Supplemental Information

The database searched was PsycINFO (<1967 to June [week 1] 2017).

SEARCH STRATEGY

1 exp parents/

2 exp parenting/ or exp parental characteristics/

3 childrearing attitudes/

4 (maternal* or mother* or parent* or paternal* or father*).mp.

5 1 or 2 or 3 or 4

6 language/ or exp language development/

7 exp speech development/ or exp verbal communication/

8 verbal ability/ or verbal fluency/

9 nonverbal communication/

10 (language* or speech*).mp.

11 or/6-10

12 5 and 11

13 limit 12 to (100 childhood <birth to age 12 yrs> or 120 neonatal <birth to age 1

mo> or 140 infancy <2 to 23 mo> or 160 preschool age <age 2 to 5 yrs> or 180

school age <age 6 to 12 yrs> or 200 adolescence <age 13 to 17 yrs>)

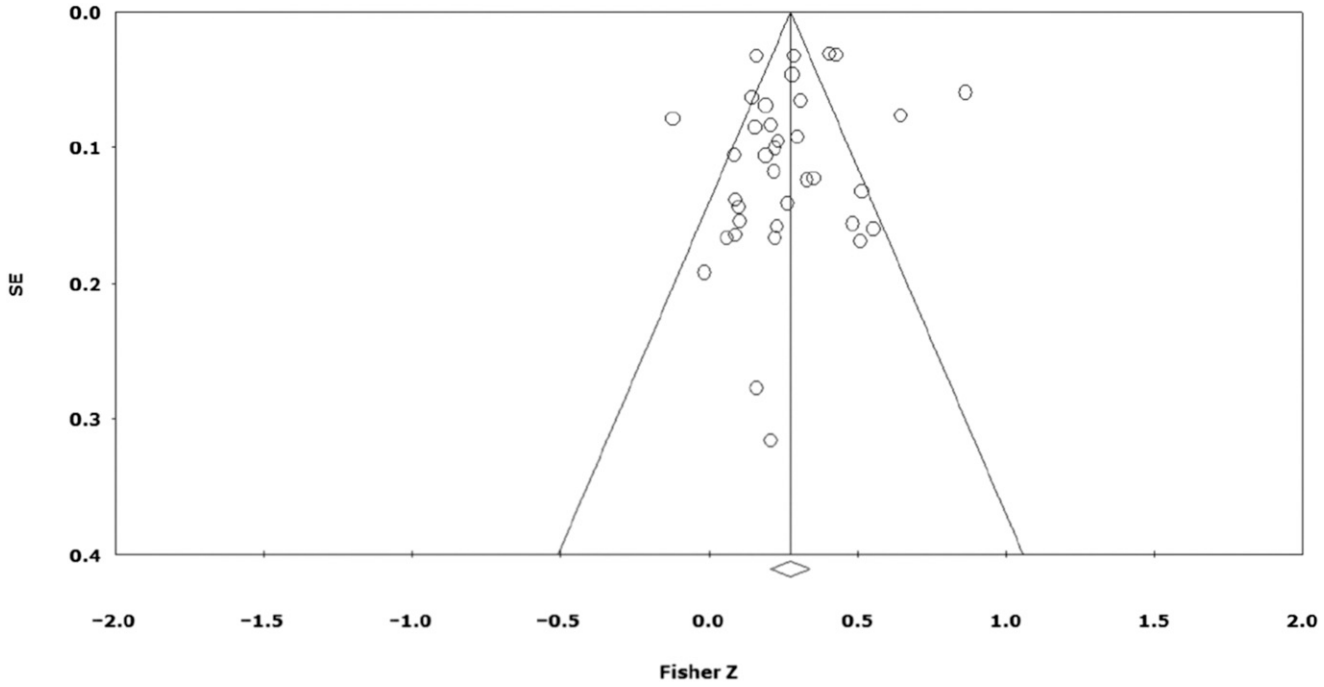
14 (infan* or newborn* or new-born* or neonat* or baby or babies or child* or youth or

kid or kids or toddler* or boy* or girl* or adolescen* or teen* or juvenile* or

pediatric*).mp.

