decomp function from the R package Utilities (O'Neill, 2021. utilities: Data Utility Functions. R package version 0.3.0. https://CRAN.R-project.org/package=utilities). Whenever possible, numbers are based on the scores of both mothers and fathers. However, sometimes only one of these scores are given. The Combined column is derived by combining Condition 1 and Condition 2. A robust variance estimation moderator analysis with PMT vs. WL as one level and PCIT vs. WL as the other level could not show a difference between the estimates (p=0.90). k = Number of studies; PMT = Parent Management Training; PCIT = Parent Child Interaction Therapy; PMT + child CBT = PMT with child CBT, WL = Waiting list; ODD = ODD diagnosis diagnosed by clinician using structured diagnostic assessment; Cut-off = Studies on children with disruptive behavior problems above clinical cut-off.
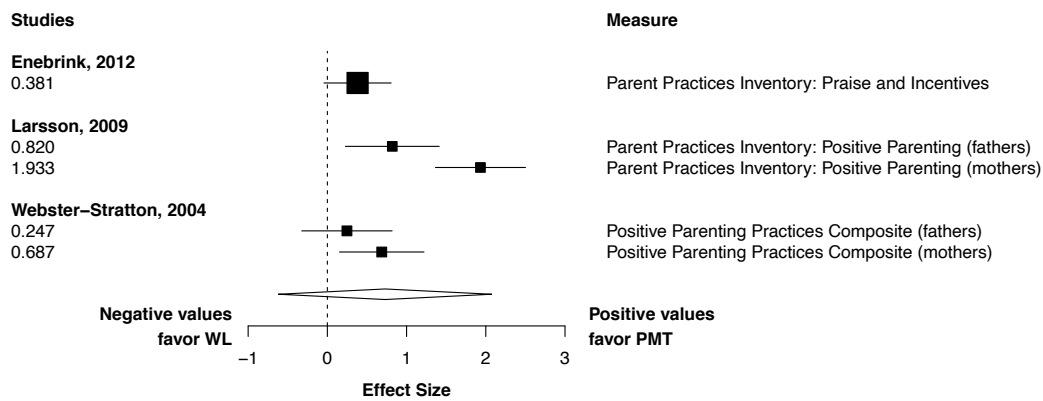
Figure S1

Forest plot of effect sizes making up the analysis of parents' assessment of disruptive behavior for standard PMT compared to WL at post-treatment

Studies		Measure
Axberg, 2012		
0.693		Eyberg Child Behavior Inventory: Intensity
Barkley, 2000		
−0.283		Child Behavior Checklist: Aggression
−0.243		Child Behavior Checklist: Delinquent
Braet, 2009		
0.170		Child Behavior Checklist: Externalizing
Carvalho Homem, 2014		
0.162		Preeschool and kindergarden behavior scale: Antisocial aggressive subscale
0.387		Preeschool and kindergarden behavior scale: Oppositional explosive subscale
David, 2014		
0.926		Child Behavior Checklist: Externalizing
Enebrink, 2012		
0.645		Eyberg Child Behavior Inventory: Intensity
0.433		Strengths and Difficulties Questionnaire: Conduct problems
Frank, 2015		
0.499		Eyberg Child Behavior Inventory: Intensity (mothers)
0.581		Eyberg Child Behavior Inventory: Intensity (fathers)
Gardner, 2006		
0.548		Eyberg Child Behavior Inventory: Intensity
Hutchkins, 2007		
0.627		Eyberg Child Behavior Inventory: Intensity
0.267		Strengths and Difficulties Questionnaire: Conduct problems
Larsson, 2009		
0.757		Child Behavior Checklist: Aggression (fathers)
0.644		Child Behavior Checklist: Aggression (mothers)
0.622		Eyberg Child Behavior Inventory: Intensity (fathers)
0.745		Eyberg Child Behavior Inventory: Intensity (mothers)
Markie–Dadds, 2006		
2.703		Eyberg Child Behavior Inventory: Intensity
1.276		Parent Daily Report
McGilloway, 2012		
0.609		Eyberg Child Behavior Inventory: Intensity
Sanders, 2000		
0.789		Eyberg Child Behavior Inventory: Intensity (fathers)
1.042		Eyberg Child Behavior Inventory: Intensity (mothers)
0.741		Parent Daily Report (fathers)
1.087		Parent Daily Report (mothers)
Scott, 2001		
0.739		Strengths and Difficulties Questionnaire: Conduct problems
Webster–Stratton, 2004		
0.932		Behavior Problem Composite (fathers)
0.936		Behavior Problem Composite (mothers)
Webster–Stratton, 1997		
1.235		Eyberg Child Behavior Inventory: Intensity (fathers)
1.304		Eyberg Child Behavior Inventory: Intensity (mothers)
1.506		Parent Daily Report: Negative behaviors (mothers)

Negative values favor WL · Positive values favor PMT

−1 0 1 2 3 4

Effect Size

Note. The robust variance estimation of this data can be found in the first row of Figure 2.

Figure S2

Forest plot of effect sizes making up the analysis of parents' assessment of social skills for standard PMT compared to WL at post-treatment

Studies		Measure
Enebrink, 2012 0.384		Strengths and Difficulties Questionnaire: Prosocial
Hutchkins, 2007 0.380		Kendall Self–Control Rating Scale
Larsson, 2009 0.797 0.561		Child Behavior Checklist: Social competence (fathers)* Child Behavior Checklist: Social competence (mothers)*
McGilloway, 2012 0.596		Social Competence Scale (parent)
Webster–Stratton, 1997 0.447		Parent Daily Report: Positive behaviors (mothers)

Negative values favor WL   Positive values favor PMT

Effect Size: −1 −0.5 0 0.5 1 1.5 2

Note. The robust variance estimation of this data can be found in the second row of Figure 2. * = Data from Drugli et al., 2007.
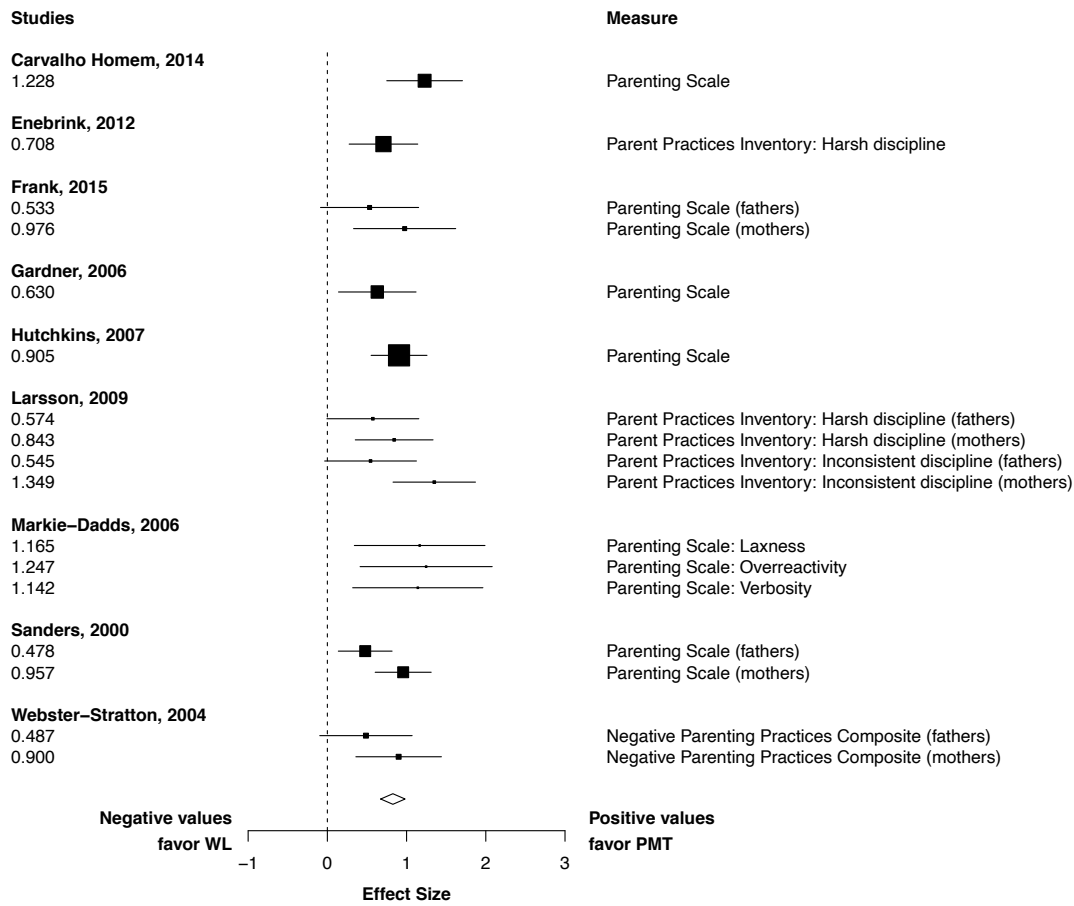
Figure S3

Forest plot of effect sizes making up the analysis of parents' assessment of positive parenting skills for standard PMT compared to WL at post-treatment

Studies		Measure
Enebrink, 2012 0.381		Parent Practices Inventory: Praise and Incentives
Larsson, 2009 0.820 1.933		Parent Practices Inventory: Positive Parenting (fathers) Parent Practices Inventory: Positive Parenting (mothers)
Webster–Stratton, 2004 0.247 0.687		Positive Parenting Practices Composite (fathers) Positive Parenting Practices Composite (mothers)

Negative values favor WL   Positive values favor PMT

Effect Size: −1 0 1 2 3

Note. The robust variance estimation of this data can be found in the third row of Figure 2.
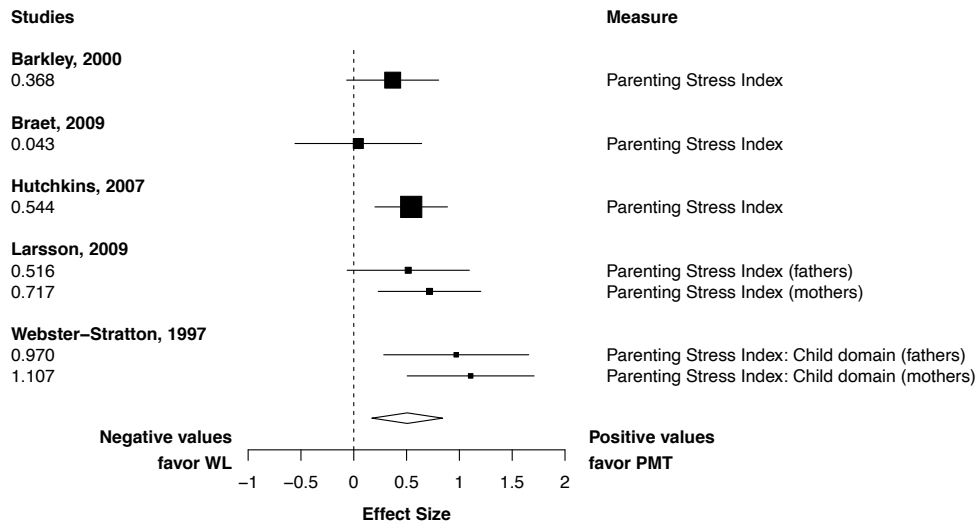
Figure S4

Forest plot of effect sizes making up the analysis of parents' assessment of negative parenting skills for standard PMT compared to WL at post-treatment

Studies		Measure
Carvalho Homem, 2014		
1.228		Parenting Scale
Enebrink, 2012		
0.708		Parent Practices Inventory: Harsh discipline
Frank, 2015		
0.533		Parenting Scale (fathers)
0.976		Parenting Scale (mothers)
Gardner, 2006		
0.630		Parenting Scale
Hutchkins, 2007		
0.905		Parenting Scale
Larsson, 2009		
0.574		Parent Practices Inventory: Harsh discipline (fathers)
0.843		Parent Practices Inventory: Harsh discipline (mothers)
0.545		Parent Practices Inventory: Inconsistent discipline (fathers)
1.349		Parent Practices Inventory: Inconsistent discipline (mothers)
Markie–Dadds, 2006		
1.165		Parenting Scale: Laxness
1.247		Parenting Scale: Overreactivity
1.142		Parenting Scale: Verbosity
Sanders, 2000		
0.478		Parenting Scale (fathers)
0.957		Parenting Scale (mothers)
Webster–Stratton, 2004		
0.487		Negative Parenting Practices Composite (fathers)
0.900		Negative Parenting Practices Composite (mothers)