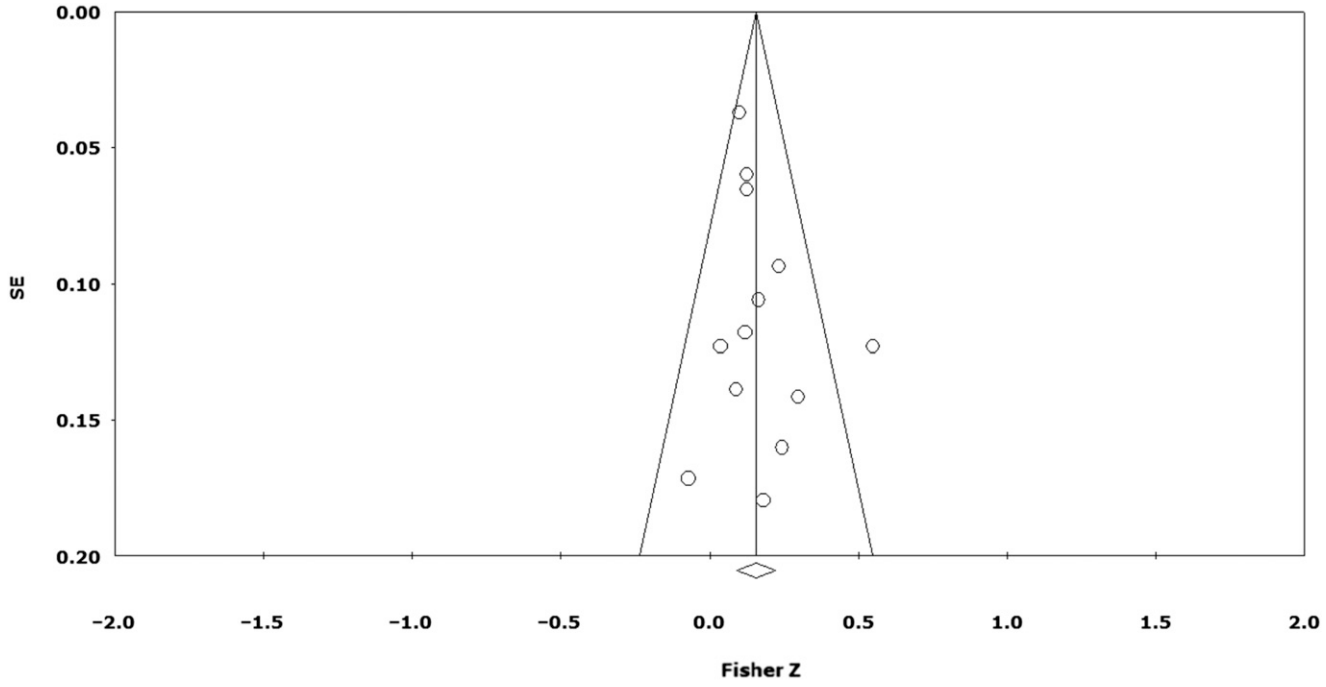
15 12 and 14

16 13 or 15



SUPPLEMENTAL FIGURE 3

Funnel plot (SE of Fisher z) of the studies examining the association between sensitive-responsive parenting and child language. The funnel plot is a measure of study size (y-axis) as a function of effect size (x-axis). Observed studies are indicated by circles. The middle vertical line is the mean prevalence estimate, and the contour lines (to the left and right) represent the region within which 95% of observed studies should lie in the absence of publication bias. Studies with large sample sizes appear toward the top of the graph and tend to cluster near the mean effect size, whereas studies with smaller sample sizes appear to the bottom-middle right of the graph. Because of the tendency to have more sampling variation in effect size estimates in studies with smaller sample sizes, these studies will be dispersed across a range of values (bottom-middle right of plot). In the meta-analysis, there was no evidence of publication bias.



SUPPLEMENTAL FIGURE 4

Funnel plot (SE of Fisher z) of the studies examining the association between parental warmth and child language. The funnel plot is a measure of study size (y-axis) as a function of effect size (x-axis). Observed studies are indicated by circles. The middle vertical line is the mean prevalence estimate, and the contour lines (to the left and right) represent the region within which 95% of observed studies should lie in the absence of publication bias. Studies with large sample sizes appear toward the top of the graph and tend to cluster near the mean effect size, whereas studies with smaller sample sizes appear to the bottom-middle right of the graph. Because of the tendency to have more sampling variation in effect size estimates in studies with smaller sample sizes, these studies will be dispersed across a range of values (bottom-middle right of plot). In the meta-analysis, there was no evidence of publication bias.