Negative values favor WL — Positive values favor PMT

Effect Size: −1, 0, 1, 2, 3

Note. The robust variance estimation of this data can be found in the fourth row of Figure 2.
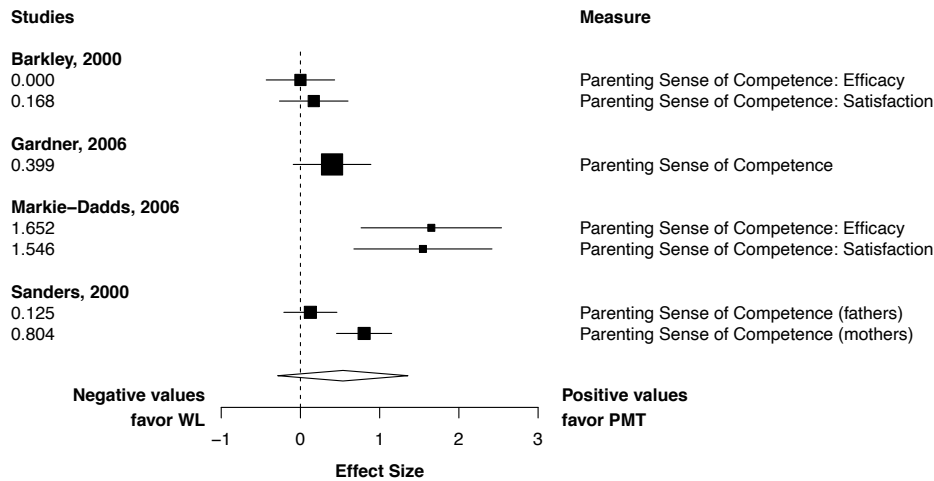
Figure S5

Forest plot of effect sizes making up the analysis of parents' assessment of parental stress for standard PMT compared to WL at post-treatment

Note. The robust variance estimation of this data can be found in the fifth row of Figure 2.
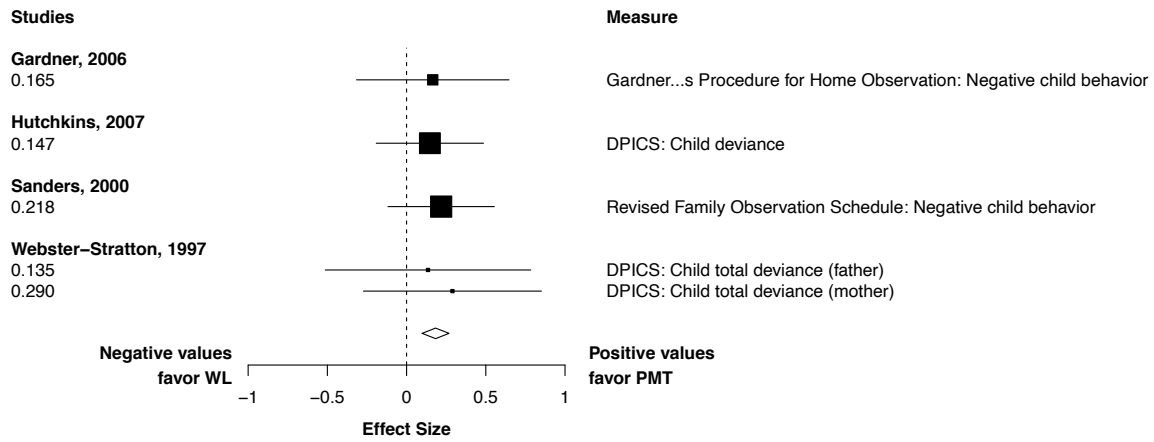
Figure S6

Forest plot of effect sizes making up the analysis of parents' assessment of parental sense of competence for standard PMT compared to WL at post-treatment

Note. The robust variance estimation of this data can be found in the sixth row of Figure 2.
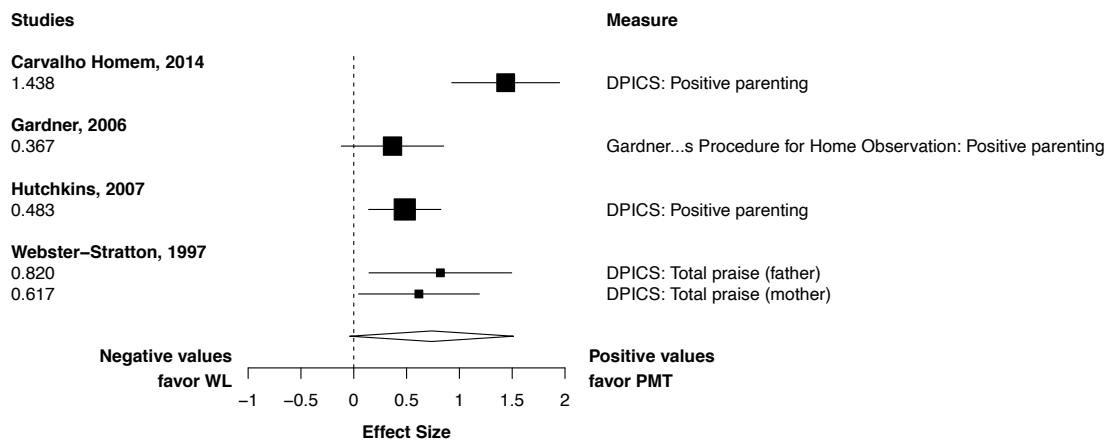
Figure S7

Forest plot of effect sizes making up the analysis of clinicians' assessment of disruptive behavior for standard PMT compared to WL at post-treatment

Studies   **Measure**

Gardner, 2006
0.165   Gardner...s Procedure for Home Observation: Negative child behavior

Hutchkins, 2007
0.147   DPICS: Child deviance

Sanders, 2000
0.218   Revised Family Observation Schedule: Negative child behavior

Webster–Stratton, 1997
0.135   DPICS: Child total deviance (father)
0.290   DPICS: Child total deviance (mother)

Negative values   Positive values
favor WL   favor PMT
−1   −0.5   0   0.5   1

Effect Size

Note. The robust variance estimation of this data can be found in the seventh row of Figure 2.
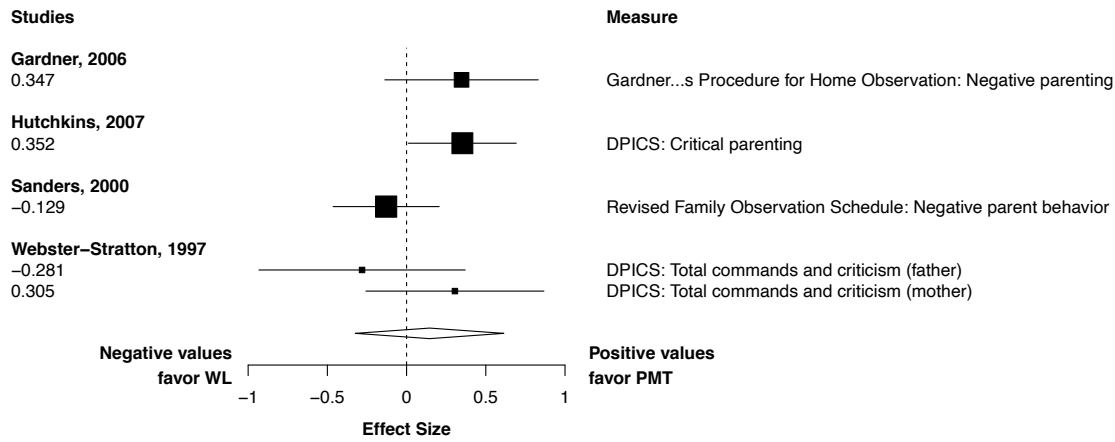
Figure S8

Forest plot of effect sizes making up the analysis of clinicians' assessment of positive parenting skills for standard PMT compared to WL at post-treatment

Studies   **Measure**

Carvalho Homem, 2014
1.438   DPICS: Positive parenting

Gardner, 2006
0.367   Gardner...s Procedure for Home Observation: Positive parenting

Hutchkins, 2007
0.483   DPICS: Positive parenting

Webster–Stratton, 1997
0.820   DPICS: Total praise (father)
0.617   DPICS: Total praise (mother)

Negative values   Positive values
favor WL   favor PMT
−1   −0.5   0   0.5   1   1.5   2

Effect Size

Note. The robust variance estimation of this data can be found in the ninth row of Figure 2.
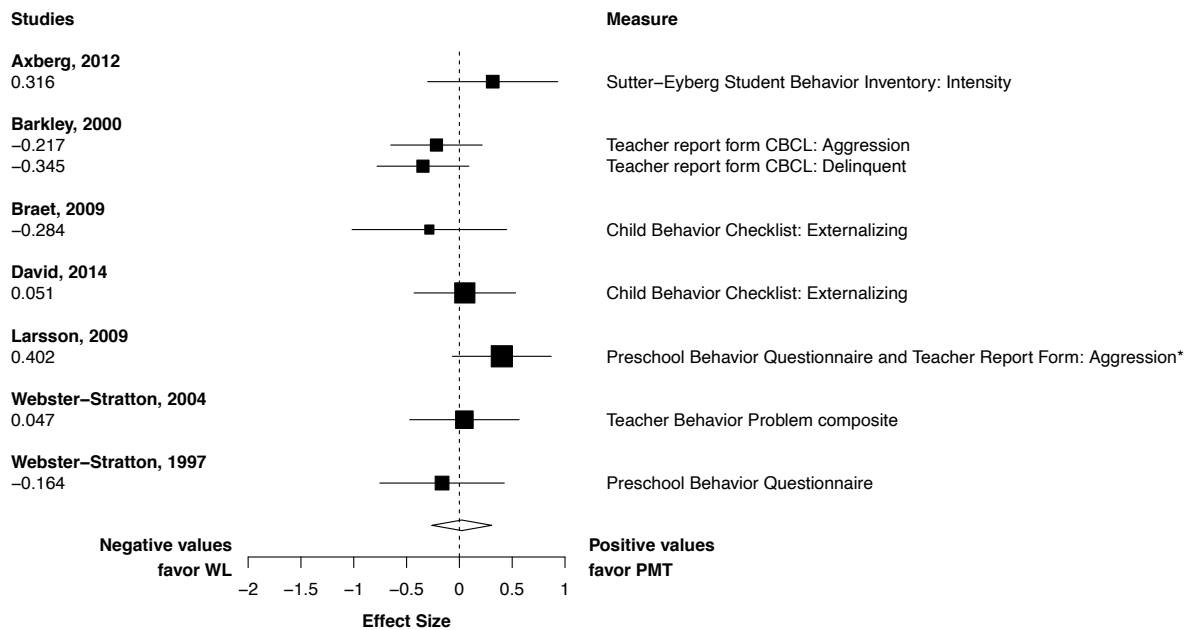
Figure S9

Forest plot of effect sizes making up the analysis of clinicians' assessment of negative parenting skills for standard PMT compared to WL at post-treatment

Studies		Measure
Gardner, 2006 0.347		Gardner...s Procedure for Home Observation: Negative parenting
Hutchkins, 2007 0.352		DPICS: Critical parenting
Sanders, 2000 −0.129		Revised Family Observation Schedule: Negative parent behavior
Webster–Stratton, 1997 −0.281 0.305		DPICS: Total commands and criticism (father) DPICS: Total commands and criticism (mother)

Negative values favor WL — Positive values favor PMT

Effect Size: −1   −0.5   0   0.5   1

Note. The robust variance estimation of this data can be found in the tenth row of Figure 2.
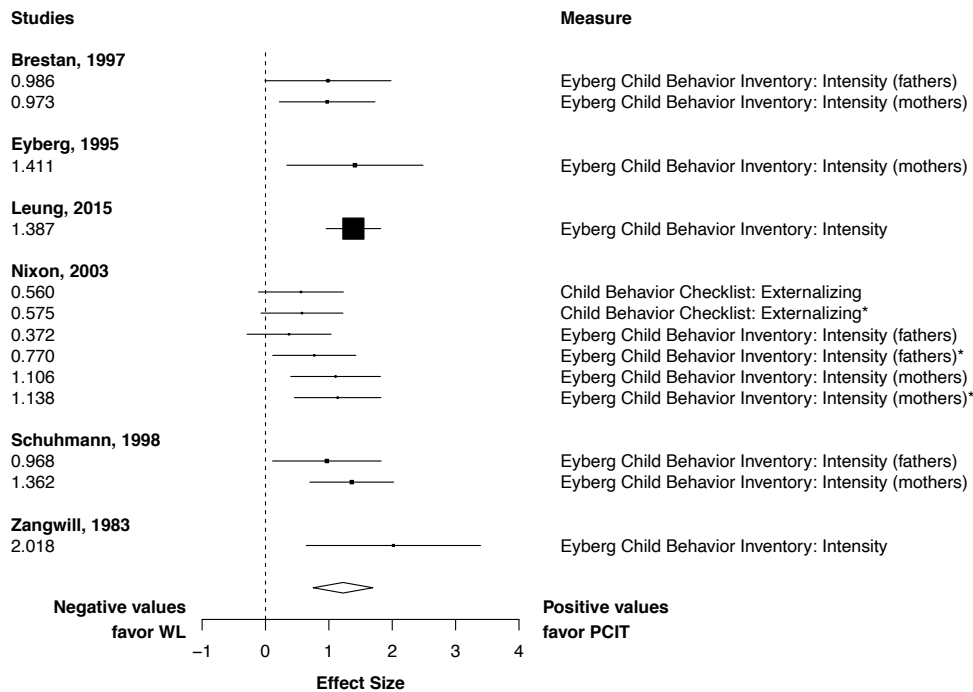