SUPPLEMENTAL TABLE 3 Study Quality Assessment Criteria

Criterion	Description	Coding
Study population	Was the study population clearly specified and defined, including location and time period of recruitment?	0 = no 1 = yes
Inclusion and exclusion criteria	Were all subjects recruited from the same or similar populations, and were inclusion or exclusion criteria specified and applied uniformly?	0 = no 1 = yes
Sample size	Was there justification for the size of the sample or discussion of the statistical power of the study?	0 = no 1 = yes
Exposure	Was the exposure of interest measured before the outcomes?	0 = no 1 = yes
Time frame	Was the time frame between the exposure and outcome sufficient so that one could reasonably expect an association if it existed?	0 = no 1 = yes
Levels of exposure	Did the study examine different levels of the exposure as related to the outcome rather than to categories of exposure?	0 = categorical 1 = continuous, levels of exposure
Valid independent variable	Was the exposure measure clearly defined, valid, reliable, and implemented consistently across participants?	0 = no 1 = yes
Longitudinal	Was the exposure measured or assessed more than once over time?	0 = no 1 = yes
Valid dependent variable	Was the outcome measure clearly defined, valid, reliable, and implemented consistently across participants?	0 = no 1 = yes
Objective independent variable	Did the study use an objective reporter (ie, observer), multiple reporters, or multiple methods for the exposure measure?	0 = self-report 1 = objective measure, multiple methods
Objective dependent variable	Did the study use an objective reporter (ie, observer), multiple reporters, or multiple methods for the outcome measure?	0 = self-report 1 = objective measure, multiple methods
Attrition, lost to follow-up	Was the attrition rate or loss to follow-up after baseline ≤20%?	0 = no 1 = yes
Controls in analyses	Did the study statistically control for potential confounding variables (eg, age and sex), or was the sample weighted?	0 = no 1 = yes

Criteria were adapted from the National Institutes of Health Quality Assessment Tool for Observational Cohort and Cross-Sectional Studies.[34]

SUPPLEMENTAL TABLE 4 Coding of Study Quality for Each Study Included in the Meta-analysis

Study	Study Population	Inclusion, Exclusion	Sample Size	Exposure	Time Frame	Levels of Exposure	Valid IV	Longitudinal	Valid DV	Objective IV	Objective DV	Attrition	Controls	Total (N = 13)
Baker et al[42]	1	0	0	1	1	1	1	0	1	1	1	1	0	9
Barnett et al[43]	1	1	0	1	1	1	1	1	1	1	1	1	1	12
Beckwith and Roding[44]	0	1	0	1	1	1	1	1	1	0	1	0	1	9
Bee et al[45]	0	1	0	1	1	1	0	1	1	1	1	1	0	9
Bornstein et al[46]	0	0	0	0	0	1	1	0	1	1	1	1	1	7
Cheung and Elliott[47]	1	1	0	0	0	1	1	0	1	1	1	1	1	9
Clarke-Stewart[48]	1	1	0	1	1	1	0	1	1	1	1	1	1	11
Cusson[49]	0	1	0	1	1	1	0	0	1	1	1	0	0	7
Gaertner[50]	1	1	0	1	1	1	1	1	1	1	1	0	1	11
Gocek[51]	1	1	0	0	0	1	1	0	1	1	1	1	1	9
Greenberg[52]	0	1	0	1	1	1	0	1	1	1	1	0	0	8
Hann et al[53]	1	1	0	1	1	1	1	1	1	1	1	1	1	12
Heinicke et al[54]	1	1	0	1	1	1	0	1	0	1	1	1	1	10
Karrass et al[55]	0	1	0	1	1	1	0	1	1	1	1	0	1	9
Kelly et al[56]	0	1	0	1	1	1	1	1	1	1	1	0	1	10
Keown et al[57]	1	1	0	0	0	1	1	0	1	1	0	1	1	8
Landry et al[58]	1	1	0	0	0	1	0	0	1	1	1	1	0	7
Lovas[59]	1	1	0	0	1	1	1	1	1	0	1	0	0	8
Madigan et al[8]	1	1	0	1	1	1	1	0	1	1	1	0	1	10
Magill-Evans and Harrisson[60]	0	1	0	1	1	1	1	1	1	1	1	1	1	11
McElwain et al[61]	0	0	0	0	0	1	1	0	1	1	1	1	1	7
Mistry et al[62]	1	1	0	1	1	1	1	1	1	1	1	1	1	12
Mol and Neuman[63]	1	1	0	1	0	1	1	0	1	1	1	1	1	10
Nozadi et al[64]	1	0	0	1	1	1	1	1	1	1	0	1	1	10
Olson et al[65]	1	0	0	1	1	1	0	1	1	1	1	1	1	10
Pearson et al[66]	1	1	0	0	1	1	1	0	1	1	1	0	1	9
Podmore[67]	1	0	0	0	0	1	0	0	1	1	1	1	0	6
Pungello et al[68]	1	1	0	0	0	1	1	1	1	1	1	1	1	10
Ransone[69]	1	1	0	1	1	1	1	1	1	1	1	1	0	11
Ruffman et al[70]	1	0	0	0	1	1	0	1	1	1	1	1	1	9
Steelman et al[71]	1	1	0	1	1	1	0	1	1	1	1	0	1	10
Stein et al[72]	1	1	0	1	1	1	1	1	1	1	1	1	1	12
Tompkins and Farrar[73]	0	0	0	0	0	1	1	0	1	1	1	1	1	7
Vernon-Feagans et al[74]	1	0	0	1	1	1	1	1	1	1	1	1	1	11
Vibbert and Bornstein[75]	0	1	0	0	0	1	0	0	1	1	1	1	1	7
Wallace et al[76]	1	1	0	0	0	1	0	0	1	1	1	1	1	8
Wasserman et al[77]	0	1	0	0	0	1	1	0	1	1	1	1	0	7