Figure S10

Forest plot of effect sizes making up the analysis of teachers' assessment of disruptive behavior for standard PMT compared to WL at post-treatment

Studies		Measure
Axberg, 2012 0.316		Sutter–Eyberg Student Behavior Inventory: Intensity
Barkley, 2000 −0.217 −0.345		Teacher report form CBCL: Aggression Teacher report form CBCL: Delinquent
Braet, 2009 −0.284		Child Behavior Checklist: Externalizing
David, 2014 0.051		Child Behavior Checklist: Externalizing
Larsson, 2009 0.402		Preschool Behavior Questionnaire and Teacher Report Form: Aggression*
Webster–Stratton, 2004 0.047		Teacher Behavior Problem composite
Webster–Stratton, 1997 −0.164		Preschool Behavior Questionnaire

Negative values favor WL — Positive values favor PMT

Effect Size: −2   −1.5   −1   −0.5   0   0.5   1

Note. The robust variance estimation of this data can be found in the eleventh row of Figure 2. * (Larsson, 2009) = Data from Drugli et al., 2006.
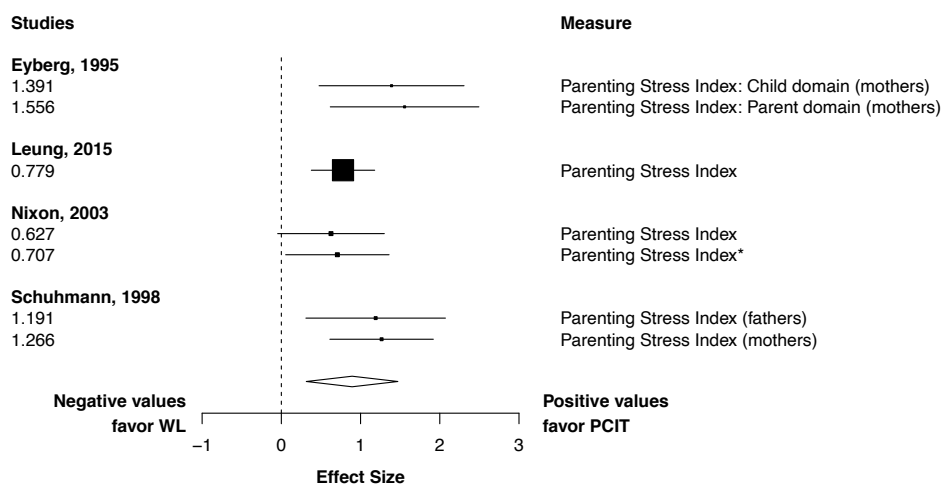
Figure S11

Forest plot of effect sizes making up the analysis of parents' assessment of disruptive behavior for PCIT compared to WL at post-treatment

Studies	Measure
Brestan, 1997	
0.986	Eyberg Child Behavior Inventory: Intensity (fathers)
0.973	Eyberg Child Behavior Inventory: Intensity (mothers)
Eyberg, 1995	
1.411	Eyberg Child Behavior Inventory: Intensity (mothers)
Leung, 2015	
1.387	Eyberg Child Behavior Inventory: Intensity
Nixon, 2003	
0.560	Child Behavior Checklist: Externalizing
0.575	Child Behavior Checklist: Externalizing*
0.372	Eyberg Child Behavior Inventory: Intensity (fathers)
0.770	Eyberg Child Behavior Inventory: Intensity (fathers)*
1.106	Eyberg Child Behavior Inventory: Intensity (mothers)
1.138	Eyberg Child Behavior Inventory: Intensity (mothers)*
Schuhmann, 1998	
0.968	Eyberg Child Behavior Inventory: Intensity (fathers)
1.362	Eyberg Child Behavior Inventory: Intensity (mothers)
Zangwill, 1983	
2.018	Eyberg Child Behavior Inventory: Intensity

Negative values favor WL — Positive values favor PCIT

Effect Size: −1, 0, 1, 2, 3, 4

Note. The robust variance estimation of this data can be found in the first row of Figure 3. * = Abbreviated PCIT.
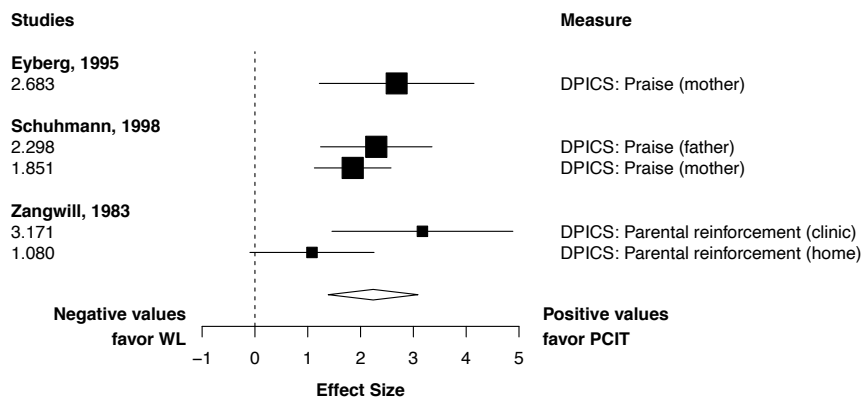
Figure S12

Forest plot of effect sizes making up the analysis of parents' assessment of parental stress for PCIT compared to WL at post-treatment

Studies	Measure
Eyberg, 1995	
1.391	Parenting Stress Index: Child domain (mothers)
1.556	Parenting Stress Index: Parent domain (mothers)
Leung, 2015	
0.779	Parenting Stress Index
Nixon, 2003	
0.627	Parenting Stress Index
0.707	Parenting Stress Index*
Schuhmann, 1998	
1.191	Parenting Stress Index (fathers)
1.266	Parenting Stress Index (mothers)

Negative values favor WL — Positive values favor PCIT

Effect Size: −1, 0, 1, 2, 3

Note. The robust variance estimation of this data can be found in the fifth row of Figure 3. * = Abbreviated PCIT.
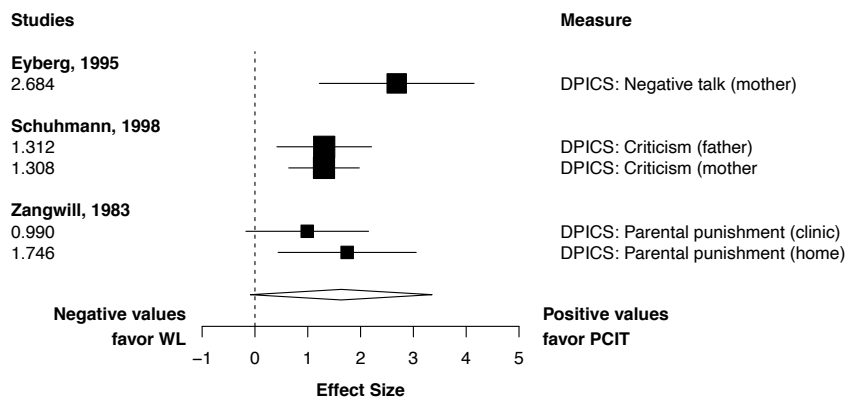
Figure S13

Forest plot of effect sizes making up the analysis of clinicians' assessment of positive parental strategies for PCIT compared to WL at post-treatment

Studies   **Measure**

Eyberg, 1995
2.683   DPICS: Praise (mother)

Schuhmann, 1998
2.298   DPICS: Praise (father)
1.851   DPICS: Praise (mother)

Zangwill, 1983
3.171   DPICS: Parental reinforcement (clinic)
1.080   DPICS: Parental reinforcement (home)

Negative values   **Positive values**
favor WL   **favor PCIT**
−1   0   1   2   3   4   5

Effect Size

Note. The robust variance estimation of this data can be found in the seventh row of Figure 3.
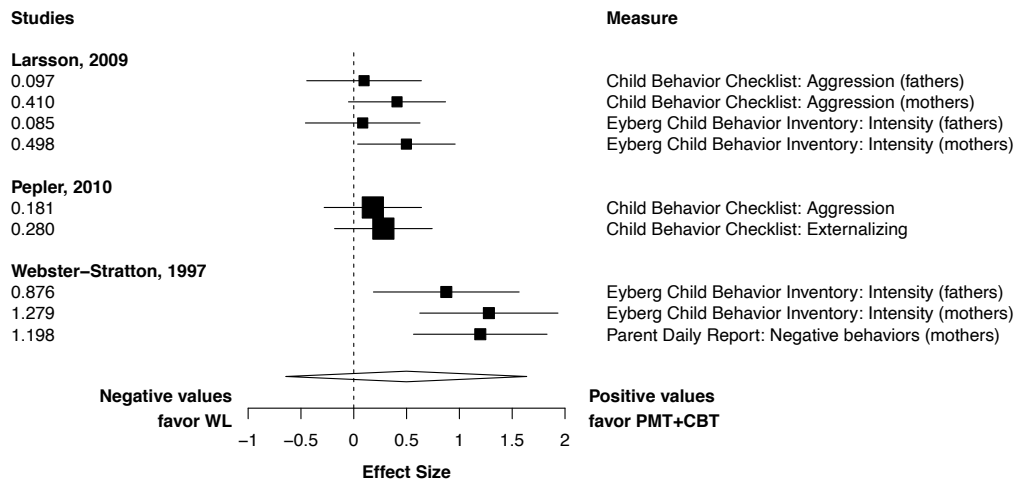

Figure S14

Forest plot of effect sizes making up the analysis of clinicians' assessment of negative parental strategies for PCIT compared to WL at post-treatment

Studies   **Measure**

Eyberg, 1995
2.684   DPICS: Negative talk (mother)

Schuhmann, 1998
1.312   DPICS: Criticism (father)
1.308   DPICS: Criticism (mother

Zangwill, 1983
0.990   DPICS: Parental punishment (clinic)
1.746   DPICS: Parental punishment (home)

Negative values   **Positive values**
favor WL   **favor PCIT**
−1   0   1   2   3   4   5

Effect Size

Note. The robust variance estimation of this data can be found in the eight row of Figure 3.
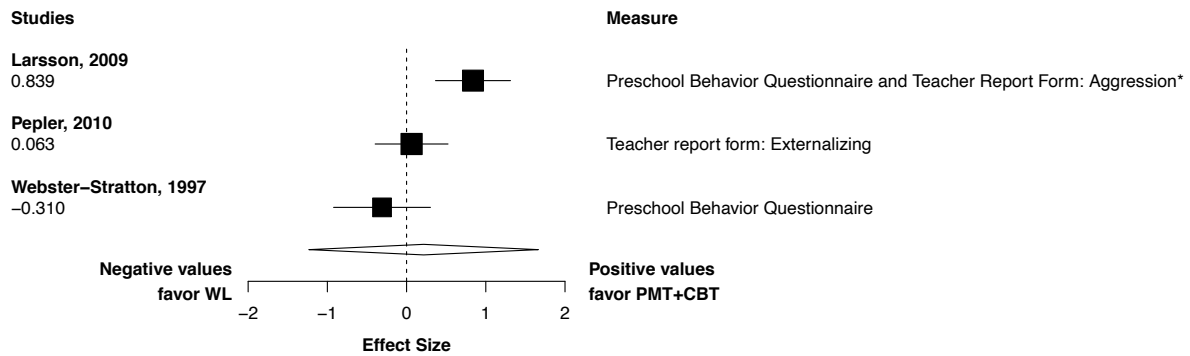
Figure S15

Forest plot of effect sizes making up the analysis of parents' assessment of disruptive behavior for PMT with child CBT compared to WL at post-treatment

Studies		Measure
Larsson, 2009		
0.097		Child Behavior Checklist: Aggression (fathers)
0.410		Child Behavior Checklist: Aggression (mothers)
0.085		Eyberg Child Behavior Inventory: Intensity (fathers)
0.498		Eyberg Child Behavior Inventory: Intensity (mothers)
Pepler, 2010		
0.181		Child Behavior Checklist: Aggression
0.280		Child Behavior Checklist: Externalizing
Webster–Stratton, 1997		
0.876		Eyberg Child Behavior Inventory: Intensity (fathers)
1.279		Eyberg Child Behavior Inventory: Intensity (mothers)
1.198		Parent Daily Report: Negative behaviors (mothers)