SUPPLEMENTAL TABLE 5 Publication Type and Location of Effect Sizes

Study	Year	Publication Type	Page	Location of Effect Size	Language Averaged[a]
Baker et al[42]	2010	Journal article	993	In text	Yes
Barnett et al[43]	2012	Journal article	386	Table 2	Yes
Beckwith and Rodning[44]	1996	Journal article	327	Table 3	Yes
Bee et al[45]	1982	Journal article	1146	Table 4	Yes
Bornstein et al[46]	2007	Journal article	205	Table 1	Yes
Cheung and Elliott[47]	2016	Journal article	908	Table 3	No
Clarke-Stewart[48]	1973	Journal article	67	Table 17	No
Cusson[49]	2003	Journal article	407	In text	Yes
Gaertner[50]	2013	Dissertation	172	Table 9	Yes
Gocek[51]	2007	Dissertation	54	Table 5	No
Greenberg[52]	1988	Journal article	563	Table 6	Yes
Hann et al[53]	1996	Journal article	306	Table 1	No
Heinicke et al[54]	1986	Journal article	784	Table 2	No
Karrass et al[55]	2003	Journal article	244	Table 1	No
Kelly et al[56]	1996	Journal article	316	Table 3	Yes
Keown et al[57]	2001	Journal article	138	Table 3	Yes
Landry et al[58]	2008	Journal article	304	Author provided	Yes
Lovas[59]	2002	Dissertation	320	Table C.17	Yes
Madigan et al[8]	2015	Journal article	873	Table II	Yes
Magill-Evans and Harrison[60]	2001	Journal article	142	Table 2	Yes
McElwain et al[61]	2012	Journal article	82	Table 1	No
Mistry et al[62]	2004	Journal article	732	Table 4	Yes
Mol and Neuman[63]	2014	Journal article	404	Table 3	Yes
Nozadi et al[64]	2013	Journal article	655	Table 2	No
Olson et al[65]	1984	Journal article	171	Table 2	No
Pearson et al[66]	2011	Journal article	529	Table 2	No
Podmore[67]	1988	Journal article	170	Table IV	No
Pungello et al[68]	2009	Journal article	551	Table 4	Yes
Ransone[69]	2017	Dissertation	54	Table 4–1	Yes
Ruffman et al[70]	2006	Journal article	117	Table 4	No
Steelman et al[71]	2002	Journal article	152	Appendix A	Yes
Stein et al[72]	2008	Journal article	607	Table 1	Yes
Tompkins and Farrar[73]	2011	Dissertation	107	Table 4–12	Yes
Vernon-Feagans et al[74]	2012	Journal article	347	Table 4	Yes
Vibbert and Bornstein[75]	1989	Journal article	172	Table 2	Yes
Wallace et al[76]	1998	Journal article	907	Table 4	No
Wasserman et al[77]	1988	Journal article	326	In text	No

[a] Pooled 1 measure of receptive and 1 measure of expressive language.