Negative values favor WL · Positive values favor PMT+CBT

Effect Size: −1 −0.5 0 0.5 1 1.5 2

Note. The robust variance estimation of this data can be found in the ninth row of Figure 3.
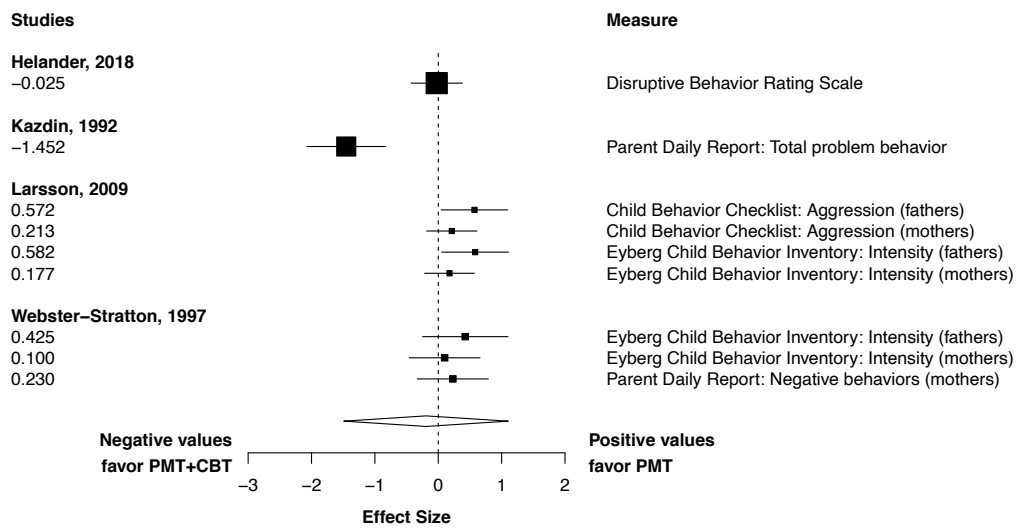
Figure S16

Forest plot of effect sizes making up the analysis of teachers' assessment of disruptive behavior for PMT with child CBT compared to WL at post-treatment

Studies		Measure
Larsson, 2009		
0.839		Preschool Behavior Questionnaire and Teacher Report Form: Aggression*
Pepler, 2010		
0.063		Teacher report form: Externalizing
Webster–Stratton, 1997		
−0.310		Preschool Behavior Questionnaire

Negative values favor WL · Positive values favor PMT+CBT

Effect Size: −2 −1 0 1 2

Note. The robust variance estimation of this data can be found in the fourteenth row of Figure 3. * = Data from Drugli et al., 2006.
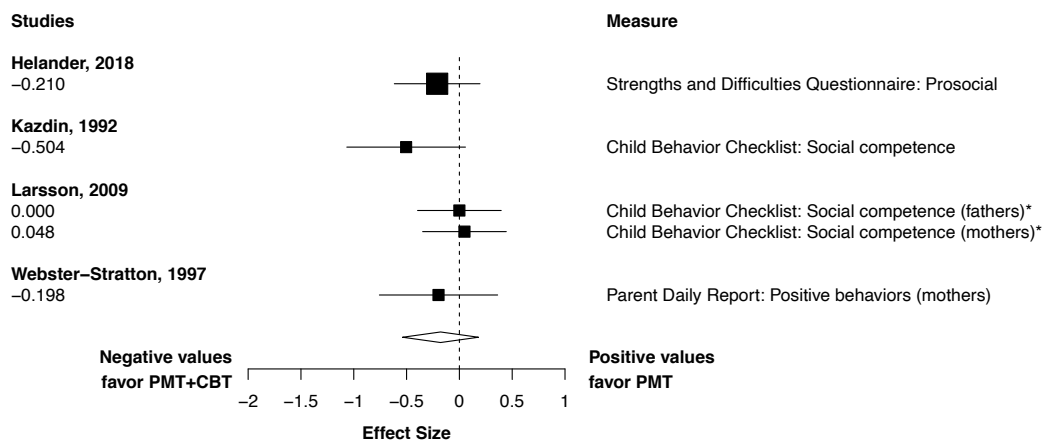
Figure S17

Forest plot of effect sizes making up the analysis of parents' assessment of disruptive behavior for standard PMT compared to PMT with child CBT at post-treatment

Studies   **Measure**

Helander, 2018
−0.025   Disruptive Behavior Rating Scale

Kazdin, 1992
−1.452   Parent Daily Report: Total problem behavior

Larsson, 2009
0.572   Child Behavior Checklist: Aggression (fathers)
0.213   Child Behavior Checklist: Aggression (mothers)
0.582   Eyberg Child Behavior Inventory: Intensity (fathers)
0.177   Eyberg Child Behavior Inventory: Intensity (mothers)

Webster−Stratton, 1997
0.425   Eyberg Child Behavior Inventory: Intensity (fathers)
0.100   Eyberg Child Behavior Inventory: Intensity (mothers)
0.230   Parent Daily Report: Negative behaviors (mothers)

Negative values   **Positive values**
favor PMT+CBT   **favor PMT**
      −3   −2   −1   0   1   2
              Effect Size

Note. The robust variance estimation of this data can be found in the first row of Figure 5.
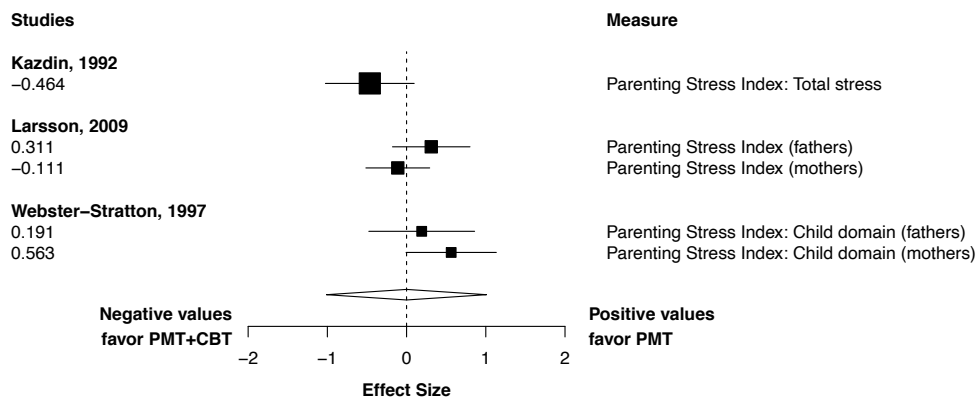
Figure S18

Forest plot of effect sizes making up the analysis of parents' assessment of social skills for standard PMT compared to PMT with child CBT at post-treatment

Studies   **Measure**

Helander, 2018
−0.210   Strengths and Difficulties Questionnaire: Prosocial

Kazdin, 1992
−0.504   Child Behavior Checklist: Social competence

Larsson, 2009
0.000   Child Behavior Checklist: Social competence (fathers)*
0.048   Child Behavior Checklist: Social competence (mothers)*

Webster−Stratton, 1997
−0.198   Parent Daily Report: Positive behaviors (mothers)

Negative values   **Positive values**
favor PMT+CBT   **favor PMT**
      −2   −1.5   −1   −0.5   0   0.5   1
              Effect Size

Note. The robust variance estimation of this data can be found in the second row of Figure 5. * = Data from Drugli et al., 2007.
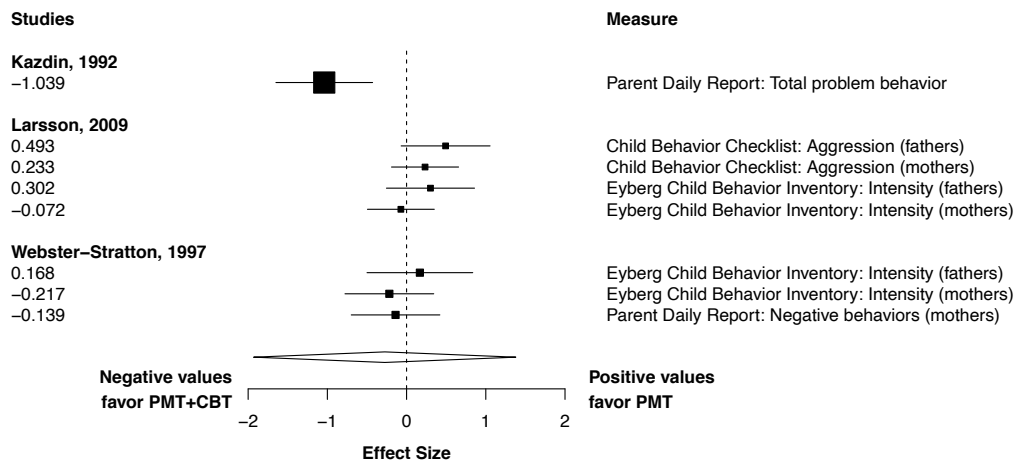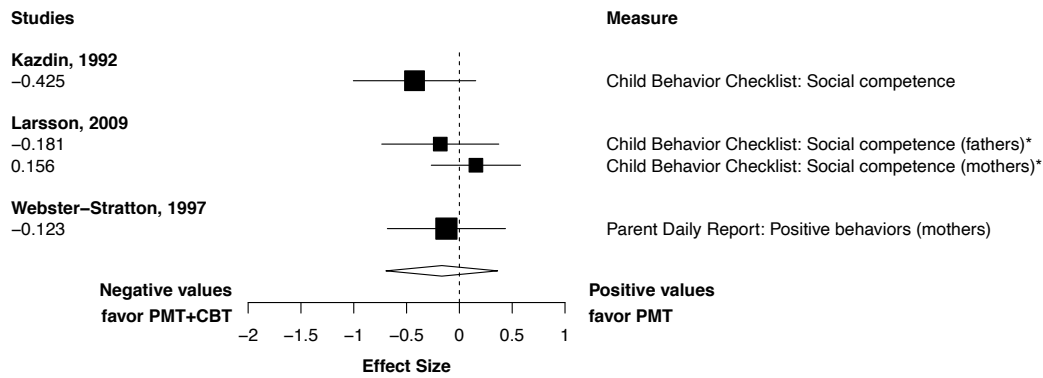
Figure S19

Forest plot of effect sizes making up the analysis of parents' assessment of parental stress for standard PMT compared to PMT with child CBT at post-treatment

Studies

Kazdin, 1992
−0.464

Larsson, 2009
0.311
−0.111

Webster–Stratton, 1997
0.191
0.563

Negative values favor PMT+CBT

Positive values favor PMT

Effect Size

Measure

Parenting Stress Index: Total stress

Parenting Stress Index (fathers)
Parenting Stress Index (mothers)

Parenting Stress Index: Child domain (fathers)
Parenting Stress Index: Child domain (mothers)

Note. The robust variance estimation of this data can be found in the fifth row of Figure 5.

Figure S20

Forest plot of effect sizes making up the analysis of parents' assessment of disruptive behavior for standard PMT compared to PMT with child CBT 12 months after treatment

Studies

Kazdin, 1992
−1.039

Larsson, 2009
0.493
0.233
0.302
−0.072

Webster–Stratton, 1997
0.168
−0.217
−0.139

Negative values favor PMT+CBT

Positive values favor PMT

Effect Size

Measure

Parent Daily Report: Total problem behavior

Child Behavior Checklist: Aggression (fathers)
Child Behavior Checklist: Aggression (mothers)
Eyberg Child Behavior Inventory: Intensity (fathers)
Eyberg Child Behavior Inventory: Intensity (mothers)

Eyberg Child Behavior Inventory: Intensity (fathers)
Eyberg Child Behavior Inventory: Intensity (mothers)
Parent Daily Report: Negative behaviors (mothers)

Note. The robust variance estimation of this data can be found in the sixth row of Figure 5.
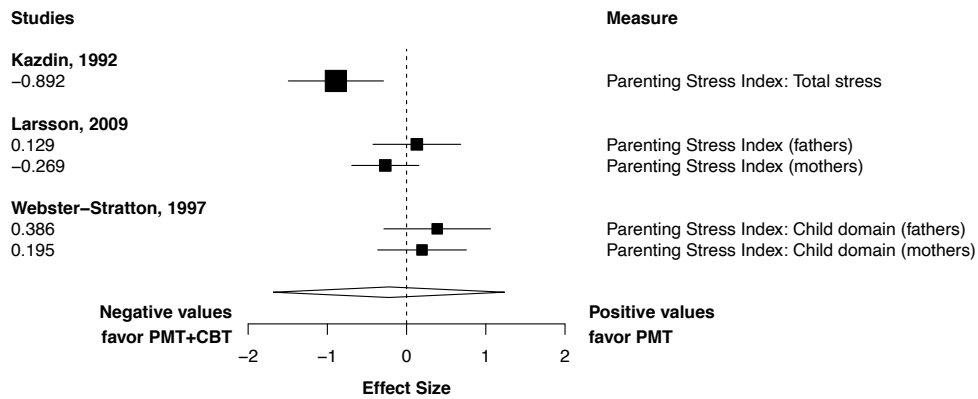
Figure S21

Forest plot of effect sizes making up the analysis of parents' assessment of social skills for standard PMT compared to PMT with child CBT 12 months after treatment

Note. The robust variance estimation of this data can be found in the seventh row of Figure 5. * = Data from Drugli et al., 2007.

Figure S22

Forest plot of effect sizes making up the analysis of parents' assessment of parental stress for standard PMT compared to PMT with child CBT 12 months after treatment

Note. The robust variance estimation of this data can be found in the tenth row of Figure 5.